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BEFORE THE ARIZONA CORPORATION COMMISSION

Arizona Corporation Commission

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IN THE MATTER OF U S WEST
COMMUNICATIONS, INC.'S
COMPLIANCE WITH § 271 OF THE
TELECOMMUNICATIONS ACT OF 1996

)
) Docket No. T-00000B-97-0238
)
) AT&T AND TCG'S COMMENTS
) ON PROPOSED MASTER PLAN
)

AT&T Communications of the Mountain States, Inc. and TCG Phoenix
(collectively "AT&T") submit the following comments on the Proposed Master Test Plan
prepared by the Staff of the Arizona Corporation Commission's ("Commission")
consultant, Doherty & Company, Inc.

I. INTRODUCTION

Operations Support Systems ("OSS") refers to all of the computer systems, databases and personnel that an incumbent local exchange carrier ("ILEC") uses to perform internal functions necessary for 1) pre-ordering, 2) ordering, 3) provisioning, 4) maintenance and repair, and 5) billing of its products and services.¹ The Federal Communications Commission ("FCC") has determined that OSS is a "network element."² Consequently, a competitive local exchange carrier ("CLEC") must be permitted access to an ILEC's OSS functions in order to provide pre-order information to potential customers, sign up customers, place orders for services or facilities, track the

¹ Implementation of the Local Competition Provisions in the Telecommunications Act of 1996, CC Docket No. 96-98 First Report and Order, FCC 96-325 (rel. Aug. 8, 1996) ("First Report and Order"), ¶ 518.

² First Report and Order, ¶ 516.

progress of its orders to completion, obtain relevant billing information from the ILEC, and obtain prompt repair and maintenance services for its customers.³

The duty to provide access to OSS functions falls squarely within an ILEC's duties under section 251(c)(3) to provide unbundled network elements on terms and conditions that are nondiscriminatory, just and reasonable, and under section 251(c)(4) to offer services for resale without imposing any limitations or conditions that are discriminatory or unreasonable.⁴ The Eighth Circuit has affirmed the FCC's determination that OSS are network elements that must be provided pursuant to section 251(c)(3) of the Act.⁵

U S WEST must provide CLECs nondiscriminatory access to all network elements, including OSS. Among other things, this means that the quality of that access must be at least equal in quality to the access U S WEST provides to itself.⁶ The FCC summarized its requirements with respect to OSS when it stated, "[w]e require, simply, that the RBOC provide the same [OSS] access to competing carriers that it provides to itself."⁷

The FCC undertakes a two-part inquiry to determine whether an RBOC meets its duty to provide CLECs nondiscriminatory access to OSS.

³ See Letter dated March 20, 1998, from FCC Chairman William E. Kennard to Senator John McCain and Senator Sam Brownback at 2 (regarding section 271 requirements and attaching Common Carrier bureau Staff summaries of the requirements applicable to each checklist item), Attachment B, p. ii-2 (discussion of Checklist Item (ii)) (hereinafter "Road Map").

⁴ *Application of Ameritech Michigan pursuant to § 271 of the Communications Act of 1934, as amended, to provide In-Region, Inter-LATA services in Michigan*, CC Docket 79-137, *Memorandum Op. and Order*, FCC 97-298 (rel. Aug. 19, 1997) at ¶ 130 (hereinafter "Ameritech Michigan Order"); see *Application of BellSouth Corporation Pursuant to Section 271 of the Communications Act of 1934, as amended, to Provide In-Region InterLATA Services in South Carolina*, CC Docket No. 97-208, *Memorandum Op. and Order*, FCC 97-418 (rel. Dec 24, 1997) at ¶ 83 (hereinafter "BellSouth South Carolina Order").

⁵ *Iowa Utilities Bd. v. FCC*, 120 F.3d 753, 808-09 (8th Cir. 1997), *aff'd*. *AT&T Corp v. Iowa Utils. Bd.*, 119 S.Ct 721, 734 (1999).

⁶ 47 C.F.R. § 51.311(b).

⁷ *Ameritech Michigan Order*, ¶ 143.

First, the Commission must determine whether [U S WEST] has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether [U S WEST] is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them” (e.g., providing specifications needed for systems design or modification, formatting and processing information needed for quick and efficient flow-through, and internal “business rules” including Universal Service Order Codes (“USOCs”), Field Identifier (“FIDs”), and other ordering codes).⁸

As part of this first inquiry, U S WEST must demonstrate that the interfaces used to access its OSS functions allow each CLEC to transfer the information received from U S WEST to the CLEC’s back office systems (e.g., the CLEC’s own OSS) and to the various systems and interfaces used by U S WEST.⁹

Second, U S WEST must demonstrate that the OSS functions and interfaces are deployed and operationally ready.¹⁰ Under this part of the inquiry, the FCC examines performance measurements and other evidence of commercial readiness.¹¹ In addition, U S WEST must show that it has deployed OSS interfaces to CLECs which are capable of handling current demand, as well as reasonably forecasted demand, for all functions.¹²

For purposes of evaluating access to OSS functions, several components must be examined, including: (1) a point of interface, or “gateway,” for the CLEC’s own internal OSS to interconnect with the regional Bell operating company (“RBOC”); (2) any electronic or manual processing link between that interface and the RBOC’s internal OSS, including all necessary back office systems, processing procedures, and personnel;

⁸ *Id.*, ¶¶ 136-37.

⁹ *BellSouth South Carolina Order*, ¶¶ 158-61.

¹⁰ *Ameritech Michigan Order*, ¶ 136; *BellSouth South Carolina Order*, ¶ 96.

¹¹ *BellSouth South Carolina Order*, ¶ 97.

and (3) all of the internal OSS (or “legacy systems”) that the RBOC uses in providing network elements and resold services to a CLEC.¹³ The FCC has rejected arguments that the duty of nondiscriminatory access is satisfied by merely installing the interface component.¹⁴

It is critical that an examination of the OSS access that U S WEST provides include U S WEST’s manual processes. As previously discussed, the FCC will examine any manual links that an RBOC provides between its interface and its internal legacy systems.¹⁵ As the FCC appropriately realized, “[i]f [an RBOC] relies on manual procedures to process a significant portion of orders received via its [ordering] interface, the capacity of the electronic processes becomes less important than that of its manual procedures.”¹⁶

This Commission should evaluate, and the FCC will evaluate, information that compares U S WEST’s own access to OSS functions with CLEC access to OSS functions.¹⁷ For those OSS functions U S WEST provides to a CLEC that are analogous to OSS functions U S WEST provides to itself, U S WEST must provide the CLEC access that is equivalent to the access U S WEST receives in terms of quality, accuracy and timeliness.¹⁸ For OSS functions that do not have a retail analog, U S WEST must

¹² *Ameritech Michigan Order*, ¶ 138; *BellSouth South Carolina Order*, ¶ 97.

¹³ *Ameritech Michigan Order*, ¶ 134.

¹⁴ *Id.*, ¶ 135.

¹⁵ *Id.*, ¶ 134.

¹⁶ *Ameritech Michigan Order*, ¶ 194 (footnote omitted).

¹⁷ *Id.*, ¶¶ 204-213.

¹⁸ Road Map, Attachment B, p. ii-3, citing First Report and Order, ¶ 517, *Ameritech Michigan Order*, ¶ 139; *BellSouth South Carolina Order*, ¶ 98.

demonstrate that it is providing access that offers an efficient competitor a meaningful opportunity to compete.¹⁹

II. GENERAL ISSUES

A. A Technical Advisory Group (“TAG”) needs to be chartered in the Master Test Plan to provide technical oversight and guidance to the Commission, the Pseudo-CLEC, and the Third-Party Consultant.

One of the roles that is noticeably absent from the Proposed Arizona Master Test Plan is the role of the Technical Advisory Group. The TAG membership generally includes participation from the State Commission, the BOC, a few CLECs, the Third-Party Consultant and the Pseudo-CLEC. The Regional Oversight Committee (“ROC”) Roles and Responsibilities of Collaborative Members (Preliminary Draft), the Texas Master Test Plan and the California Master Test Plan all include the recognition and identification of something like the TAG. In the ROC Roles and Responsibilities Document, the group is called the TAG and it is described as, “[a] collaborative body consisting of the Commission Steering Committee and/or its designees, U S WEST, CLECs, and other interested persons.”²⁰ The roles and responsibilities of the ROC TAG are as follows:

The role of a TAG member is to:

- Provide support for the collaborative process.
- Provide technical assistance in test planning and execution.
- Recommend criteria for selection of Third-Party Tester.
- Support Test Plan needs.
- Provide for Test Participant needs as necessary.
- Define high-level test scenarios.

¹⁹ Road Map, Attachment B, p. ii-3, citing *Ameritech Michigan Order*, ¶ 139; *BellSouth South Carolina Order*, ¶ 98.

²⁰ ROC Roles and Responsibilities of the Collaborative Members (Preliminary Draft), August 27, 1999, Section 1.6.

- Provide review of results of each as documented in the Test Analysis Phase.²¹

In the Texas Master Test Plan, the group is also called the TAG. The role of the TAG in the Texas Master Test Plan was defined as follows:

A technical advisory group (TAG) consisting of membership from the Texas Commission, SWB, the CLECs and Third Party Consultant was formed to address the issue of SWB OSSs and associated performance measures in a collaborative manner. All CLECs were solicited for participation and as a result the TAG CLEC members currently includes, but are not limited to AT&T, MCI WorldCom (MCIW), Allegiance Telcom, Inc., NorthPointCom and Covad/Nightfire. The Commission then chose Telcordia Technologies (Telcordia) to be the Third Party Consultant.²²

In the California Master Test Plan the advisory group is called the Technical Advisory Board (“TAB”). The role of the TAB was defined in the California Master Test Plan as follows:

A Technical Advisory Board will be convened at the start of testing. Its membership shall be CPUC, the Test Administrator/Manager, Test Generator, Pacific representation and from three to five CLEC representatives. Its charter is to participate in the special Change Management Process on the test architecture (Figure 4.1) in accordance with the procedures in Appendix B, and to provide CLEC support as requested by the Test Administrator/Manager. This CLEC support consists of providing appropriate network elements for EBI interface operation.

In addition, TAB members (as determined by the Test Administrator/Manager), the Test Administrator/Manager and the CPUC will review periodic test results and offer advice, observations and provide input to the test process. This will be done to enable the CLECs and Pacific to provide feedback on the testing as requested by the Test Administrator/Manager.²³

²¹ *Id.*, Section 2.5.

²² The Public Utility Commission of Texas, Southwestern Bell (SWB) OSS Evaluation Master Test Plan, Issue 3, April 1999, p. 1.

²³ Pacific Bell OSS Master Test Plan, The California Public Utilities Commission, Version 3.0, June 28, 1999, p. 28, Section 5.2.7.

Despite the common recognition of the usefulness of a group like the TAG, there is no such role identified in the Arizona Proposed Master Test Plan. AT&T recommends that the TAB role as defined in the CA Master Test Plan be modified as appropriate and included in the Arizona Master Test Plan. The TAB can help cooperatively resolve the myriad of as of yet unforeseen issues that are sure to arise during the testing process. Additionally, TAB oversight and guidance can help to ensure that the Arizona testing process is one that all parties can support.

B. The collaborative test should also test whether U S WEST has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether U S WEST is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them.

The overall purpose of the collaborative test process as stated in the Master Test Plan is to demonstrate “the extent of operational readiness, performance, and capability of U S WEST to provide CLECs with access to OSS.” (Master Test Plan, p. 5). Operational readiness is only one part of two-part test that the FCC has developed.²⁴ The first part of the FCC’s two part test is whether, “[U S WEST] has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether [U S WEST] is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them.”²⁵ In discussing its evaluation of a Bell Operating Company’s (“BOC”) compliance with the first of the two parts, the FCC stated:

²⁴ *Ameritech Michigan Order*, ¶ 136.

²⁵ *Id.*

Under the first part of this inquiry, [U S WEST] must demonstrate that it has developed sufficient electronic and manual interfaces to allow competing carriers to access all of the necessary OSS functions. For those functions that [U S WEST] itself accesses electronically, [U S WEST] must provide equivalent electronic access for competing carriers. We recognize, however, that for some functions, manual access may need to remain available as an additional mode of access. [U S WEST] also is obligated to provide competing carriers with the specifications necessary to instruct competing carriers on how to modify or design their systems in a manner that will enable them to communicate with [U S WEST's] legacy systems and any interfaces utilized by [U S WEST] for such access. [U S WEST] must provide competing carriers with all of the information necessary to format and process their electronic requests so that these requests flow through the interfaces, the transmission links, and into the legacy systems as quickly and efficiently as possible. In addition, [U S WEST] must disclose to competing carriers any internal "business rules," including information concerning the ordering codes that [U S WEST] uses that competing carriers need to place orders through the system efficiently. Finally, [U S WEST] must ensure that its operations support systems are designed to accommodate both current demand and projected demand of competing carriers for access to OSS functions.²⁶

The Proposed Master Test Plan contains very little, if any, considerations for the testing of the first part of the FCC's two part test. The Proposed Master Test Plan does include a section titled "Change Management Test" that does evaluate the processes that U S WEST uses to communicate and implement changes to its interfaces. (Master Test Plan, pp. 39 – 41). However, the majority of that section assumes that interfaces are already in place. While Section 7.6 U S WEST-CLEC Interaction, does have some references to evaluating the process it takes to establish the interfaces between the CLEC and U S WEST, those references are very limited – less than ¼ of a page. The ease, or difficulty, in establishing interfaces with U S WEST and the process that U S WEST follows when it makes changes to its interfaces is critical information that both the Commission and the FCC will require in evaluating U S WEST's compliance with the first of the FCC's two part test. AT&T recommends that more attention be devoted in the

²⁶ *Id.*, ¶ 137 (footnotes omitted).

Master Test Plan to evaluating whether U S WEST has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether U S WEST is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them.

To that end, AT&T recommends that a section like Section VII. of the §271 Bell Atlantic, NY OSS Evaluation Project Master Test Plan, Final Version 2.0, Dated July 31, 1998 (“NY Master Test Plan”) be included in the Arizona Master Test Plan. For ease of reference, a copy of the NY Master Test Plan is attached to these comments as Exhibit A. In addition to a test area on change management, Section VII, Relationship Management and Infrastructure Domain Test, contains other vital test areas that will allow the Commission to determine if U S WEST is providing sufficient assistance and support to CLECs. These critical test areas include:

1. Change Management
2. Interface Development
3. Account Establishment & Management
4. Network Design, Collocation, and Interconnection Planning
5. System Administration Help Desk
6. CLEC Training
7. Forecasting

With those considerations and test areas, the test of the initial and ongoing assistance that U S WEST provides to CLECs will be more complete and will allow the Commission to make a recommendation that is responsive to the FCC’s evaluation criteria.

C. The test of whether U S WEST has deployed the necessary systems and personnel to provide sufficient access to each of the necessary OSS functions and whether U S WEST is adequately assisting competing carriers to understand how to implement and use all of the OSS functions available to them should include all of the systems, processes and interfaces that U S WEST makes available to CLECs.

A test of the assistance that U S WEST provides to CLECs that use its OSS interfaces, systems and processes should include all of the means that U S WEST makes available to CLECs. For the electronic interfaces that U S WEST makes available to CLECs (IMA-GUI, EDI, EXACT, EB-TA, and IABS), the evaluation should include those interfaces. However, the evaluation should not be limited to only those processes that are electronic in nature. Some processes, such as the ordering of collocation, do not have electronic interfaces supporting them. Notwithstanding the absence of electronic interfaces, U S WEST should provide CLECs with adequate processes for ordering collocation. Collocation is a critical part of a facilities-based CLEC's strategy.

Inadequate processes for ordering collocation can be devastating in terms of market entry and market expansion timing for CLECs and an effective tool for U S WEST to slow the growth of facility based CLECs. Interconnection forecasting is also a critical function that is unsupported by an electronic U S WEST interface. Inadequate or unclear interconnection forecasting processes have been used in the past by U S WEST to deny or delay a CLEC's lawful request for interconnection facilities. U S WEST's lack of electronic interfaces should not be used as an excuse to remove the interconnection forecasting process from evaluation during the collaborative testing.

AT&T believes that in addition to providing a framework for evaluating the assistance that U S WEST provides to CLECs, Section VII of the NY Master Test Plan

also appropriately includes sections for evaluations of critical manual processes. AT&T believes that the Arizona Master Test Plan would be well-served to include a section like Section VII of the NY Master Test Plan in its final version.

D. The collaborative test is too limited in the types of services and facilities that will be tested.

The Master Test Plan states that the “test will focus on resale, UNE-C, UNE-Loop, UNE-Loop with number portability, and number portability.” (Master Test Plan, p. 6) There are other important services and facilities that should be added to the test.

1. The Arizona Master Test Plan Should Include Test of Interconnection and Collocation.

As previously discussed, interconnection and collocation are important elements to the success of local exchange competition in Arizona that should be included in the scope of the test. The FCC has already determined that any OSS evaluation must include a consideration of whether the OSS access that a BOC is providing adequately supports interconnection. Specifically, the FCC stated that,

In determining whether a BOC has met its OSS obligation under section 271, the Commission generally must determine whether the access to OSS functions provided by the BOC to competing carriers sufficiently supports each of the three modes of competitive entry strategies established by the Act: *interconnection*, unbundled network elements, and services offered for resale. In so doing, we seek to ensure that a new entrant's decision to enter the local exchange market in a particular state is based on the new entrant's business considerations, rather than the availability or unavailability of particular OSS functions to support each of the modes of entry. Currently, competitive carriers in Michigan are pursuing a mix of entry strategies, including the use of resale services, unbundled network elements, and facilities they have installed themselves. The OSS functionalities to which Ameritech provides access, as part of its

OSS obligations, must support each of the three modes of entry and must not favor one strategy over another.²⁷ (emphasis added)

While the FCC has stated the importance of interconnection in the evaluation of a BOC's OSS, it is unclear if the Proposed Master Test Plan places equal importance on interconnection. In several places in the Master Test Plan, interconnection is not included in the listing of products, services and facilities included in the test.²⁸ However, there are references to collocation and interconnection measurements and results scattered throughout the performance indicators sections in Appendix B of the Proposed Master Test Plan.

AT&T recommends that interconnection and collocation considerations should be clearly included in the various tests of the Arizona Master Test Plan. As previously discussed, interconnection and collocation considerations should be included in the test of the support and assistance that U S WEST provides to CLECs. Additionally, interconnection services should be included in the Functionality Test and the Performance Measurement Evaluation, and collocation considerations should be included in the Performance Measurement Evaluation. Clearly including interconnection and collocation considerations in the Master Test Plan will help ensure that the Commission can provide a recommendation to the FCC based upon a thorough and comprehensive evaluation of the OSS support that U S WEST provides for each of the three modes of competitive entry.

²⁷ Id., ¶ 133.

²⁸ The Proposed Master Test Plan, pp. 6, 14, 16-17 and 32, references products and services to be tested, but does not mention interconnection or collocation.

The NY Master Test Plan included six separate test scenarios for the ordering and provisioning of interconnection facilities and two for the ordering of collocation.²⁹

AT&T recommends that these scenarios be included in the Arizona Master Test Plan as part of the evaluation of U S WEST's interconnection processes.

2. The Arizona Master Test Plan Should Include Test of the Combination of Unbundled Loops and Interoffice Transport.

A combination of unbundled loop and dedicated interoffice transport with and without number portability is also an important service that CLECs will be obtaining from U S WEST that should be included in the test. Instead of serving large business customers through the purchase from U S WEST of special access circuits, CLECs will be able to provide the same service through the use of unbundled loops and unbundled interoffice transport. This combination is sometimes called the enhanced extended loop ("EEL"). Given U S WEST's reluctance to provide for even existing combinations of unbundled network elements, it is important that U S WEST's ability to support this critical combination be evaluated. The New York Public Service Commission recognized the importance of this combination and included eleven test scenarios for the combination of unbundled loops and interoffice transport as part of its evaluation.³⁰ AT&T recommends that these test scenarios be included in the final version of the Arizona Master Test Plan as well.

²⁹ NY Master Test Plan, Appendix, B, pp. B3-7 through B3-8.

3. The Arizona Master Test Plan Should Include Considerations of DSL Services and Facilities.

The Master Test Plan should also include considerations of orders for xDSL services and facilities. The Proposed Master Test Plan excludes ADSL services from the test because ADSL will not be supported through U S WEST's electronic interfaces until sometime next year. (Proposed Master Test Plan, p. 17). As previously discussed, the lack of an electronic interface does not excuse U S WEST from its nondiscrimination obligations. If U S WEST has no electronic interfaces to support ADSL or xDSL services, then its manual processes should be tested.

Due to the rapidly developing market for broadband and data services, U S WEST support for all types of xDSL services and facilities is vital to the development of competition and should be tested as fully as possible. In particular, access to loop qualification and U S WEST bandwidth management information must be tested, along with other xDSL specific systems.

The California Public Utilities Commission included several considerations for DSL services and facilities in the Pacific Bell OSS Master Test Plan, Version 3.0, June 28, 1999 ("CA Master Test Plan").³¹ For ease of reference, a copy of the CA Master Test Plan is attached as Exhibit B. The CA Master Test Plan included twelve separate DSL test scenarios in its functionality test.³² All twelve of these test scenarios are independent of whether the xDSL service is supported through electronic or manual methods. AT&T recommends that, at a minimum, the twelve DSL scenarios in the CA Master Test Plan be included in the AZ Master Test Plan. AT&T recommends that these

³⁰ *Id.*

³¹ CA Master Test Plan, pp. 2 & 5.

³² CA Master Test Plan, Attachment 1A.

test scenarios be included in the Functionality Test, the Retail Parity Evaluation, the Change Management Test and the Performance Management Evaluation.

4. Private Line, ISDN, PBX, and Centrex Services Should Not be Excluded From the Arizona Master Test Plan.

The Proposed Test Plan excludes private line, ISDN, PBX and Centrex from the scope of the test because U S WEST supports these services through manual processes. (Proposed Master Test Plan, p. 17). As an initial matter, it is unclear why the support for these services is presumed to be through only manual processes. U S WEST has testified in the Arizona §271 proceeding that these services are all currently supported through the EDI, IMA-GUI, and EB-TA interfaces.³³ Even if some or all of these services are supported through manual processes, as previously discussed, the fact that U S WEST may support these services through manual processes does not excuse U S WEST from its obligation to provide nondiscriminatory support for these services.³⁴ U S WEST's support of these services through manual processes makes it even more imperative that this support be evaluated to ensure that U S WEST is meeting its statutory nondiscrimination obligations. Manual processes could result in slower provisioning and more ordering and provisioning errors than for similarly situated U S WEST orders. AT&T recommends that private line, Centrex, PBX and ISDN services be considered in the Arizona Master Test Plan. U S WEST's inclusion of Centrex, ISDN, PBX and private line services in its Standard Service Groupings would also seem to indicate that

³³ Before the Arizona Corporation Commission, *U S WEST Communications, Inc.'s Compliance with §271 of the Telecommunications Act of 1996*, Docket No. T-00000B-97-0238 (hereinafter "*U S WEST 271 Proceeding*"), Affidavit of Dean W. Buhler, March 25, 1999, Exhibit DWB-007. p. 6.

³⁴ Telecommunications Act of 1996, §251 (c)(4)(B),

U S WEST believes that these services should be considered in the Arizona Master Test Plan as well.³⁵

The NY Master Test Plan includes twenty-four test scenarios for ISDN, private line, Centrex and PBX that are independent of whether the service is supported via manual or electronic interfaces.³⁶ Regardless of whether it is determined that U S WEST supports these services through electronic or manual means, AT&T recommends that these test scenarios be included in the Functionality Test, the Retail Parity Evaluation, the Change Management Test and the Performance Management Evaluation.

5. Maintenance and Repair for Design Services Should Not be Excluded From the Arizona Master Test Plan.

A testing of maintenance and repair for design services was excluded from the Proposed Master Test plan because there was “[n]o AZ demand”. (Proposed Master Test Plan, p. 17). U S WEST’s testimony in the Arizona §271 proceeding shows that to be an incorrect assertion. U S WEST’s own data for design services shows continuous activity for ordering, provisioning and repair of design services since at least July of 1998.³⁷ Since design services that are being provided by U S WEST have occasionally required repair activities, it is inappropriate that the maintenance and repair of these design services be excluded from the test plan.

³⁵ AZ Master Test Plan, Appendix B, p. B-58.

³⁶ NY Master Test Plan, Appendix B, pp. B3-4 through B3-5.

³⁷ *U S WEST 271 Proceeding*, Affidavit of Michael G. Williams, March 25, 1999, Proprietary Exhibit MGW-002. p. 26.

E. The Master Test Plan must state that all phases of the test must be open to all interested parties.

CLECs should be given access to all materials and assistance provided by U S WEST to the third party tester, to ensure that the development undertaken by the third party can be duplicated by competitors in the real world. Minutes should be kept of all contacts between the third party and U S WEST and made available to the CLECs. An open process including CLEC monitoring of the test ensures that current versions of systems/documentation are being tested and ensures that the third party is not receiving assistance and cooperation that the CLECs will not be able to enjoy following Section 271 entry.

AT&T recommends that the Arizona Master Test Plan follow the “open process” model that was used in the New York test and directly incorporate elements of that model into the Arizona Master Test Plan. Minutes were kept of all meetings between Bell Atlantic – New York (“BA-NY”), the third party tester, the test transaction generator and/or the New York Public Service Commission. These minutes as well as letters, test reports, test exceptions and all other relevant documentation was posted on a publicly available web site (URL <http://www.dps.state.ny.us/tel271.htm>). Through the use of the web site, documentation was made available to all parties at virtually the same time. The Master Test Plan should make it clear to both the third party consultant and the pseudo-CLEC that frequent and timely documentation of the testing process is a required part of the scope of work. Additionally, it should be made clear that all relevant documentation must be posted on a publicly accessible web site.

Rigorous, timely communication of the progress of the test process will help reduce the number of unpleasant surprises during the life of the test. This communication will also allow for mid-course corrections as new information is uncovered during the process. An open process will help all parties to develop the confidence that the test results are reliable.

F. The Arizona Master Test Plan should clearly require the third party consultant to produce reports for the Retail Parity Evaluation, the Change Management Test, and the Performance Measurement Evaluation Test Plan.

While the Proposed Master Test Plan has a requirement for the third party consultant to produce test reports for the Functionality Test (Proposed Master Test Plan, Section 4.7.4) and the Capacity Test (Proposed Master Test Plan, Section 6.7.4), there is no similar requirement for the Retail Parity Evaluation, the Change Management Test and the Performance Measurement Evaluation Test plans. As previously discussed, proper documentation and reporting will help all participants develop confidence in the overall test process. A failure to include these reporting requirements in the Arizona Master Test Plan could result in the successful third party test consultant asserting that reports for those three tests are “beyond the scope of work.”

G. Problems encountered during the test should be thoroughly documented as test exceptions, U S WEST should correct the problems and the problem component(s) should be retested.

Once a problem has been uncovered, U S WEST should correct the problem and retesting should be performed to ensure that the problem has actually been resolved. The Master Test Plan on pages 28 – 29 appears to allow U S WEST to submit a written

explanation of a problem instead of documented corrective action followed by retesting. Paper promises in the form of a written explanation are not sufficient evidence that U S WEST has corrected, or will correct the identified problem. Any test problems encountered should be corrected by U S WEST and then retested. Only then will there be sufficient evidence that the problem has really been fixed.

In the CA Master Test Plan, when an interface, system, or process tested by the Pseudo-CLEC/Third Party Consultant does not meet objective criteria, standards or expectations there is a formal process that includes retesting that must be followed to resolve the test exception. AT&T proposes that the exception process used in the CA Master Test Plan be used in the Arizona Master Test Plan. AT&T recommends the following test exception process be followed:

1. An interface, system, or process tested by the Pseudo-CLEC/Third Party Consultant does not meet objective criteria, standards or expectations.
2. The Pseudo-CLEC/Third Party Consultant creates a written Exception Report describing the issue(s) raised.
3. The Exception Report is delivered to the Third Party Consultant, as required.
4. If Exception Report affects business rules or interface, it is brought to the TAB.
5. U S WEST prepares a written response to the exception describing any intended fix(es).
6. U S WEST advises the Third Party Consultant that the fix is complete. The Third Party Consultant gives to the Pseudo-CLEC.
7. If the results meet the criteria, standards, or expectations, then the process

is considered complete.

8. If the results affect business rules or interface, the Third Party Consultant informs the TAB.

9. If the applicable criteria have not been met, the process is repeated until the criteria is met.

A thorough process of documenting, correcting and retesting identified test exceptions will provide the hard evidence that is necessary to determine that test exceptions are properly identified and properly corrected.

H. The Master Test Plan should include specific forms to be used in documenting the test specification for the required test scenarios.

While the Arizona Proposed Master Test Plan references the need for “[b]aselined test plan[s]” and “[t]est specifications” it does not define the form that these documents should take.³⁸ The NY Master Test Plan,³⁹ the CA Master Test Plan⁴⁰ and the TX Master Test Plan⁴¹ (a copy of the TX Master Plan is attached to these comments as Exhibit C) all identify and include descriptions and definitions of the documents used for the test scenarios/test specifications. AT&T believes that the form of the test specification in the TX Master Test Plan would be useful in the Arizona Master Test Plan. The use of the test specification format in the TX Master Test Plan will ensure that all parties know the proper documentation that must be completed before any test scenario can be executed.

³⁸ Arizona Proposed Master Test Plan, p. 26.

³⁹ NY Master Test Plan, Appendix A.

⁴⁰ CA Master Test Plan, Attachment 2, pp. 110 – 115.

⁴¹ TX Master Test Plan, Section 4.5.1.3, p. 53 and Attachment 4, pp. 118 – 125.

I. The Master Test Plan Should Include a Requirement for the Third-Party Consultant to Produce a Daily Report.

One of the tools that was used to manage the test process during the Texas collaborative test process, and will be used during the California test process, was the Daily Report.⁴² The Daily Report provides a review of the current progress of testing and gives an indication of potential areas of concern and technical issues. In Texas, the Daily Report was produced by the Test Manager and in California, the Daily Report will be created by the Test Administrator/Manager.

AT&T recommends that the third party consultant be required to produce and make publicly available a Daily Report. AT&T recommends that the Daily Report format as identified in the CA Master Test Plan be used in the Arizona Master Test Plan. The production of a Daily Report in the AZ Master Test Plan will ensure that all parties have current status of the test process. Frequent and timely communication of test results will help ensure that all parties can support the AZ collaborative test process and that the parties have confidence in the results of the process.

J. CLEC participation in the collaborative test process should not be limited.

One of the problems experienced by CLECs in another state collaborative test process was that the number of CLEC representatives that were allowed to participate in technical discussions associated with the testing were severely limited. CLECs were limited to just one or two representatives for several of the technical meetings. Conversely, the BOC could bring an unlimited number of participants to the technical meetings and workshops. The topic of OSS encompasses a wide range of subject matters

⁴² TX Master Test Plan, pp. 23 – 24, and CA Master Test Plan, pp. 30 – 32.

and it is sometimes difficult to have just one or two people that can speak to the wide range of issues that OSS discussions engender. To adequately address the wide range of subjects and issues during the testing process, it should be explicit that CLECs are not limited in the number of representatives that can participate in workshops and meetings related to the testing.

III. PERFORMANCE MEASUREMENTS

The performance measurement evaluation should be completed before any other testing or evaluation is initiated. The performance measures will be the “yard stick” against which U S WEST’s OSS access to both itself and CLECs will be measured. It is critical that the parties know how accurate, reliable, and repeatable the “yard stick” is before they start using it to measure U S WEST’s OSS access. It is also important to know just what the “yard stick” is supposed to be measuring.

Wasted effort could be the result if other tests and evaluations are initiated using the unaudited U S WEST data collection, analysis and reporting processes. It serves no party if tests are performed only to find out later that the measurements used to evaluate the tests were unreliable or misunderstood. The performance measurement evaluation should be the first test or evaluation performed during the collaborative process.

Not surprisingly, KPMG’s evaluation of BA-NY’s data collection processes revealed many discrepancies.⁴³ Some of the discrepancies remained unresolved at the time of the August 6, 1999 Final Report. Because the evaluation of the performance measurement data collection, analysis and reporting processes was not completed before

⁴³ Bell Atlantic OSS Evaluation Project, Final Report, Version 2.0, August 6, 1999, pp. POP-8 IV-178 through POP-8 IV-204 and pp. M&R4 V-60 through M&R4 V-83.

the functional and capacity tests were initiated, there is understandably a reduced amount of confidence placed in the processes that produced those results. The Arizona Commission would be well served to evaluate U S WEST's data collection, analysis and reporting processes at the onset of the test. This should allow any data collection process issues to be identified and resolved before they are allowed to potentially damage the reputation of the collaborative process as a whole or call into question the validity of the performance results.

IV. CAPACITY TESTING ISSUES

A. Capacity testing should clearly and explicitly include considerations of “stress volumes” to determine the ability of U S WEST to process a higher than normal volume of pre-order and order transactions in a timely manner.

CLEC orders to U S WEST cannot be guaranteed to arrive in a steady stream. Marketing programs and introductions into new areas will often result in a spike in the number of orders that CLECs submit to U S WEST. To truly reflect actual market realities, the capacity test should include an evaluation of U S WEST's ability to handle a surge in orders. AT&T recommends that the stress volume performance test that was used in the NY Master Test Plan be included in the Arizona Master Test Plan.⁴⁴ This will permit the Commission to obtain information on U S WEST's ability to handle the ordering spikes that will most certainly be associated with CLEC marketing practices.

B. The capacity testing should include considerations of the manual intervention that U S WEST requires for 100% of the CLEC orders.

The Master Test Plan appears to assume that CLEC orders will flow through from the CLEC to U S WEST's mechanized systems and interfaces. That is not the case.

⁴⁴ NY Master Test Plan, pp. IV-65 through IV-67.

Every order submitted by a CLEC to U S WEST requires some form of human intervention by U S WEST personnel. That human intervention takes the form of complete or partial retyping of the CLEC order, or manual review of the order. An accurate portrayal of U S WEST's ordering capacity must necessarily include considerations of the extensive manual intervention involved.

The Master Test Plan in section 6.11 does give some consideration to the manual processes involved in processing CLEC orders. However, that section inappropriately treats the manual intervention as a discrete item rather than as an integral part of U S WEST's ordering process. The manual processes should be included as part of the end-to-end testing process; not as a stand-alone process.

As the FCC has recognized, "[i]f [an RBOC] relies on manual procedures to process a significant portion of orders received via its [ordering] interface, the capacity of the electronic processes becomes less important than that of its manual procedures."⁴⁵ Such is the case with U S WEST's interfaces. U S WEST's requirement that 100% of CLEC orders be subjected to some form of manual intervention results in the manual processes creating a bottleneck in U S WEST's ordering process. To exclude the manual processes from an investigation of the end-to-end capacity of U S WEST processes renders the capacity test a waste of time. Only with considerations of the manual processes inherent in U S WEST's processes can a true portrayal of U S WEST's capacity be assessed.

C. The Capacity Test should address the downstream provisioning systems.

The Proposed Master Test Plan includes that statement that,

The Capacity Test does not address the downstream provisioning systems in which CLEC-initiated traffic and U S WEST-initiated traffic are combined. Those systems are considered mature and not in need of testing since they are part of U S WEST retail operations.⁴⁶

While U S WEST has not created any new downstream provisioning systems to support CLEC needs, how those downstream provisioning systems are used in the competitive environment may be quite new. To ensure that those downstream systems can support the CLEC requirements, they should be addressed in the Capacity Test. For example, the U S WEST Loop (or Line) Facility Assignment Control System (“LFACS”) is a downstream provisioning system that is used to support both CLEC unbundled loop and U S WEST POTS retail orders. While the LFACS system is common to both the unbundled loop and POTS provisioning processes, U S WEST asserts that the processes used to provision unbundled loops and POTS service are quite different. In order to get a true picture of the ability of U S WEST’s relatively new and immature processes to support CLEC orders, the downstream OSS components of those processes should be included in the Capacity Testing.

D. The Capacity Test should not be limited to only clean LSRs.

The Proposed Master Test Plan states that, “[f]or the ordering capacity test, clean LSRs will be used.”⁴⁵ AT&T disagrees with that approach and recommends that a representative mix of LSRs be used. Only using clean LSRs in the Capacity Test is not indicative of real-life CLEC ordering. The fact is that CLECs will send LSRs that are not clean – they will sometimes contain incomplete information or errors. To truly assess

⁴⁵ *Ameritech Michigan Order*, ¶ 194 (footnote omitted).

⁴⁶ *Arizona Proposed Master Test Plan*, p. 33.

U S WEST's real world capacity, a representative mix of clean and errored LSRs should be used. Reality is that LSRs with errors may take more time to identify and reject than will a clean LSR. Processing only clean LSRs will provide information only on U S WEST's theoretical capacity under the best of conditions.

E. The Capacity Test should be conducted during a complete billing month.

To minimize the possibility that U S WEST can mask its true capacity to process orders, the Capacity Test should be run over a thirty calendar day period. In a Capacity Test that lasts a short amount of time – one or two days – it is possible that U S WEST could devote extraordinary efforts to ensure that the test orders are given special attention. A longer duration test during a thirty calendar day period makes it more likely that U S WEST's true ability to process orders can be assessed.

F. The Capacity Test should include an evaluation of U S WEST's end-to-end capacity to provide CLECs with services and facilities.

The Arizona Master Test should make it clear that the Capacity Test is not only a test of U S WEST's ability to handle CLEC pre-order transactions and process CLEC orders, but it is a test of U S WEST's ability to actually install the orders as well. During the Texas testing, successful testing was defined as the SWB service order processor accepting the CLEC order. The testing did not consider that the orders had actually been successfully installed. In many instances the exact order that was declared by the third party tester to be successfully completed in ordering was not successfully installed. CLEC customers would lose dial tone or lose the ability to receive calls. While the third

⁴⁷ *Id.*, p. 33.

party tester viewed the order as successful, in the eyes of the CLEC's customers many of the orders were a complete failure. The Capacity Test should not be limited to successfully swapping the "bits and bytes" associated with orders and order status notices; it should also include the capacity of U S WEST to successfully install the ordered service

V. FUNCTIONALITY TEST ISSUES

A. Due date assignment should be an activity assessed as part of the pre-ordering functionality test.

Due date assignment should be one of the covered transactions in the pre-ordering Functionality Test. Presently, due date assignment is not included in the pre-order transactions to be tested in the Functionality Test.⁴⁸ While Appointment Scheduling is a part of the pre-order Functionality Test, appointment scheduling is not the same as a due date assignment. An appointment, as U S WEST uses the term, is a scheduled date and time when a U S WEST technician in the field is dispatched to a customer's premises.⁴⁹ A due date is a promise by U S WEST that a customer will have service installed on a specified date. Some installations will require a U S WEST technician to be dispatched (i.e., an appointment); others will not. For situations where the technician needs to be dispatched, the due date will often be the same as the appointment date. For those situations where a U S WEST technician need not be dispatched, the CLEC will require the ability to reserve a due date as a pre-order function.

⁴⁸ Arizona Proposed Master Test Plan, p. 21.

⁴⁹ *U S WEST 271 Proceeding*, Affidavit of Dean W. Buhler, Exhibit DWB-006, p. 7.

The FCC has defined due date information as a pre-order function.⁵⁰ In order to be responsive to the FCC's pre-order requirements, due date information, in addition to appointment scheduling, should be part of the pre-ordering functionality test.

B. The Functionality Test should test U S WEST's ability to send jeopardy notices to CLECs.

The FCC has identified order jeopardy notices as one of the order status notices that BOCs are required to provide to CLECs.⁵¹ Jeopardy notices should be included in the list of outbound transactions included in the Functionality Test.⁵² The NY Master Test Plan includes test targets for jeopardy notifications.⁵³ AT&T recommends that these jeopardy notice test targets be included in the AZ Master Test Plan as well.

C. The Functionality Test should include a test of U S WEST's ability to flow-through orders.

U S WEST has made claims that its OSS interfaces will soon support true flow-through of CLEC orders to U S WEST's service order processor without the need for manual intervention. The FCC has determined that order flow-through is a dispositive issue for purposes of Section 271 compliance. The FCC has clearly stated that a "substantial disparity between the flow-through rates of [an RBOC's] orders and those of competing carriers, on its face, demonstrates a lack of parity."⁵⁴ As the FCC also found:

⁵⁰ *Application of BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana*, CC Docket 98-121, *Memorandum Op. and Order*, FCC 98-271 (rel. Oct. 13, 1998). ("BellSouth Second Louisiana Order"), ¶ 94.

⁵¹ *BellSouth South Carolina Order*, ¶ 115, n. 347.

⁵² AZ Proposed Master Test Plan, p. 21.

⁵³ NY Master Test Plan, p. IV-34.

⁵⁴ *BellSouth South Carolina Order*, ¶ 107.

We give substantial consideration to order flow-through rates because we believe that they demonstrate whether a RBOC is able to process competing carriers' orders, at reasonably foreseeable commercial volumes, in a nondiscriminatory manner. Evidence of flow-through also serves as a clear and effective indicator of other significant problems that underlie a determination of whether a RBOC is providing nondiscriminatory access to its operations support systems. Our operations support systems analyses in the *BellSouth South Carolina Order* and *First BellSouth Louisiana Order* linked order flow-through with a variety of other deficiencies in a RBOC's operations support systems, including: (1) failure to provision orders in a timely manner; (2) failure to provide order status notices electronically; (3) failure to provide competing carriers with complete, up-to-date, business rules and ordering codes; and (4) lack of integration between pre-ordering and ordering functions.⁵⁵

Clearly, the FCC recognizes the importance of order flow-through. The FCC will be quite interested in U S WEST's ability to flow-through orders. Consequently, it is critical that the Arizona test verify the ability of U S WEST's interfaces to allow CLEC orders to flow-through to the U S WEST service order processors without the need for manual intervention of any kind. The NY Master Test Plan included just such tests.⁵⁶ AT&T recommends that the Arizona Master Test Plan include the flow-through testing that was included in the NY Master Test Plan.

D. The Maintenance and Repair Functionality Test should include testing of the ability to review a customer's trouble history and the ability for the CLEC to perform a Mechanized Loop Test ("MLT").

The ability to review a customer's trouble history and the ability to initiate MLT testing and receive the results of that testing are key activities associated with providing

⁵⁵ *BellSouth Louisiana Second Order*, ¶ 108 (emphasis added; footnotes omitted).

⁵⁶ NY Master Test Plan, pp. IV-36 through IV-37 and IV-67 through IV-70.

maintenance and repair support to a CLEC's customers. The Arizona Proposed Master Test Plan appears to limit the maintenance and repair Functionality Test to the activities specifically related to the creation of trouble reports. There is more to maintenance and repair activities than the act of creating a trouble report. To be at parity with functionality that is available to U S WEST repair center personnel, CLEC personnel must also have access to information that will allow CLECs to diagnose customer troubles. Trouble history review and MLT test capabilities are two tools that allow CLECs and U S WEST to diagnose customers' troubles. As such, these functions should be included in the Functionality Test of the Arizona Master Test Plan.

VI. APPENDIX B PERFORMANCE INDICATOR ISSUES

A. GA-1 Gateway Availability – Human-to-Computer and GA-2 Computer-to-Computer Interface.

In order to be providing nondiscriminatory access to U S WEST's OSS, U S WEST must make access to its underlying OSS available through its human-to-computer and computer-to-computer interfaces during the same scheduled times as it makes those OSS available to its own retail operations. U S WEST should be required to report the scheduled time that its interfaces are available to CLECs through the human-to-computer and computer-to-computer interfaces as well as to its retail operations. For the U S WEST retail operations, the salient point is not whether the retail operations choose to take advantage of the OSS availability, but whether the systems are available.

To illustrate the point, assume that U S WEST schedules its human-to-computer and computer-to-computer CLEC interfaces to the U S WEST underlying OSS to be available for twelve hours a day and the same underlying OSS are available to

U S WEST's retail operations for twenty hours a day. Even if the systems availability results show 100% scheduled availability for the human-to-computer and computer-to-computer interfaces, the fact that the underlying OSS was available to CLECs for eight fewer hours during the day would indicate discriminatory treatment.

B. PO-1 Pre-Order/Order Response Times.

It has been AT&T's experience that having a pre-order query executed through U S WEST's IMA-GUI interface is only half the battle. Prior to that, the IMA-GUI pre-order query screens must be activated. When a CLEC customer service representative attempts to activate an IMA-GUI pre-order screen, there is considerable waiting time on the part of the CLEC customer service representative while the IMA-GUI goes through all of its JAVA scripts. AT&T recommends that as part of the pre-order response times, the time to activate pre-order screens for both CLEC and U S WEST retail customer service representatives be examined.

As a general matter, the descriptions and explanations of the business rules regarding how the pre-order response time data will be collected, analyzed and reported are insufficient to provide an understanding of the measurement results. Several relevant questions remain unanswered in the details provided in the PO-1 measure. The lack of sufficient detail makes it unclear just what is being measured and how it is being measured. For example, CLECs and U S WEST could each be doing thousands of pre-order queries per day. Is U S WEST planning on collecting data for every query and every response? Is U S WEST going to take a sample of the queries and their responses? If U S WEST is taking a sample of query/response time transactions, how it the sample

being taken? Will the CLEC and U S WEST samples be taken the same way? The Arizona Master Plan needs to provide details on how the measurement data will be collected.

Another example of an unanswered question concerns when U S WEST starts the clock for pre-order queries and stops the clock for the pre-order responses. A CLEC query using IMA will go from the CLEC's terminal, through the network connection, to the Firm Order Manager, to the Data Arbiter, to Fetch-N-Stuff and finally get to the U S WEST databases that contained the required information.⁵⁷ Conceivably, all of these different systems will add time to the pre-order query/response time. What remains unclear in the Proposed Arizona Master Test Plan is at what points in the transaction journey will the start and stop times be triggered. The Arizona Master Test Plan should identify the points in the transaction flow at which the clock starts and stops.

Another deficiency in the PO-1 performance measure in the Proposed Master Test Plan is that it makes no reference to failed or errored queries. Many CLEC queries will have missing or inaccurate information. Should that occur, the U S WEST interfaces should notify the CLEC of that fact as soon as possible. Alternatively, insufficient U S WEST capacity to process CLEC queries could result in accurate CLEC queries being "timed out" because the U S WEST interfaces were not able to process both the incorrect and valid queries at the same time. The Arizona Master Test Plan should include considerations for failed or rejected queries in the details of measure PO-1.

The New York Department of Public Service has requirements that BA-NY must meet for CLEC performance measurements. A copy of New York's requirements are

⁵⁷ Proposed Arizona Master Test Plan, p. 10.

attached to this filing as Exhibit D.⁵⁸ The NY Performance Measurements contains measure PO-1, Response Time OSS Ordering Interface.⁵⁹ The NY PO-1 measure provides the measurement details that the Proposed Arizona Master Test Plan is lacking. Additionally, the NY PO-1 measure contains definitions of and considerations for rejected queries and queries that time-out. AT&T recommends adding the level of detail to the Arizona Master Test Plan PO-1 measure as exists in the NY PO-1 measure.

C. OP-1 Speed of Answer – Interconnect Provisioning Center and OP-2 Calls Answered Within Twenty Seconds – Interconnect Provisioning Center and MR-1 Speed of Answer – Interconnect Repair Center and MR-2 Calls Answered within 20 seconds – Interconnect Repair Center.

The Proposed Arizona Master Test Plan is also lacking sufficient detail for these measures. All four measures are keyed upon answering a call. However, it is unclear from the Proposed Master Test Plan what constitutes an “answer.” Is voice mail considered to be an answered call? Is the placement of the caller in a queue considered to be an answered call? Is an abandoned call considered an answered call? The Arizona Master Test Plan must make clear the definition of an answered call. AT&T recommends that a call would only be considered answered if it were answered by a live Interconnect Provisioning or Repair Center representative.

D. OP-3 Installation Commitments Met.

This is a key measurement in the Proposed Arizona Master Test Plan which is extremely unclear on just what is being measured. In addition, U S WEST’s definition of

⁵⁸ New York State Carrier-to-Carrier Guidelines, Performance Standards and Reports, *Bell Atlantic Reports*, Compliance Filing, July 12, 1999 (“NY Performance Measurements”).

⁵⁹ NY Performance Measurements, pp. 4 – 6.

a “met commitment” unfairly benefits U S WEST. The first concern is that the numerator in the OP-3 formula is the “Total Orders completed on Original Due Date.”⁶⁰ Reality is that for many orders the original due date will not be the final due date. CLECs may request changes that result in changes to the original due date. Alternatively, U S WEST may make changes to the original due date. It makes no rational sense why U S WEST would define the numerator in the Installation Commitments Met formula as the original due date when quite often the CLEC or U S WEST will make changes that extend or shorten the original due date.

The second concern is that under U S WEST’s definition, a commitment that is missed because of CLEC or CLEC customer-caused reasons is counted as a met commitment even if U S WEST was also not able to meet the commitment. Instead of being counted as a met commitment, a commitment missed because of CLEC or CLEC-customer caused reasons should be excluded from the OP-3 results. When a commitment is missed, a new commitment date must necessarily be negotiated. The new commitment date will give U S WEST the opportunity to make the commitment date and it is that new commitment date that should be included in the OP-3 results.

E. OP-4 Ordering and Provisioning Installation Interval.

Once again, this is a measure that has far too little detail on just what is being measured. U S WEST’s Performance Measurements Witness, Michael G. Williams provided oral testimony in the recent Nebraska Section 271 hearing that clearly demonstrated the deficiencies of U S WEST’s current OP-4 Installation Interval proposal. Mr. Williams’ testified that for some types of services and facilities that CLECs obtain

⁶⁰ Proposed Arizona Master Test Plan, Appendix B, p. B-3.

from U S WEST, orders held for facility reasons would be included in the average installation interval calculation. Mr. Williams also testified that for other services and facilities, orders held for facilities reasons would be excluded from the average installation interval results. Nowhere in the detail provided for measure OP-4 in Appendix B of the Proposed Arizona Master Test Plan does it explain when orders held for facility reasons would be included in the average installation interval and when they would be excluded.

Mr. Williams also testified that for CLEC orders where the CLEC requested due dates were longer than the U S WEST standard installation intervals, U S WEST would exclude those results from the average installation interval calculation. However, Mr. Williams also testified that for U S WEST retail orders where the customer requested a due date longer than the standard installation interval, the order would be included in U S WEST's average installation interval results. Selective exclusion of longer interval CLEC orders from the average installation results while selective by including those same type of orders in U S WEST's results will make the CLEC average installation results appear shorter than they really are and the U S WEST retail results longer than they really are. U S WEST's self-serving exclusion and inclusion of installation interval data results in any comparison of CLEC and U S WEST data being unreliable and inappropriate.

Setting aside for the moment the patent unfairness of U S WEST's manipulation of the data, nowhere in the information that U S WEST provided for the OP-4 Installation Interval Measurements can this selective inclusion or exclusion of data be seen or

determined. This “data chicanery” calls into question what other data tricks U S WEST has up its sleeve.

At a minimum, the OP-4 Installation Interval Measurement should clearly identify any product specific data treatment differences. Additionally, any product specific data treatment differences should be consistently applied between CLEC and U S WEST retail or internal results. Only then, can the Commission hope to be able to make relevant comparisons of CLEC and U S WEST data.

Finally, rather than throwing away data through exclusions, AT&T recommends that additional data disaggregation be used. There should be a bias towards retaining as much data and order experience as possible. For example, it is reasonable that intervals for orders where facilities are available should not be lumped together with orders where facilities are not available. However, the solution is not to, as U S WEST does in some circumstances, throw out all of the data for orders with no available facilities. The solution is to separately report orders with facilities and orders with no available facilities. In that way, the Commission can determine whether CLEC orders with no facilities available are being filled as quickly as U S WEST customer orders with no facilities available.

F. OP-5 Installation Trouble Reports.

U S WEST has a business rule for the OP-5 Installation Trouble Report measurement that is anything but clear. The formula in the Master Test Plan indicates that the denominator of the calculation is the “Total Number of New Installation Orders

Completed in the Reporting Period.”⁶¹ During the recent Nebraska Section 271 hearing, U S WEST’s Performance Measurements witness Michael G. Williams testified that when U S WEST performed the actual calculation, the denominator for the calculation was not the number of installation orders completed during the reporting period. Instead, Mr. Williams testified that the denominator was the monthly average number of orders completed during the reporting period and the month prior to the reporting period. Once more, U S WEST’s understanding of the method of calculating a performance measurement result bears little resemblance to the description provided in its documentation.

G. OP-7 Coordinated Cutover Interval – Unbundled Loop, OP-8 Coordinated Number Portability Timeliness, and OP-9 Combined Coordinated Cutover Interval Unbundled Loop and Number Portability.

There are five key elements of a successful coordinated cutover of an unbundled loop. They are: 1) starting and completing the unbundled loop cutover within the agreed upon timeframe, 2) completing the cutover in as short a time as possible and, for loops with associated LNP, 3) having the LNP trigger activated prior to the loop cutover, 4) calling the CLEC to inform it that the cutover has been completed and 5) only removing the switch translations after the LNP trigger has been activated and the unbundled loop has been converted. Obviously, the customer will be out of service when the actual “lift and lay” is being performed. What may not be so obvious is that failure to properly perform any of the other four key elements can also result in the customer being out of service or experiencing degraded service conditions. Most cutovers of unbundled loops for existing service are done within an agreed to narrowly defined window of time. The

⁶¹ Proposed Arizona Master Test Plan, Appendix B. p. B-11.

window of time, usually a period of an hour, is coordinated such that the customer, the CLEC and U S WEST agree to and can plan for the out of service condition that is inherent in loop conversions. If U S WEST converts the loop either earlier than planned or later than planned, customer dissatisfaction by the CLEC customer is a likely result. The customer will be planning on not using his or her phone during the scheduled window of time and will be planning on using the phone outside of that window of time. Going out of service at a time period not agreed to by the customer because U S WEST converted the loop early or late can unnecessarily inconvenience the customer and will likely reflect poorly on the CLEC.

If U S WEST has failed to activate the LNP trigger prior to the loop cutover, once the loop is converted to the CLEC, the customer will be unable to receive incoming calls. It goes without saying that an inability to receive calls will impact customer satisfaction with the CLEC's service even if U S WEST caused the problem. Once the loop has been converted by U S WEST, it is critical that U S WEST proactively inform the CLEC of that fact. The CLEC needs to know that the loop conversion work has been completed before the CLEC can send the broadcast message to the NPAC number portability database. Once the CLEC sends the broadcast message, the number portability process is complete and the CLEC's customer should be able to receive calls. If U S WEST completes the loop conversion but fails to inform the CLEC of that fact, the CLEC's customer will also be unable to receive incoming calls. To permit the CLEC to complete the LNP process, U S WEST must inform the CLEC that the loop conversion has been completed. Finally, if U S WEST eliminates the customer's translations in its switch before the loop has been converted and the customer's number has been ported, the

customer will be unable to receive calls. Again, this will cause dissatisfaction on the part of the customer.

Out of the five key elements of a successful unbundled loop conversion, U S WEST has only proposed measures that address two. The OP-7 measure does appear to measure how long the lift and lay time is and the OP-8B measure does appear to track U S WEST's performance in activating LNP triggers prior to the lift and lay time.

However, there are no performance measurements to track U S WEST's performance in starting and completing the loop conversion activity within the scheduled window of time, there is no measure that tracks U S WEST's obligation to call the CLEC and let it know that the loop conversion has been completed and there is no measure of U S WEST's performance in removing switch translations only after the loop has been converted and the customer's number ported. These three elements of U S WEST performance need to be monitored and included in the Arizona Master Test Plan.

These are not theoretical problems. AT&T's experience with U S WEST in Arizona is that U S WEST frequently starts and completes loop conversions outside of the agreed to window of time, neglects to inform AT&T or provides only late notice that a loop conversion has been completed, and removes switch translations prior to the loop conversion. None of these customer affecting issues would be captured in any of U S WEST's performance measurements.

AT&T recommends that the OP-7 measure be modified to include an additional measure of Percentage of Coordinated Loop Cutovers Completed Within the Scheduled Interval. The scheduled interval would be defined as a one-hour interval at the scheduled date and time. An order would only be considered complete after U S WEST notified the

CLEC that the conversion installation activity was completed. The formula for that measure would be (Total Number of Coordinated Unbundled Loop Orders Completed within the Scheduled Interval)/Total Number of Coordinated Unbundled Loop Cutovers). The addition of this measure would address the problem of non-scheduled cutovers and failure to inform the CLEC that the loop conversion activity has been completed.

AT&T also recommends that for orders of loop conversions with number portability, a measure of the Percentage of Switch Translations Removed After Loop Cutover and Number Portability be included as an additional measure in the Arizona Master Test Plan. Apart from issues of wiring during the actual loop cross connection process, the two additional measures should allow tracking of most of the U S WEST performance issues that cause problems during unbundled loop conversions.

H. MR-3 Out of Service Cleared Within 24 Hours – Non-designed Repair Process, MR-4 All Troubles Cleared With 48 hours – Non-Designed Repair Process, MR-5 All Troubles Cleared Within 4 hours – Designed Repair Process, MR-6 Mean Time to Restore, MR-7 Repair Repeat Report Rate, and MR-8 Trouble Rate.

All of these measures exclude troubles “found to be related to customer equipment, customer education, inside wire, and no access.” Rather than excluding these orders, AT&T recommends that the data be separately collected. During the New York collaborative test process, the third party tester suspected that Bell Atlantic was devoting less attention to the clearing of CLEC trouble reports than for trouble with Bell Atlantic’s retail customers.⁶² The suspicion was that rather than take the time to correctly identify the trouble, the Bell Atlantic repair technician would be quick to code the trouble as “no trouble found,” test OK or some other customer caused reason. The third party tester

reviewed Bell Atlantic processes and data and discovered that CLEC troubles were disproportionately being coded to causes not attributable to Bell Atlantic and were closing troubles that probably should have received more diagnostic activity. The fact that the data was available allowed the third party tester to investigate its suspicions. Rather than excluding these reports from the analysis, AT&T recommends that reports found to be related to customer equipment, customer education, inside wire, and no access be separately reported from other types of trouble reports.

I. CP-1 Collocation Provisioning Installation Commitments Met.

This measure shares one of the same problems that exists for the OP-3 Installation Commitments Met measure. It also gives U S WEST credit for a commitment met if the CLEC is not ready even if U S WEST is also not ready. Rather than counting the CLEC not ready order as a commitment met, the order should be excluded from the calculations and the order should be measured against the new commitment date.

J. DPO-2 Pre-Order/Order LSR Rejection Notice Interval.

The LSR Rejection Notice Interval is measured in units of whole business days. If an LSR is to be rejected it should be rejected as quickly as possible. It is more appropriate that the LSR rejection notice interval be measured in increments of hours and minutes rather than whole business days. It appears that U S WEST has, or can easily obtain, the ability to report the LSR reject notice interval in units of hours and minutes as

⁶² State of New York, Department of Public Service, Bell Atlantic OSS Evaluation Project, Final Report, Version 2.0, August 6, 1999, pp. M&R5 V-75 through M&R5 V-76 and M&R5 V-82.

U S WEST's proposed formula for this measure states that the "date and time of rejection notice transmittal" and the "date and time of LSR receipt" will be collected.

K. Average Interval Offered.

U S WEST states that CLECs should count on the U S WEST standard installation intervals when facilities are available. A measure of average interval offered will monitor how well U S WEST does in actually returning FOCs that have the standard installation interval as the confirmed due date. The New York Department of Public Service has developed a measure of average interval offered that AT&T recommends be included as a measure for the Arizona Master Test Plan. The New York measure is PR-1 Average Interval Offered.⁶³

L. Jeopardy Notice Measurements.

The FCC has determined that it is critical for a BOC to provide jeopardy notices to CLECs if the BOC knows beforehand that it will not meet a committed installation due date. Specifically the FCC stated:

... it is critical that the BOC provide the competing carrier with timely notice if the BOC, for any reason, can no longer meet that due date. These notices are called order jeopardy notices.⁶⁴ (footnote omitted)

The Proposed Arizona Master Test Plan does not include any measures of order jeopardy notifications. AT&T recommends that PR-7 of the New York Performance

⁶³ NY Performance Measurements p. 30.

⁶⁴ *Ameritech Michigan Order.*, ¶ 130

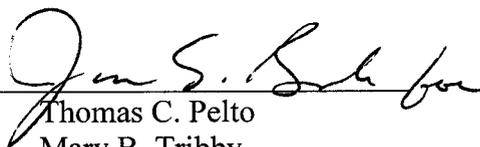
Measurements be added to the Arizona Master Test Plan to monitor U S WEST's performance in providing these critical FCC order status notices.⁶⁵

VII. CONCLUSION

The Proposed Master Test Plan provides a good starting point. However, there are items, tests and requirements contained in the New York, California and Texas test plans that should be incorporated in the final Arizona Master Test Plan for U S WEST OSS. The additions will help to ensure that U S WEST's OSS meet the requirements of the Act and the FCC's orders.

RESPECTFULLY SUBMITTED this 17th day of September, 1999.

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⁶⁵ NY Performance Measurements, p. 48.

CERTIFICATE OF SERVICE

I hereby certify that the original and 10 copies of AT&T's and TCG's Statement of Position on the OSS Collaborative Process were filed this 17th day of September, 1999, with:

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EXHIBIT

A

This filing will be supplemented on
Monday, September 20, 1999,
with the NY OSS Evaluation Project Master Test Plan,
Final Version 2.0 Dated July 31, 1998
("NY Master Test Plan").

Copies of the NY Master Test Plan will be available to
workshop participants on Monday, September 20, 1999.

EXHIBIT

B

PACIFIC BELL
OSS MASTER TEST PLAN

The California Public
Utilities Commission

Version 3.0
June 28, 1999

OSS Master Test Plan

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1. DOCUMENT UPDATES

Update Version	Updated by	Date	Description of Updates
2.0	Pacific Bell	6/2/99	
2.03	Telcordia	6/12/99	Changes made during OSS Test workshop, June 7 through 15, 1999
3.00	Telcordia	6/28/99	1. Reflects Commission decision on open issues. 2. Reflects industry comments on test scenarios.

1.1 Master Test Plan Change Control

This document has been issued by the CPUC under its ACR dated June 28, 1998. Comments from all parties will be expected by July 11, 1999. Once comments have been reviewed, this document will be placed under Change Control by the Commission. Any further change being considered for this document will be published to the industry before being included in this document. The Commission reserves the right to include or exclude any changes to this document.

1.2 Reasons for re-issue and changes

There are no changes to this document at this time. Prior versions of this document have been drafts, issued for comment. This is the first baseline issue of this document; hence there are no changes. If any changes occur, they will be summarized here and indicated within the body of the document as appropriate.

2. EXECUTIVE OVERVIEW

This Master Test Plan, once executed, will evaluate for the California Public Utilities Commission (CPUC), Federal Communications Commission (FCC) and Department of Justice (DOJ), the operational readiness, performance and capability of Pacific Bell (hereafter referred to as Pacific) to provide pre-ordering, ordering, provisioning, maintenance & repair (M&R) and billing Operations Support Systems (OSSs) functionality to the Competitive Local Exchange Carriers (CLECs). This Master Test Plan (MTP) is the result of a rigorous process initiated by the CPUC with collaborative workshops in the summer of 1998 and continued in June 1999. In the Commission's decision, D.98-12-069, on Pacific's draft 271 Application issued on December 17, 1998, the Commission set forth various parameters that this Master Test Plan must meet.

The goal of the test plan is to provide a plan to validate/assess Pacific's readiness and capability to provide pre-ordering, ordering, provisioning, maintenance and repair and billing OSSs functionality to CLECs. The MTP results will be summarized and reported in an OSS Compliance Final Report, that will be written by the Test Administrator and submitted to the Commission for its use. These tests will primarily take place in addition to normal retail and CLEC activity in a production environment. The test focus, including performance/parity, consists of:

- End-to-End/Functionality Test - will test end-to-end processes from pre-ordering through provisioning and billing, and maintenance and repair. Testing will be performed with Pacific's production OSSs and processes. Test will focus on Unbundled Network Element (UNE) Loop with Port, Basic Loop and Asymmetric Digital Subscriber Line (xDSL) types of services and LNP. (Note: An additional test will be completed for stand-alone Directory Listings).
- Capacity Test - will test the capacity of Pacific's pre-ordering and ordering processes for Resale, UNE Loop with Port, Basic Loop with and without Number Portability (NP), and stand-alone Local Number Portability (LNP) types of service. Testing will be performed with Pacific's production systems and processes. An analysis of scalability of Pacific's systems and procedures will also be performed.

The test strategy and approach, test case scope and focus, timeline, responsibilities, risks and various phases (planning, preparation, execution/analysis/assessment and approval) and their associated activities are a part of this plan. Successful completion is required by Pacific to achieve approval for entering the interLATA telecommunications market. Focusing the scope of

OSS Master Test Plan

testing in various phases, identifying teaming, roles and responsibilities and specific accountabilities will help expedite the necessary steps to achieve completion. Implementation requires the involvement of independent third parties to perform three distinct roles: Test Generator, Test Administrator/Manager, and Technical Advisor to the CPUC. The CPUC will provide overall project management, the Technical Advisor will assist the CPUC Staff, and the Test Administrator/Manager will oversee the execution and assess the processes and test execution. Implementation also requires Test End-Users, which will consist of employees of Pacific and the Test Administrator/Manager and others to be determined. The Test End-Users will be used to primarily provide for the usage related needs of the testing. This Master Test Plan provides the framework for the detailed test plans, which will be developed by the Test Administrator.

3. INTRODUCTION

The California Public Utilities Commission (the Commission) is currently investigating Pacific Bell's entry into the interLATA telecommunications market, pursuant to Section 271 of the Federal Telecommunications Act. As part of this investigation, the Commission is undertaking an evaluation of Pacific's OSSs, including the interfacing process which allow CLECs to compete with Pacific in providing local telephone service. These OSSs include those that provide for the mechanized CLEC interfaces for pre-ordering, ordering, provisioning, maintenance and repair and billing capabilities necessary for CLECs to provide Local Service in Pacific's serving areas. The evaluation will test whether Pacific OSSs provide parity or nondiscriminatory access with meaningful opportunity to compete with CLECs by using a Third Party performing CLEC activity providing service in Pacific territory in California.

3.1 Purpose and Goals

This Master Test Plan has been developed to assess Pacific's OSS readiness to support CLECs in the state of California. It outlines the strategy for the evaluation of the readiness of Pacific's OSS to handle CLEC business. It includes the test scope, requirements, overall schedule/timeline, test environment, entrance and exit criteria for each phase, test approach and responsibilities among the test participants. It provides the framework for the development of detailed test cases and test scripts. By defining the overall test process, this document will serve to reduce the amount of unanticipated problems that may impede progress of this test.

The test scenarios defined by Pacific and the CLECs that will be verified by the Test Administrator/Manager are included in this Master Test Plan document. The details will be provided in the Test Specifications document to be created by the Test Administrator as part of its test planning process defined in the Functionality and Capacity Test planning sections.

The Goals of this Master Test Plan include:

- Define the Scope of testing.
- Define the testing process and methodology that will be used to perform the Pacific OSS evaluation following the OSS recommendations specified by the Commission, including, but not limited to, D.98-12-069, and the applicable Performance Measures
- Provide overall framework for the test activities and validation of the testing

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- Provide for a collaborative approach among the CLECs, the Commission, Pacific, and the Third Parties as appropriate
- Provide expeditious sequencing of activities
- Define project dependencies and provide the approach for managing them closely
- Maintain consistency with generally accepted industry practices and processes.
- The testing approach will be “military” in nature, that is, test until success as described in Appendix C.
- “Testing Load” – A predefined number of pre-order transactions and local service requests specified on both an hourly and daily basis, that are to be processed in the capacity tests, which should, when combined with the appropriate scalability analysis (to be prepared by consultants), provide the Commission with sufficient information to determine the commercial readiness and robustness of those aspects of Pacific’s OSS under test.
- “Mix of Services” – The percentages of different types of services and/or UNEs that the parties have agreed to, or the Commission has ordered, can be used in the functionality and capacity tests to guide the test administrator in determining how many local service order requests of each type should be processed.

3.2 Scope

The evaluation will cover order types associated with the various modes of CLEC entry: Resale, LNP, UNE Loop with Port, Basic and Assured Loops, xDSL, DS1-capable loops and stand-alone Directory Listings. For UNEs, the functional areas of pre-ordering, ordering and provisioning, billing, and maintenance and repair will be tested. Testing will include both residence and business orders and will encompass new, reconfigurations “as specified”, change orders, outside moves, disconnects, cancellations, and suspend and restore order types. From an ordering perspective, the Pacific OSSs will generate acknowledgements, error rejections, Firm Order Confirmations (FOCs) and Service Order Completions (SOCs). In addition, testing will also include items such as a variety of feature combinations, directory listings (“as is” and “as specified”), hunting, 900/976 blocking, and toll restrictions. Detailed requirements for the functionality to be tested are given in Section 6.

There are two types of tests that will be conducted:

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1. A Functionality Test will focus on both the mechanized and manual support functions. The evaluation will cover the various order types associated with four modes of CLEC entry: UNE Loop with Port combination, stand-alone LNP, UNE 2-wire loops with and without number portability, number portability, UNE DS1 loops with and without number portability (see Table 6-1). It will also include the evaluation of Pacific OSSs' ability to meet a set of applicable Performance Measures. These Performance Measures will be used to evaluate parity or applicable benchmarks between the service Pacific provides to its own retail customers and the service it provides to its CLEC customers.
2. A Capacity Test will focus on the ability of the Pacific OSSs to support a given mechanized workload [Local Service Requests (LSRs) that are Automatic Order Generator (AOG) eligible¹]. Some errors that can be handled by mechanized processes will be introduced as part of this test. Orders will be processed to service order distribution (FOC). The evaluation will cover order types associated with various modes of CLEC entry: UNE loop with port combination, UNE 2-wire loops with and without LNP, stand-alone LNP, resale, and stand-alone directory listing (see Table 6-3). It will also include the evaluation of Pacific OSSs' ability to meet a set of applicable Performance Measures. These Performance Measures will be used to evaluate parity or applicable benchmarks between the service Pacific provides to its own retail customers and the service it provides to its CLEC customers.

Table 3-1 provides a summary of the test areas and types of testing to be performed.

Table 3-1: Test Areas and Types of Testing

Function	Functionality Test	Capacity Test
Pre-ordering	X	X
Ordering	X	X ²
Provisioning	X	
Maintenance and Repair	X	
Billing	X	
Flow-through Tests	X	X
Performance Measures	X	X ³

In general, testing will be conducted for a pre-determined set of error free test scenarios. However, for the Functionality Test, a set of the most common error scenarios will be covered under this evaluation. The Test Administrator/Manager

¹ AOG eligible refers to those LSRs that do not require manual intervention.

² Up to and including the service order distribution process (FOC) (i.e., for purposes of this test plan all steps following are considered provisioning).

³ Limited number of Performance Measures as defined in Section 6.4.

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will define the number and type of error scenarios to be covered. The number and defined type of error scenarios will not be shared with Pacific so as to maintain a level of "blindness".

The Competitive Checklist (i.e., 271), the Public Interest and Section 272 compliance issues defined in D.98-12-069 will not be addressed directly.

3.3 Audience

The audience for this document is expected to be Pacific, the Test Administrator/Manager, the Test Generator, the FCC, the DOJ, and the CLECs.

Note: In an Assigned Commissioner Ruling (ACR) dated May 21, 1999, the CPUC Telecommunications Division has been ordered to convene informal workshops to finalize this Master Test Plan. The collaborative sessions were held June 7 through June 15, 1999.

3.4 Open Issues

There are currently no open issues. If they were to occur, they would be summarized here and throughout the document, they would be indicated within braces { }.

4. ENVIRONMENT

4.1 Architectural Blueprint

The systems included in this test environment are expected to be production systems. Pacific Bell and MCIW are responsible for their liability associated with using their production environments for this test. They are responsible for modifications made to their systems, potential disruption to or impairments of their telecommunications services or customers as a result of this test. Any tools required for this test will be supported, administered and maintained by the respective participants. The following depicts the architectural blueprint of the environment to be used for testing. In addition, an Electronic Bonding Interface (EBI) from MCIW to Pacific's maintenance and repair system is included as is an MS Gateway from the test generator to Pacific's 911 gateway.

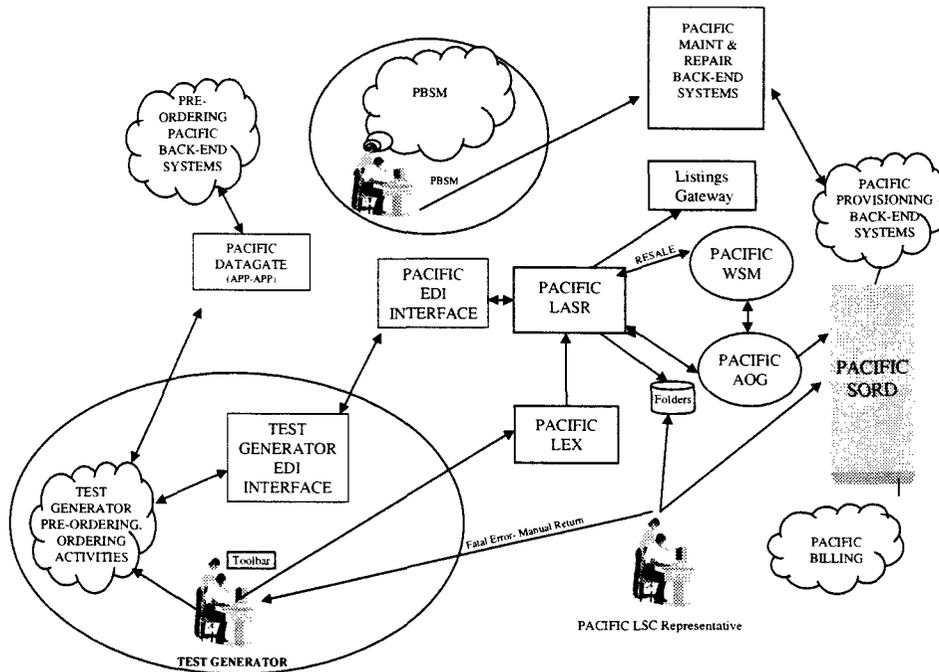


Figure 1: Architectural Blueprint

4.1.1 Account Environment

Pacific, under the direction of the Test Administrator, will provide test accounts that will be used to reconfigure, change, and disconnect services for the purpose of Third Party OSS Interface Testing. These test accounts are a combination of local exchange company facilities and database entries in Pacific's systems. Pacific will create dummy accounts with TNs and customer records (CSRs) that will be used in the testing process. Pacific will input this data before the test begins, establishing these test accounts as in-place lines of various types. This information in the form of name, address, TN, of the live (but created for the test) service will be provided to the Test Administrator/Manager.

The Test Generator will develop and submit orders against these test accounts. Test calls will be made from the test line (connected to telephones dedicated to testing) so that billing information (daily usage feeds and telco charges) can be collected. The test accounts will be on Pacific's real production systems and will be set aside for the use of the Test Generator. The Test Administrator/Manager, based on the Master Test Plan, will determine the test account requirements.

4.2 Operations Support Systems (OSSs)

This section details the various systems included in this test. Details are provided on the new systems⁴ developed by Pacific to handle CLEC customer service requests which provide for a mechanized process flow and those that provide the CLEC access to the Pacific OSS in case they do not have their own mechanized (i.e., application to application) interface developed. The releases associated with these systems are typically expected to remain the same for the duration of the tests. However, since the environment to be used for testing is the production environment, changes are expected to be required. Therefore, deviations from the baseline environment must be identified to the Test Administrator/Manager along with an impact statement associated with the changes within the release that may impact this testing. Then a decision will be made relative to subsequent actions/activities.

The environment will be the current Pacific production environment, with inputs supplied according to the PMO (Present Method of Operation).

4.2.1 Pre-Ordering

⁴ These Pacific systems include DataGate, EDI Interface, LASR, AOG.Folders, WSM, LEX, Verigate, EBI, MS Gateway.

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Verigate provides the GUI for pre-ordering functionality, and DataGate will provide the app-to-app connectivity for the pre-ordering functionality. DataGate and Verigate allow a CLEC to perform the following information on-line:

1. Customer Service Record (CSR) - view current service records as a result of a customer providing authorization for a change
2. Address Verification/Dispatch - verify service address information as registered
3. Request for Telephone Number (TN) - reserve one or more telephone numbers for new connections. Reserved TNs are available for 30 days. TN assignment and cancellation is also included.
4. Service Availability/Product and Feature Availability (PFA) - retrieve a list of services and features that are provided from a particular local serving office. Common Language Location Identification (CLLI) Code represents the switch that provides service to the telephone number requested.
5. Service Appointment Scheduling - Due Date - view available dates and appointment times for the verified address [Note: Applicable for Resale (Capacity Test only) and UNE Loop with Port.]
6. Facility Availability - Access to LFACS Information (ALF) – allows the CLEC to view whether dispatch is required for connection of a new line of service at a verified residential address. This transaction also provides Facilities, spare and defective pair information for residential customers at the verified address.
7. Primary Interexchange (IXC) Carrier (PIC) selection/Local Primary Interexchange Carrier (LPIC) selection/Carrier Identification Code (CIC) – identifies the available IXC selections for customer PIC/LPIC selection at the switch level.
8. Number of Rejects/Failed Inquiries
9. Support K1023 pre-order processing for xDSL (available via fax transmission).

4.2.1.1 DataGate – Mechanized Access

DataGate is a Pacific-developed interface, which provides for pre-ordering capabilities from an application to application interface. Therefore, with

OSS Master Test Plan

DataGate, CLECs can build a mechanized (i.e., electronic) interface to the Pacific pre-ordering OSS.

4.2.1.2 Verigate – GUI Access

Verigate provides for pre-ordering capabilities from a GUI interface.

4.2.2 Ordering

There are several Pacific systems involved in the ordering process. They include LEX, EDI, LASR, WSM, AOG, and SORD.

4.2.2.1 Local Service Request Exchange (LEX) – Manual Access

LEX is the GUI that provides online manual access to create, maintain, submit and status (e.g. issued, FOC, SOC, etc.) LSRs submitted to Pacific. LSRs submitted by CLECs which pass initial edits are processed by Pacific OSSs to create service orders and provide for subsequent provisioning of the requested services.

4.2.2.2 Electronic Data Interchange (EDI) Interface- Mechanized Access

The EDI Interface receives LSRs from the CLECs and translates them to a format acceptable by Pacific internal systems. For LSRs that are received via this interface their status is also returned via this interface (e.g. acknowledgement, reject notification, FOC, SOC, etc.). The CLEC LSRs, which pass initial edits, are processed by the Pacific OSSs to create service orders and to provide for subsequent provisioning of the requested services.

4.2.2.3 Local Access Service Request (LASR) – Mechanized Access

LASR provides for the mechanized editing of the LSRs. LASR receives LSRs from either the EDI Interface or LEX. If LASR receives the LSR with an error rejection condition across the EDI interface, it returns the rejection notification through that interface. If LASR receives the LSR with an error rejection condition via LEX, it returns the rejection notification through that interface. After the LSR passes LASR edits, LASR determines if an LSR is “AOG eligible”.

4.2.2.4 WSM (Wholesale Service Manager)

OSS Master Test Plan

This system provides for mechanized editing of resale LSRs. WSM receives LSRs from either the EDI interface or LEX.

4.2.2.5 Automatic Order Generator (AOG)– Mechanized Access

Automatic Order Generator (AOG) creates a service order from the entries on the LSR as well as from additional tables, to obtain data that is not required on the LSR but is necessary for service order creation. AOG then processes it and creates the service orders. If the service orders are successfully created, AOG attempts to distribute them to SORD for downstream processing. During processing, AOG encounters one of the following situations:

- Creates one or more service orders on AOG eligible LSRs and thus, successfully distributes the service order to SORD
- Creates the service order but is unable to successfully distribute the service order to SORD
- Finds “Non Fatal” Error in which the LSR must be processed manually. Service orders will be manually created or a reject notice will be manually created and electronically transmitted to the CLEC.

4.2.2.6 Folders – LSR Database

Folders is a database system for LASR that provides Pacific Local Service Center (LSC) representatives with the ability to view LSRs and provide reports of LSR status during the processing of CLEC LSRs. LSRs input to LASR from either the EDI Interface or LEX are stored in the Folders database. For the test, LSRs will have any of four (4) new test OCNs. This is to enhance anonymity of the test cases.

4.2.2.7 Service Order Retrieval and Distribution (SORD) – Mechanized Access

Service Order Retrieval and Distribution (SORD) provides the service order distribution and assignment processing and associated information. SORD provides the FOC and SOC status back to the CLEC via LASR or WSM to either EDI or LEX, whichever mechanism in which it was received. The FOC is a response from the service order processor that represents the acknowledgement of receipt of an order from a CLEC. The SOC is a response from the service order processor that represents the acknowledgement of successful completion of the service order. Manual input is provided to create the service orders for complex orders and non-AOG eligible orders.

4.2.2.8 MS Gateway

This interface system is used to populate E911 database information in support of emergency services.

4.2.3 Provisioning – Backend Systems

Several Pacific backend systems provide for the provisioning functions. These systems are generally not directly accessed by the CLECs. These systems support processing for functionality provided to the CLECs as they do for Pacific retail customers. They will provide for the assignment of facilities as needed.

4.2.4 Maintenance and Repair

4.2.4.1 Pacific Bell Service Manager (PBSM)

Pacific Bell Service Manager (PBSM) is a Pacific developed character based stand-alone system that provides access to Pacific's maintenance and repair functionality. PBSM enables the CLECs to submit trouble reports for its end-users, check the status of a trouble report, view trouble history and perform Mechanized Loop Test (MLT) as described below. PBSM will support trouble reporting on Resold Plain Old Telephone Service (POTS) UNE, including Loop with Port and 2-wire Loop (Basic, Assured, four-wire DS1 & xDSL).

PBSM has the capability of initiating a MLT and receiving test results for UNE Loop with Port. The MLT test can be performed without initiating a trouble report. The MLT functionality of PBSM will provide the capability of performing a full MLT test. The MLT test provides results for Direct Current (DC) and Alternating Current (AC) K-OHM measurement for Tip to Ring, Tip to Ground, and Ring to Ground. It also displays Tip to Ground and Ring to Ground DC voltages and if Ringers are detected on the loop. The test also displays the Central Office (CO) line check and dial tone check. The test also provides capacitance test readings and estimated loop length. The MLT test code is returned along with its English Translation, such as "Test OK".

The MLT results will allow the CLEC to determine if trouble exists on the Pacific loop and associated Customer Premise wiring and equipment (CPE) to which it is connected. MLT does not provide any method of sectionalizing the trouble report between the Pacific network or the CPE unless a Maintenance Test Unit (MTU) exists in a Standard Network Interface (SNI) at the end-user's premise.

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PBSM does not support reporting trouble on disconnected services or Telephone Numbers (TNs) that have been ported out of Pacific.

4.2.4.2 Electronic Bonding Interface (EBI)

Electronic Bonding is an industry standard for Maintenance and Repair. Pacific will provide the EBI interface to communicate with MCIW's EBI application. This interface will be used for selected Maintenance and Repair test cases.

4.2.5 Billing and Usage – Backend Systems

Many backend systems provide for billing and usage. These systems are not directly accessed by the CLECs. These systems support the same processing for the same functionality provided to the CLECs as used to provide for Pacific retail customers. They provide for the production of the wholesale bill to the CLECs. The next section describes the main system that provides for the UNE bill.

The Functional Testing will be limited to a manual review of the paper output of the billing and usage systems (customer bill) and the usage mag tapes normally provided to CLECs. It will not include the testing of mechanized transmission of these outputs.

4.2.5.1 Carrier Access Billing System (CABS)

The Carrier Access Billing System (CABS) is a Pacific system that provides for CLEC billing. CABS receives feeds from Toll/Usage, Service order and Payment systems on a daily basis in order to render CLEC bills. The UNE billable elements are:

- Charges:
 - Monthly Charge From/Through Dates
 - Usage Charges (by Jurisdiction), OC&Cs (by Jurisdiction), Monthly Charges, Surcharges, Taxes (by tax authority), and Total Current Charges
 - Originating (Overall Company Code)
- Detail of Adjustments:
 - Adjustment Description

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- Adjustment From Date, Adjustment Through Date
- Audit (Claim) Number
- Exchange Carrier Circuit ID (ECCKT)/Telephone Number
- Adjustment Amount (By Jurisdiction)
- Rate Element Quantity
- Discount and Zone Information (if applicable)
- Detail of Other Charges and Credits (OC & C):
 - OC&C From Date, OC&C Through Date
 - Invoice Number, Purchase Order Number
 - Telephone Number
 - OC&C Charge Description/Explanation
 - OC&C Amount (By Jurisdiction / PIU (percentage interstate usage
 - Rate Element
 - Quantity
 - Fractional Amount, One Time Amount, Monthly Amount
 - Discount and Zone Information (if applicable)
- Detail of Usage and associated summary
 - State Usage from Date, Usage through Date
 - Jurisdiction
- Summary By Access Service Group (ASG); Total by Billing Account Number (BAN)
 - Minutes/Messages
 - Rate
 - Rate Change Date

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- Usage Amount
- Rate Element: Common Transport, Blended Transport, Tandem Switching, and Local Switching
- Third party (e.g. Calling Card Usage)

- Detail of Surcharges (if applicable) and taxes:
 - State

 - Type of Surcharge and Tax

 - Monthly Access, Other, Usage and associated Tax Amounts

4.2.6 End Users

A set of Test End-Users will be used to participate in the UNE Loop with Port, LNP and UNE Loop (Basic & xDSL) tests. In many instances additional telephone line(s) will be installed at the Test End-Users premises. This secondary test line will be used solely to conduct the test. Collocation cages at specific company locations will be used to provide for the LNP, UNE Loop (Basic & xDSL) tests.

4.2.7 Network

CLECs recognize that comprehensive, end-to-end testing of these order types will necessitate direct involvement of CLECs and the use of physical CLEC facilities. For example, UNE orders with LNP clearly require a physical switch and collocation space of a real CLEC in order to be fully completed. Furthermore, even though the LSRs could be submitted by the Third Party Test Generator, orders would need to use actual CLEC values and facility assignments and the Coordinated Hot Cut, or TBCC, processes would need to be coordinated with actual CLEC provisioning groups.

Therefore, the following CLECs will participate and provide facilities required to execute Functionality Test scenarios for the above-named critical order types, provided that geographic arrangements and resource requirements are manageable and can be worked out with the Test Administrator in advance:

AT&T
Cox
ICG
NEXTLINK
Northpoint
Covad

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The CLEC network facilities that will be provided include local switch and loop facilities to evaluate LNP and Digital Subscriber Line Multiplexer (DSLAM) facilities to evaluate DSL.

4.3 Test Environment Management

4.3.1 The Test Environment Checklist

The following items will be checked based on the test methodology being used:

1. Terminal, workstation or Personal Computer for all Test Generator personnel who are to execute the test cases.
2. Tools (e.g., test management system, test drivers) and communications expectations available (e.g., including website access, systems access from remote site, etc.)
3. File permissions are correct (e.g., OSS access, access to website for reports, etc.)
4. Printer access defined and available (e.g., to create the reports)
5. Logins to systems as necessary with applicable security
6. Access to data as necessary
7. Communications verification to ensure connections have been established relative to Pacific and Test Generator production LEX or EDI Interfaces
8. Provide test environment details pertaining to the platform, interfaces, a contact for each system, and the physical links the system uses.

4.3.2 Environmental Change Management

Typically changes and upgrades to the software under test are not expected to occur during the test intervals. In addition, typically the tables, links and other environmental changes, which may impact this testing, are expected not to occur during the test interval.

However, since this testing will be performed in a production environment, release levels are expected to change on a pre-announced schedule, which may be within the Functionality Test execution window. These changes will be managed

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under the standard Change Management Process. In addition, other environmental changes (e.g., table updates) are expected to occur. Adverse impacts from these changes will become problems to be considered for the test evaluation. Major problems (e.g., a new release causes many tests to fail) may force the release to be backed out or the test to be rescheduled. Conversely, if changes go smoothly, this demonstrates that changes can be managed successfully. If changes to the environment are planned or occur as a direct result of the OSS test, Pacific must describe the changes in the Pacific systems that may impact the testing and define their impact as soon as they are known. To allow for the timely execution of the tests, a special Change Management Process as defined in Appendix B will be followed for changes needed as a direct result of the OSS test. All affected CLECs will be informed as to this temporary alternative process.

4.3.3 Environment Needs

4.3.3.1 *Environment Needs - Functionality Tests*

The environment used for the Functionality Test consists of the mechanized (i.e., EDI, DataGate) interfaces built by the Test Generator using documentation it acquired from Pacific using procedures that CLEC's currently use in identifying and acquiring this information. In addition, to validate Pacific's OSS readiness, testing must include an interoperability test with the Test Generator initiating LSRs through their EDI Interface or LEX. The Test Generator will also initiate pre-order queries through Verigate. EDI pre-order The Test Generator must have the ability to test and validate the various services and conditions defined in the test scope. To accomplish this, the Pacific production systems that provide for the mechanized processing interface to the Test Generator will be used.

The Functionality Test will assess the DataGate and Verigate interfaces for pre-ordering, and the EDI and LEX Interfaces for ordering. In addition, the MS Gateway for E911 database population will be assessed. The OSSs required to perform the provisioning, maintenance and repair, and billing are used by Pacific's retail customers and CLECs, and primarily consist of Pacific legacy systems. Thus, they are included in the Functionality Test, but are not defined here. It is also noted that these backend systems currently support both mechanized and manual effort required to support commercial level volume.

The Test Generator will initiate Maintenance and Repair functionality tests into PBSM. In addition, MCIW will initiate Maintenance and Repair test cases into Pacific's EBI.

To support the Test End-Users for the Functionality Test, the accounts must be established correctly in the Pacific production database. See Section 6.5.5 for

more details.

4.3.3.2 Environment Needs - Capacity Tests

The Pacific production systems will be used to conduct the Capacity Test. The Capacity Tests will include DataGate and Verigate and EDI pre-order for the pre-ordering process. Systems to be included in the Capacity Test order process are EDI, EDI pre-order and LEX,. This Capacity Test will be through SORD distribution. Moreover, the backend systems that provide for SORD distribution (FOC) needs are included.

4.3.4 Environment Cleanup

4.3.4.1 Environment Cleanup - Functionality Test

Once the Functionality Test is complete, the environments used for this test must be restored back to their original state relative to the events imposed by the testing (i.e., test related items are removed from the systems). This cleanup is expected to occur within 30 days after completion or no later than when the Test Administrator/Manager's and the Technical Advisor's Evaluation Report is issued. In addition, if other systems were used in the test, the test data on these must also be removed.

Cleanup items to address consist of:

- Telephone Numbers
- Facilities
- Billing
- Directory Listings
- 911 database updates
- Customer data - total purge relative to the test orders (each participant needs to assure this is the case). The Test Administrator/Manager will randomly request verification.
- Purging of EB trouble tickets

4.3.4.2 Environment Cleanup - Capacity Test

Once the Capacity Test is complete, the production environment must be restored back to its original state within 3-5 days. The major cleanup is associated with the pending orders. An extended due date will be used for the Capacity Test (e.g., 12/24/99) to help prevent the provisioning process, and identify test orders for data extraction and cleanup purposes. However, a FOC must be received prior to employing this cleanup methodology. A clean up of LSRs that exception to Folders will need to be purged, but will not be part of the test results. Otherwise, Pacific will provide cleanup by removing the orders associated with the Test Operating Company Numbers (OCNs) and the extended due date.

5. ADMINISTRATIVE PROCESS

This section defines the processes that will help govern the test activities. The terminology section at the end of the document defines the terminology used within this Master Test Plan.

5.1 Timeline

A summary of the key milestones/critical path items for the success of this project is described in this section. This summary represents a high-level overview of the major milestones associated with the tests. A separate work project plan developed and managed by the CPUC will be used to manage and track project status. The Test Administrator will have its own internal plan that supports this timeline and the detailed activities required to meet the major milestones. The Test Generator and Pacific will operate in accordance with the Test Administrator plan, as will the end-users. The project plan will be used as the controlling timeline for the test events. The content of the project plan should be re-visited at a minimum every week and revised if necessary since key elements may vary over time.

The test procedures will also include a test management jeopardy process (see Section 5.3.6) to manage potentially missed milestones. The work project plan also includes assignment of responsibility for each task in the project that needs to be completed.

5.2 Roles and Responsibilities

Whereas the Commission and Technical Advisor can provide valuable and cost-effective advice and solutions, the ultimate accountability for implementation of this Master Test Plan is the Test Administrator's with the support of the Commission and the Technical Advisor.

This section details the overall roles and responsibilities of the test participants with respect to this testing effort. Additional roles and responsibilities specific to each test will be detailed later in Sections 7.1.2 and 8.1.2. It is expected that test participants will execute their responsibilities in a timely manner, according to the process defined in this document.

5.2.1 Commission

The role of the Commission is to:

- Provide overall project management
- Own the test plan.
- Create the testing implementation timeline
- Provide support for the collaborative process in enhancing the Master Test Plan
- Provide final approval of Master Test Plan
- Appoint a Test Administrator/Manager to manage the test activities. The Test Administrator/Manager responsibilities are defined in Section 5.2.4
- Appoint a Test Generator to develop the testing interfaces and conduct related activities.
- Review and approve the Final Report prepared by the Test Administrator/Manager.

5.2.2 Pacific Bell

Pacific is a direct participant in the tests. The role of Pacific is to:

- Provide the Pacific OSS environment to be used for the test (i.e., production environment)
- Support Test Plan needs, as necessary
- Provide list of primary, Subject Matter Experts (SMEs) and escalation contacts to all parties
- Provide for preparation, setup, and access to the Pacific production components for the tests as necessary (primarily for monitoring by Test Administrator/Manager)
- Provide system processing data necessary to understand the resource usage

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for the test workload

- Extract data and compute the Performance Measures.
- Assign an account team to interface with the Test Generator
- Provide documentation to the Test Administrator to enable scalability analysis of system interfaces and work center operations (LSC and LOC).

5.2.3 Technical Advisor to Commission Staff

The Technical Advisor's role is to:

- Assist in development of Commission Master Test Plan
- Review Test Cases
- Evaluate documentation assessment and process analysis
- Provide technical advice to Commission Staff
- Provide on-site observing of actual test, as needed
- Evaluate data and reports prepared by Test Administrator/Manager
- Provide oversight for Test Generator until Test Administrator/Manager is selected
- Analyze data and write report
- Submit final report

5.2.4 Test Administrator/Manager

The Test Administrator/Manager's role is to:

- Define MTP scope to assure coverage and the ability to test scenarios expected.
- Gather test data
- Compile a detailed daily log of events capturing the details of its experiences in dealing with all participants.
- Prepare end-user test scripts
- Provide on-site observing
- Compile and evaluate data
- Administer testing implementation timeline
- Prepare reports
- Provide oversight for Test Generator
- Submit test observations, test results attestation and draft final report
- Provide Documentation Assessment and Process Analysis (i.e., LSC/LOC scalability of appropriate systems)
- Assist Technical Advisor in validating Performance Measures Process/System
- Develop test cases based on the test scenarios, including number of error scenarios.
- Assess the operation of the LSC for consistency, timeliness and accuracy.
- Assess the operation of the LOC for consistency, timeliness and accuracy.
- The Test Administrator/Manager will assure the test scenario selection will cover both access mechanisms (LEX, EDI).
- Assess the scalability of the OSS test interfaces using documentation provided by Pacific Bell.
- Identify the end-user participants (80% Pacific Bell locations, 20% TBD by Test Administrator).
- Assess the operations scalability (force management) of the LSC and LOC.
- Assure statistically valid approach to testing.

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- Chair the Technical Advisory Board (TAB).
- The Test Administrator/Manager will take the necessary steps to make sure the Test Generator does not receive any information that a CLEC would not receive under the normal course of business.

5.2.5 Test Generator

- Develop interfaces
- Install connectivity
- Create LSRs
- Input LSRs/
- Document results of interface development and order generation
- Acquire appropriate documentation, attend training and assess quality and completeness of documentation, training, etc. to mirror CLEC activity to build an automated interface.
- Create and input pre-order queries.
- Compile a daily log of events capturing the details of its experiences in dealing with Pacific.

5.2.5.1 MCIW as EBI Test Case Generator for Maintenance and Repair

MCIW work center personnel will execute appropriate Maintenance and Repair test cases under the direction of the Test Administrator/Manager.

5.2.6 CLEC Network Element Providers

Under the administration of the Test Administrator/Manager, AT&T, COX

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Communications, ICG, NEXTLINK, NorthPoint, COVAD will provide local switch, loop and DSLAM facilities to support DSL and LNP testing. The TAB will be the forum for this participation.

5.2.7 The Technical Advisory Board (TAB)

A Technical Advisory Board will be convened at the start of testing. Its membership shall be CPUC, the Test Administrator/Manager, Test Generator, Pacific representation and from three to five CLEC representatives. Its charter is to participate in the special Change Management Process on the test architecture (Figure 4.1) in accordance with the procedures in Appendix B, and to provide CLEC support as requested by the Test Administrator/Manager. This CLEC support consists of providing appropriate network elements for EBI interface operation.

In addition, TAB members (as determined by the Test Administrator/Manager), the Test Administrator/Manager and the CPUC will review periodic test results and offer advice, observations and provide input to the test process. This will be done to enable the CLECs and Pacific to provide feedback on the testing as requested by the Test Administrator/Manager.

5.2.8 The End Users

The end user will execute defined telephone calling/usage scripts as directed by the Test Administrator. The Test Administrator will identify the quantity of end users. These end users will be business and residence locations for which Pacific will provide facilities. The end user population will come from a variety of sources as determined by the Test Administrator.

The purpose of the end user test scripts will be to generate usage for billing and usage evaluation as well as to provide a network-based test bed to support maintenance, and repair.

5.3 Management of Tests

5.3.1 The Test Administrator/Manager

A Test Administrator/Manager will be assigned to ensure that testing will be conducted expeditiously and that test participants are aware of the test status. The Test Administrator/Manager must perform the following functions for the Functionality Test, since the planning and execution of this test will take place over many days:

1. Problem Management and Action Item Management
 - Track testing Action Items (e.g., requests for information relative to testing using a daily log)
 - Distribute a tracking summary of action items to resolve problems identified by the Test Generator, the Test Administrator or Pacific.
 - Assign accountabilities and track resolutions to issues/problems identified
 - Track test management jeopardies if milestones are missed.
1. Test Schedule Management
 - Assign accountabilities and track resolutions as necessary for the test activities, with support from the Commission and the Technical Advisor
 - Collect daily test status from Pacific, Test Generator, the End User and report to the Commission.
1. Communications Management
 - Provide overall communications management within the testing interval
 - Maintain daily contact with the Test Generator and other participants
 - Maintain an electronic contact list (e.g., subject matter experts, escalation) for each test participant, the Technical Advisor and the Commission
 - Distribute test management jeopardies reports to appropriate audience as determined by the Test Administrator/Manager

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- Distribute daily summary of the compiled test metric information forwarded by the test participants the same day it is collected or the day after as necessary
- Create and distribute weekly high-level summary, including test progress, problem identification, action items, issue resolution progress and potential jeopardies status review.
- Convene the TAB

A typical Test Administrator/Manager contact list is shown below. The Test Administrator/Manager will determine those that will get certain communications. Most communications will be distributed to the Commission and the Technical Advisor.

Table 5-2: Test Administrator/Manager Contact List FOR ILLUSTRATIVE USE ONLY. To be filled out by Test Administrator prior to Testing

Contact	Responsibility	Telephone Number
	California Public Utilities Commission	
	Pacific Bell Lead Person	
	Test Generator	
	Technical Advisor	
	OSS Subject Matter Expert	
	TAB	

5.3.2 Daily Report

The following information will be reported on a daily basis during test execution. Test participants will provide the test status information to the Test Administrator/Manager. The Test Administrator/Manager will create the daily report. The Daily Report provides a review of the current progress of testing and gives an indication of potential areas of concern and technical issues. Actual metrics data will be counts of occurrences in the various categories and are further detailed in Section 5.3.3.

The Test Administrator/Manager will take the necessary steps to make sure the Test Generator does not receive any information that a CLEC would not receive under the normal course of business.

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1. Pacific input to Daily Report includes;
 - For systems included in the test, provide system availability
 - Describe system and communications problems/issues that may affect availability
 - Describe discovered software issues (e.g., problems discovered during testing or production)
 - Describe Methods and Procedures (M&P) issues
 - Propose MR's to Test Administrator to fix identified system problems

1. Test Generator input to Daily Report includes;
 - Status of LSRs
 - For Test Generator systems included in the test (i.e., systems interfacing to the Pacific OSSs), provide system availability
 - Describe system and communications problems/issues that may affect availability
 - Describe discovered software issues (e.g., problems discovered during testing or production)
 - Describe error/reject conditions (unplanned ones), error identification, and proposed root cause
 - Describe any M&P issues
 - Provide Test End-Users status and schedule, including any delayed or unscheduled activity
 - Describe any Test End-Users-reported problems
 - Daily log

1. Test Administrator/Manager input to Daily Report includes;
 - Status of test management jeopardies and escalated problems
 - Other problems and action items

- Schedule review
- Update of test metrics
- Preparation of test scripts
- Management of MR's
- Daily log

5.3.3 Test Metrics

The test metrics to be used will be defined in the Test Administrator's test plan. The test metrics must include at least the administrative and technical metrics listed below.

5.3.3.1 *Administrative and Control Metrics*

- Total number of test cases
- Total number of test cases executed
- Total number of test cases completed (from an end-to-end functionality perspective)
- Total number of test cases with problems reported
- Total number of end-user test scripts
- Total number of end-user test scripts executed
- Total number of end-user test scripts completed
- Total number of end-user test scripts with problems
- Total number of problems reported (test cases and test scripts).
- Test schedule slippage
- Test phase interval: planned versus actual

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5.3.3.2 Technical Analysis Metrics

The issues surrounding LSR flow-through and LSR rejects should be managed through metrics in the Capacity and Functionality Tests, including but not limited to, Performance Measure #4 Percentage of Flow-through Orders. These will help focus some of the analysis activities. For flow-through, the following measures should be computed by Pacific and reported to the Test Administrator/Manager and Technical Advisor on a daily basis. See Attachment D, flow-through Matrix.

1. Pacific EDI Interface flow-through (from Test Generator input)
2. Pacific LEX flow-through (from Test Generator input)

5.3.3.3 Test Case Tracking Matrix

The Test Administrator/Manager will maintain, with daily inputs from the Test Generator, a Test Case Tracking matrix for the Functionality Test. This tracking tool is an extension of the material in Attachment 1 allowing an individual status to be placed on each Test Case in the test. The Test Case Tracking Matrix allows a comprehensive view of test status.

5.3.4 Problem Reporting Procedures

All problems will be reported to and managed by the Test Administrator/Manager. The Test Administrator will determine format and procedure for problem (trouble) reporting (MCIW to provide comments).

5.3.5 Escalation Process

Problems encountered by the test generator that cannot be resolved through the use of resources available to CLECs, in the normal course of business or which threaten the attainment of scheduled milestones, shall be brought to the attention of the Test Administrator as an "escalation". If the underlying facts or the resolution of the escalation would require an amendment to an OSS interface or business practice, then the Test Administrator shall apprise the TAB of the escalation and the potential resolution of the situation. The escalation process does not include activities that the test generator performs outside the scope of normal CLEC activities. This would be escalated directly to the Test Administrator.

Escalations will be handled by the Test Administrator/Manager. Problems which cannot be resolved by the Test Administrator/Manager will be referred to the Commission staff for mediation and resolution. The Technical Advisor will assist

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in the resolution of problems with the intent of obtaining a quick, reasonable resolution that will not affect the test schedule or compromise the test results.

In the event issues need to be escalated a contact list developed by the Test Administrator/Manager will be used. Pacific Bell and the Test Generator will identify their escalation contacts. The Test Administrator/Manager will maintain a contact list for escalation issues.

The Test Administrator/Manager will determine those that will get certain communications. Most communications will be distributed to the commission staff and the technical advisor.

5.3.6 Test Management Jeopardy Process

Test management jeopardies will be managed by the Test Administrator/Manager. Test management jeopardies are used to help ensure the project remains on schedule. A test management jeopardy will be created when an event causes an impact on the projects' goals and expectations (usually, the schedule) as defined in the Master Test Plan. The jeopardy can be identified by any team member and requires an action plan be developed to resolve the situation. Pacific Bell, or the Test Generator may be assigned accountability by the Test Administrator/Manager for an action plan to resolve a situation that can cause the project to be in jeopardy. The Technical Advisor will assist in the resolution of test management jeopardies with the intent of obtaining a quick, reasonable resolution that will affect the test schedule a minimal amount and will not compromise the test results.

Major components of the test management jeopardy report consist of:

- Ownership – Test participant responsible for championing the jeopardy resolution such that an action plan is determined
- Issue/Problem description – brief summary
- Impact – how the issue/problem will impact the project
- Action Plan – plan to resolve the issue/problem while maintaining the Master Test Plan objectives and goals
- Exception Report – although the plan is to perform “military-style” testing, it is possible that an exception will be observed. At the direction of the Commission, testing will continue and an exception report noted. If this occurs, consideration will be given to needed regression testing prior to the conclusion of the tests. The Test Administrator and the Commission will be responsible for making this decision.

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- Status – green (on schedule), yellow (cautionary) and red (in danger) relative to achieving the action plan, which supports maintaining the test goals (e.g., schedule, scope, etc.).

Test participants will be notified of jeopardies according to the contact list maintained by the Test Administrator/Manager.

5.3.7 Change Control Process

The objectives of change control are to obtain initial agreement on a document and then to assure that any changes caused by developments unknown at the time of issue will be properly reflected into an update to the document. This process employs the baselining concept.

The Commission will approve initial issues and updates to baselined documents, with input from the Technical Advisor.

Change management for the test environment is discussed in Section 4.3.2.

All change control information is supplied to the Test Administrator/Manager and is distributed according to the contact list maintained by the Test Administrator/Manager.

5.3.8 Risk Management

The Test Administrator shall develop a risk management/contingency plan for testing. The objective is to develop as complete a list of risks as possible. This plan shall include the following:

Identify the impacts, primarily negative results, if a previously identified requirement, task/expectation or assumption is not delivered on time, completed on time, plus the alternative action plan and the responsible parties are:

- Work Project plan - task at risk
- Risk Event Identification - review of event
- Impact - impact risk would have if it occurs. Assignment of likelihood can be portrayed in a High, Moderate, or Low fashion rather than quantitative, which may require more analysis. The impact statement provides an assessment (most typically of the delay) caused by the occurrence of the event.

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- Impact, Plan/Mitigation Strategies - various mitigation alternatives shall be considered for each identified risk and a primary option shall be selected, i.e., avoidance, retention, control, and deflection
- Risk Prioritization - rank order listing of the identified risk events based on the results of the risk analysis.

6. REQUIREMENTS AND ASSUMPTIONS

The organization of this section is as follows:

- Section 6.1: Interface Development Requirements Documentation
- Section 6.2: LSC/LOC Scalability Requirement
- Section 6.3: Functionality Test requirements
- Section 6.4: Capacity Test requirements
- Section 6.5: Test evaluation requirements
- Section 6.6: Assumptions relating to all phases of test activity

6.1 Interface Flow-Through Development Requirements

Common requirements must be used to implement the capability of flow-through among the (Test Generator and Pacific) systems. The Test Administrator/Manager will validate that Pacific used the same set of requirements in the development of their system interfaces. Many job aides (interface documents, handbooks, etc.) and accessible letters form the basis for understanding the requirements for the interface development.

Most of the pertinent documentation needed to perform the Test is located on Pacific Bell's CLEC website at <https://clec.sbc.com>. The following summarizes this documentation:

- CLEC Handbook
- Overview of Workshops and OSS Classes, Class Schedule and Rates
- Ordering Forms and Job Aids
- Carrier Coding Guide
- Common Carrier Tax Exemption Guidelines
- Forecasting Forms and Procedures
- Service Area Maps (LATAs, Prefixes, NPAs, etc.)
- USOC and FID Guide
- White Page Listings User Guide
- Directory Closing Date Schedules
- PBSM Guide
- Resale User Guide

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- Local Service Ordering Requirements (LSOR)
- Local Service Pre-Ordering Requirements (LSPOR)
- Accessible Letters
- IS Call Center Job Aids, Interconnection (Connectivity) Requirements, System Status
- Web Listings Lookup
- Performance Measures
- CLEC-specific Information

Test Administrator requests for additional documentation should be provided by Pacific upon request. Test Generator requests for additional documentation should be directed to the Pacific Bell Account Team drawn from existing Account Team members, and should be provided under the same terms and conditions as provided to CLECs during the normal course of business. Additional documentation provided to the Test Generator should be simultaneously provided to CLEC representatives on the TAB.

Other documentation may be needed. Pacific will establish an account team to answer questions concerning other documentation.

6.2 LSC/LOC Scalability Requirement

To support the future workloads, the amount of staff needed to provide for the level of service agreed upon must be appropriately planned. The test efforts will not test (directly or indirectly) to verify the appropriate amount of staff, as it is not feasible to train and hire at this point in time. However, the staff planning process (e.g., process to determine amount of staff predicted to be needed and process to provide for the staff) will be assessed by the Test Administrator. The staff scalability review will be performed for both the LSC and LOC staff.

6.3 Functionality Test Requirements

The purpose of the Functionality Test is to determine whether a pre-determined set of customer ordering scenarios, representing a set of customer ordering capabilities, can be originated based on information accessed from the Pacific pre-ordering system(s). In addition, the Functionality Test will determine whether or not the ordering scenarios can flow through the ordering, provisioning and billing systems, such that service requested is provisioned and billed accurately.

The main documents from which requirements are drawn are:

- Test Scenarios (see Attachment 1)
- The amended Joint Partial Settlement Agreement (JPSA), filed May 3, 1999,

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regarding Performance Measures, contain the applicable Performance Measures that will be applied to the Functionality Test, and include a high-level definition of the expected results. There are two kinds of Performance Measures that will help evaluate the outcome of the Functionality Test:

- *Parity measurements* are designed to assess, for those OSS functions with retail analogs, whether the Incumbent Local Exchange Carrier (ILEC) provides access to competing carriers equal to the level that it provides itself, its customers or its affiliates, in terms of quality, accuracy, and timeliness.
- *Benchmark measurements* are designed to assess, whether Pacific is providing OSS access to CLECs at a level of performance that satisfies a Commission ordered standard, (i. e. benchmark where no retail analog exists). For those OSS functions with no retail analogs, whether the ILEC provides access sufficient to allow an efficient competitor “a meaningful opportunity to compete”. AT&T will provide proposed re-write.

6.3.1 Test Scenario LSR Coverage Process Review

Functionality Test coverage is important to assure functionalities to reflect the anticipated future business environment as determined by the CPUC. Test coverage is given in Table 6-1, which was developed during industry workshop June 7 – 15, 1999.

The Test Administrator/Manager will finalize scenarios for the Functionality Test. The Test Administrator will ensure each unique scenario provides value-added processing, thus reducing duplication of common processes. These unique test scenarios will provide for several iterations of similar tests to help gain a reliable statistical sample of processing and Performance Measures within the test interval. This effort is called the test case loading.

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A core set of LSRs will be used. These are broken down to the following representative mix of residential and business scenarios:

Table 6-1: Core Set of LSRs for Functionality Test.

PRODUCTS	% of Orders (approximate)	Scenario Types by Product/Activity	%of Orders (approximate)	Res/Bus
UNE Loop with Port	38%	Retail to UNE Loop with Port Reconfigurations	19.0%	80% Res 20% Bus
		Resale to UNE Loop with Port Reconfigurations	1.9%	
		UNE Loop with Port – New	3.8%	
		UNE Loop with Port – Changes	7.6%	
		UNE Loop with Port – Disconnects	1.9%	
		UNE Loop with Port - Outside Moves	1.9%	
		UNE Loop with Port - Suspends	.95	
		UNE Loop with Port - Restores	.95	
		Stand-alone LNP	10%	
Number Portability - Resale	.5%			
UNE 2 Wire Loops with and without Number Portability	36%	Retail POTS to UNE Basic Loop Reconfigurations	9.0%	90% Bus 10% Res
		UNE Basic Loop – New	6.3%	
		UNE Basic Loop – Disconnects	.9%	
		Resale POTS to UNE Basic Loop Reconfigurations	3.6%	
		Retail POTS to UNE Assured Loop Reconfiguration	9.0%	
		UNE Assured Loop – New	6.3%	
UNE DS1 Loops without Number Portability	5%	UNE DS1 Loop-New	4.75%	100% Bus
		UNE DS1 - Disconnects	.25%	
UNE xDSL Loop without Number Portability	6%	Retail ADSL to UNE ADSL	1.0%	20% Res 80% Bus
		UNE xDSLs - New	4.5%	
		UNE xDSL - Disconnects	.50%	
Stand-alone Directory Listings / 911	5%	Req. Type J and MS Gateway 911	5.0%	NA
Totals	100%	Totals	100%	

The following sections detail the requirements for the types of scenarios to be included in the test, the requirements for each of the processes included in the scenarios and also the typical process flow expected in the Functionality Test.

6.3.2 Scenarios

This section describes the types of orders, the directory listings, and the features that will be included in the test case scenarios. These scenarios will be used as templates to create detailed orders/LSRs. In certain instances, even though the LSRs have been correctly generated by the Test Generator, orders may require some form of manual intervention in the Pacific systems (e.g., orders that are not Automatic Order Generator (AOG) eligible).

The Functionality Test will contain both fully mechanized and partially manual service orders. Mechanized orders are LSRs that can flow-through Pacific's electronic ordering systems without manual intervention (i.e., AOG eligible). For orders that require manual assistance, the LSC is expected to process these manual LSRs as their Present Method of Operations (PMO) dictates.

The scenarios will consist of pre-ordering, ordering, provisioning, and billing. Some will also contain usage and maintenance and repair processing. The following provides a high-level focus of the test scenarios based on the processes to be tested:

1. *Pre-Ordering* (see also Section 6.3.5.1)

- Test Generator tasks include the obtaining of necessary pre-ordering information
- Must include the information the CLEC customer service representatives obtain from the pre-order systems (i.e., address validation, TN reservation, etc.) or via manual K1023 requests

1. *Ordering* (see also Section 6.3.5.2)

- Order activities:
 - New
 - Reconfigurations as specified
 - Change Orders
 - Suspends and Restores
 - Outside Moves
 - Disconnects

1. Request types are:

- Original
- Supplement
- Cancellation
- Order types as listed in Table 6.1
- Initial Notification
 - FOC
 - Reject Notices

1. *Provisioning*

- SOC
- Jeopardy Notices (i.e., those jeopardy situations that may occur as processing proceeds).

1. *Maintenance and Repair*

- Planned
- Unplanned (i.e., those M&R situations that may occur as processing proceeds)

1. *Billing*

- Daily usage tape
- Paper wholesale bill

6.3.3 Types of Orders

Order types are defined as xDSL set forth in Table 6.1. The order types defined below will be included in the Functionality Test.

Unless otherwise specified, the scenarios below include single and multi-line orders, business and residence orders, and supplementals.

6.3.3.1 *Unbundled Network Elements (UNE)*

The test scenarios to be included in this test for Unbundled Network Elements (UNEs) are:

- Retail to UNE Loop with Port Reconfigurations - Pacific customer converts to CLEC
- Resale to UNE Loop with Port Reconfigurations - CLEC converts its own customer from Resale to UNE Loop with Port
- UNE Loop with Port - New - End-user establishes new service (UNE Loop with Port) with CLEC
- Retail to UNE Basic Loop - Pacific customer converts to CLEC, where Basic loop is leased from Pacific by CLEC
- Retail to UNE Assured Loop - Pacific customer converts to CLEC, where assured loop is leased from Pacific by CLEC
- Retail to UNE DS1Loop - Pacific customer converts to CLEC, where DS1 loop is leased from Pacific by CLEC
- Resale to UNE Basic – Pacific customer converts to CLEC where basic loop is leased from Pacific by CLEC
- Resale to UNE Assured – Pacific customer converts to CLEC where assured loop is leased from Pacific by CLEC
- UNE Basic Loop - New - End-user establishes new service (i.e., UNE Basic Loop) with CLEC
- Retail xDSL to UNE xDSL reconfigurations - Customer converts to CLEC,

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where xDSL leased from Pacific by CLEC

- UNE xDSL Loop - New - End-user establishes new service xDSL with CLEC
- UNE Loop with Port - Suspend and Restore - Service is suspended and restored at a later date
- UNE Loop with Port - Outside Move - End-user moves to different location/address
- UNE Loop with Port - Change - Request to change a feature
- UNE Loop with Port - Disconnect - Service is disconnected from the end-user
- UNE Basic, Assured and DS1Loops - Disconnect - Service is disconnected from the end-user
- UNE xDSL Loops- Disconnect - Service is disconnected from end-user
- UNE xDSL assured loop- Disconnect - Service is disconnected from end-user
- UNE DS1 loop- Disconnect - Service is disconnected from end-user

Note: During the Functionality Test, the end-user references above will most typically be simulated by the Test Generator executing the test (i.e., Test End-Users that represent the end-user will primarily be providing for the usage related needs of the test).

6.3.3.2 Other

The only other order activity included in the Functionality Testing is stand-alone Directory Listings.

6.3.4 Features, Feature Compatibility's and Directory Listings

Included within the order scenarios will be options for directory listings and features. The following options exist for directory listings and will be tested and validated within the test scenarios:

- Main list

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- Non-published
- Additional
- Dual name
- Non-listed
- Simple Caption listings.

Attachment 1 defines the list of feature types and combinations of features to be included in this test.

6.3.5 Processes

Several business processes typically comprise a scenario within the Functionality Test. The processes are:

- Pre-ordering
- Ordering
- Provisioning
- Billing
- Maintenance and Repair

6.3.5.1 Pre-Ordering

Pre-ordering is the process that allows CLECs the ability to query Pacific databases to verify certain information required to issue a valid LSR. In order for the LSR to flow through the Pacific OSSs without any manual intervention, it is important that the LSR contains accurate information of the service that is being requested. The Performance Measures will be applied to the measurements generated by the Functionality Test for pre-ordering.

The pre-order process of the Functional Test will include the following:

1. Customer Service Record (CSR) - view current service records as a result of a customer providing authorization for a change
2. Address Verification/Dispatch - verify service address information as registered
3. Request for Telephone Number (TN) - reserve one or more telephone numbers for new connections. Reserved TNs are available for 30 days. TN assignment and cancellation is also included.
4. Service Availability/Product and Feature Availability (PFA) - retrieve a list of services and features that are provided from a particular local serving office. Common Language Location Identification (CLLI) Code represents the switch that provides service to the telephone number requested.

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5. Service Appointment Scheduling - Due Date - view available dates and appointment times for the verified address [Note: Applicable for Resale (Capacity Test only) and UNE Loop with Port.]
6. Facility Availability - Access to LFACS Information (ALF) – allows the CLEC to view whether dispatch is required for connection of a new line of service at a verified residential address. This transaction also provides Facilities, spare and defective pair information for residential customers at the verified address.
7. Primary Interexchange (IXC) Carrier (PIC) selection/Local Primary Interexchange Carrier (LPIC) selection/Carrier Identification Code (CIC) – identifies the available IXC selections for customer PIC/LPIC selection at the switch level.
8. Number of Rejects/Failed Inquiries
9. Loop qualification via manual K1023 request.

6.3.5.2 Ordering

Ordering consists of the process by which the CLEC order/LSR requesting services and features is submitted to Pacific for processing.

Ordering Activities

During ordering, the ability of Pacific's OSSs to provide for the processing of the CLEC's order is being tested relative to the following ordering activities:

- Receipt and acknowledgment of LSRs
- Reject processing (i.e., mechanized edits and rejects)
- Manual or mechanized creation of the applicable service orders
- Receipt of a FOC, which is a response from the service order processor that represents the acknowledgement of receipt of an order from a CLEC. For purposes of this test, the SOC is included in the provisioning process description area, as it represents the response from the service order processor of acknowledgement of service order completion (i.e., assignment).
- Processing through SORD distribution

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- Supplemental
- Cancellations.

During this time CLEC activity pertaining to LSRs for inbound and outbound transactions received and sent by Pacific systems will be observed for single and multi-line residential and business services.

Order Activities

The Functionality Test will cover the ability of the Pacific OSSs to receive the following order activities as inbound transactions:

- New - establish a new account
- Reconfigurations - for the purposes of this test reconfigurations refers to reconfiguring from retail or resale
- Change - disconnect feature, change feature, add feature
- Suspend/Restore - suspend a customers' service, restore the customers' service
- Disconnect - disconnect service for an account
- Outside Move - change customer address

The Functionality Test will cover the ability of the Pacific OSSs to send the following outbound transactions:

- Mechanized order rejection/error notification
- Order acknowledgement
- Firm Order Confirmation (FOC)

6.3.5.3 Provisioning

Provisioning is the ability of a system to provision features and services in the switch (and, where relevant, in the outside plant services), as requested in the LSRs. This step will test the ability of the Pacific backend systems to provide the CLECs with the services and features being requested, as well as update the

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Listings and 911 databases. The return of the service order completion notification to the CLEC indicates that provisioning is complete. Provisioning will be considered complete once a SOC is received by the CLEC.

The jeopardy process is included in the Functionality Test. This process will be validated through observation of the jeopardy process. A jeopardy is currently defined to be a condition that occurs on or before the due date, indicating that the due date is less likely to be met. Jeopardy notice conditions may occur during the process of the test. Some examples of what can cause a jeopardy are:

- No cable pair or bad cable (held order)
- xDSL binder group unavailable
- Various central office conditions (e.g. Busy CFA)

6.3.5.4 Billing

Billing is the ability of Pacific to provide the CLECs with an accurate wholesale bill and usage data, and billing records for the services, features, network items (e.g., loop, port) and functions that were ordered and provisioned. In addition, verification of the rate center specific charging must occur for recurring, non-recurring and usage sensitive charges and miscellaneous charges. The primary OSS focus is to validate the ability of the billing systems to receive the input in a timely manner and process the bill accurately.

The billing test inputs for the Functionality Test consist of the test LSRs and Customer Service Records (CSRs). The test output consists of the billing tape copies of usage feeds and wholesale bills. The inputs will be compared with the outputs relative to the elements of each order to verify the account has been established and billed correctly, and with the same level of quality that Pacific provides to its end user customers. In addition, the usage will be validated relative to correctness and accuracy. This process will be done based on the Pacific printed invoice. Inputs to the Test Administrator/Manager will be provided via paper or tape.

The Functionality Test will test the ability of Pacific to provide wholesale bills that are in compliance with Industry Guidelines such as the Ordering and Billing Forum (OBF) guidelines, excluding those guidelines that govern mechanized transmission.

Billing Validation will take place in the following manner:

- Identify and validate specific charges and adjustments

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- Identify features subscribed to by customer
- Validate it is accurate and complete
- Validate timeliness (the printed invoice, and the usage transmission)
- Validate daily and monthly usage feeds for UNE records (originating and terminating records).

The focus of the billing testing will:

- Ensure the bill complies with detail and format as indicated by Industry Guidelines such as the OBF guidelines.
- Ensure what is ordered is what is billed
- Ensure wholesale bill provides for non-recurring, recurring and usage sensitive charges
- Ensure rates are applied correctly for each product, service or element
- Ensure taxes and surcharges have been applied appropriately for the jurisdictions
- Ensure usage charges are billed within the timing limitations or criteria established by local or state jurisdictions
- Ensure products that are billed in advance, as well as, recurring and non-recurring charges are billed accurately
- Ensure discounts, adjustments and calculations are performed appropriately
- Ensure the timeliness of the bills (i.e., are they sent/received within the amount of hours/days required)
- Validate the bill data for accuracy and understandability
- Check rounding rules are applied accurately
- Ensure prorated amounts are charged accurately according to the disconnect date

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- Ensure disconnects are processed and appear accurately on the bill.

UNE Bill Elements

Minimum bill elements for the UNE bill based on OBF consists of:

- Face Page
- Detail of adjustments
- Detail of Other Charges and Credits (OC & C)
- Detail of usage
- Detail of surcharges (if applicable)
- Detail of taxes

6.3.5.5 Maintenance and Repair

Maintenance and Repair (M&R) is the ability for the CLECs to report trouble to Pacific and check the status of the reported trouble through PBSM or EBI. Any trouble that is related to the test scenarios and occurs within the test interval will be considered part of the test. These unplanned troubles will require analysis and be reported by the Pacific Bell, the Test Generator, the End User or the Test Administrator. Therefore, the M&R testing will include planned and unplanned tests. A select set of the Functionality Test scenarios will contain planned M&R tests. The focus of this testing would be the evaluation of the trouble request process, status, and repair (i.e., ability to receive and process a mechanized trouble report) and the ability to perform a Mechanized Loop Test (MLT) where appropriate. These tests will not include an evaluation of the Pacific staff to be able to perform their duties as that is already verified. The focus of a limited set of maintenance and repair requests will be on validating the electronic process of inquiries, status, and requests.

The M&R test scope for UNE Loop with Port consists of:

- No dial tone (NDT)
- Static/Noise on the line
- Cannot call out (CCO)

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- Cannot Be Called (CBC)
- Cannot Be Called (CBC intra-switch)
- Cannot call Long Distance (LD)
- Features not working
- Features not provisioned
- Cannot call 411
- Cannot accept collect calls
- Cannot call 555-1212

The methodology to be used for performing the M&R test scenario execution will consist of having a superficial (i.e., no real condition is induced or occurs) or induced (i.e., a pre-determined condition is created) condition, validating the induced conditions and then providing an M&R request. In addition, the existing M&R process activities will be observed during the test interval. For the UNE Loop with Port testing, the induced condition will be verified through the use of MLT (i.e., not through the use of Test End-Users) where appropriate. Conditions will be induced at the CO and a person will be defined as the central point of contact to arrange for the condition to be induced without alerting the repair staff (there will be monitoring activities to validate various expectations and conditions of the test execution). Table 6-2 defines potential trouble conditions and potential ways to induce the maintenance and repair test scenarios are (most inducements are expected to occur in the CO):

Table 6-2: Trouble Conditions and Associated Inducements

Trouble Condition	Associated Inducements
No Dial Tone	Remove coil in CO
Static/noise on line	Install defective coil in CO
Cannot call out	Remove coil in CO
Cannot be called	Remove coil in CO
Cannot be called (intra-switch)	Translate incorrectly
Cannot call Long Distance	Change translations
Features not working	Change translations
Features not provisioned	Change translations
Cannot call 411	Change translations

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Trouble Condition	Associated Inducements
Cannot accept collect calls	Change translations
Cannot call 555-1212	Change translations

6.4 Capacity Testing Requirements

The Capacity Test evaluates whether the relevant Pacific systems have sufficient capacity to handle the additional workload introduced by the CLEC.

The balance between simplicity of testing and statistical soundness of the analysis must be reached in determining the appropriate test conditions. For example, it will be necessary for the Test Generator to develop a tool that permits inputting a high number of LSRs required for the OSS Capacity Testing.

The Capacity Test will include tests for evaluating pre-ordering and ordering capacity. For each of these tests and for each OSS in the pre-order and order processes, the Capacity Testing will help evaluate the selected Performance Measures (PMs).

For the ordering Capacity Test, AOG-eligible LSRs will be used. The intent is to validate the capacity of the systems and not the resources to perform the work as a result of manual activity⁵. Test conditions that provide for the mechanized error and rejections will be included. Capacity Testing will also be performed in the production environment. See Section 4.3.3.2 for capacity test environment needs.

Since these tests will be run in a production environment, special care is necessary to ensure there will be minimal impact on normal company business.

Special conditions (e.g., future due dates on LSRs) may be placed on the test data so that production processing is not affected. Using an extended due date (e.g., 12/24/99) will also provide an alternative way to identify test orders for data extraction and cleanup purposes.

6.4.1 Capacity Test for Pre-Ordering

The pre-order process of the Capacity Test will include the same activity list as the Functionality Test, with the exception of the manual K1023. See Section 6.3.5.1. For the DataGate and Verigate OSS evaluation, the Test Generator will provide Capacity Testing pre-ordering volume sufficient to cover the planned test

⁵ The vast majority of the proposed volume is AOG eligible. Moreover, to the extent the Capacity Test takes place during regular business hours, Pacific's current staff will be handling their regular load.

workload at an hourly rate, which will be defined by the Test Administrator/Manager.

6.4.2 Capacity Test for Ordering

LSR activities associated with the Capacity Testing for inbound and outbound transactions received by Pacific systems will be observed. The Capacity Testing, which will generally consist of clean AOG eligible LSRs (i.e., in order to present the maximum workload), will cover the ability of the Pacific OSSs to receive residence and business, single and multiple line, and supplements and cancellations for the order types as inbound and outbound transactions as explained in Section 8. Mechanized error rejects will also be included to test the systems ability to process these in a mechanized fashion within the volume defined. The suspend/restore order type is not included and provisioning is not in scope. Supplemental orders have been excluded because the Capacity Testing is flow-through only and supplements do not currently flow-through. For EDI and LEX, the Test Generator will provide for the order volume, mix and arrival rate defined.

6.4.3 Capacity Test Volume

This section describes the workload volume that will be simulated and entered directly to the Pacific systems that support CLEC business activity. The LSRs to be included in the capacity test will be based on Table 6-3. The Capacity Testing is limited to AOG-eligible LSRs. Therefore, non-flow-through order types have been excluded. These test cases are limited to the processes for pre-order and ordering.

The volumes for both the order and pre-order capacity tests will meet the equivalent of 8,400 LSRs per day. The volume units in the order portion of the Capacity Testing are LSRs while the units for pre-orders are queries, which are estimated from the volume of LSRs.

6.4.3.1 Pre-Order Volume

The simulated workload volume for the pre-order Capacity Test is estimated using the data from the order test (see Section 6.4.3.2) in addition to the data describing the distribution of the pre-order queries (see Section 6.4.4, which provides the distribution in aggregate form) for the test case scenarios. The formula that Pacific used to determine pre-ordering volumes is as follows: 8,400 LSRs times 4.3 (average queries per LSR) equals 36,120. Additional transactions will be processed to bring queries up to 40,000. The hour by hour volume for pre-order testing will follow the same pattern as the order testing.

6.4.3.2 Order Volume

The simulated workload volume for the order Capacity Test will consist of 8,400 LSRs in a day. The busiest hour of the day usually starts at 10 A.M. The volume arrival rate and its associated boundaries, such as peak expectations, will be determined using historical data. The specific hour by hour volume will be determined by the Test Administrator/Manager.

6.4.4 Capacity Test Mix

The test scenarios for the Capacity Testing directly define the quantities of order types that comprise the simulated order and pre-order transactions. These test cases will be selected from the same basic group of test cases that will be defined for the Functionality Test. xDSL has been excluded because they are not AOG-eligible while Resale, Basic Loop with and without NP, and stand-alone LNP have been added.

For application testing, 20% of the volume will be run through the GUI interface and 80% will be run through app-to-app interfaces.

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Table 6-3: Core Set of LSRs for Capacity Test

	% of Orders (approximate)	Scenario Types by Product/Activity	% of Orders (approximate)	Res/Bus
UNE Loop with Port	40%	Retail to UNE Loop with Port Reconfigurations	20.0%	80% Res 10% Bus
		UNE Loop with Port – New	8.0%	
		UNE Loop with Port – Changes	8.0%	
		UNE Loop with Port – Disconnects	4.0%	
Stand-alone LNP	10%	Stand-alone LNP	10.0%	50% Res 50% Bus
UNE 2 Wire Loops with NP	40%	Retail to UNE Basic Loop Reconfigurations	9.0%	10% Res 90% Bus
		UNE Basic Loop – New	4.0%	
		UNE Basic Loop – Disconnects	2.6%	
UNE 2 Wire Loops without NP	40%	Retail to UNE Basic Loop Reconfigurations	11.4%	100% Bus
		UNE Basic Loop – New	4.0%	
		UNE Basic Loop – Disconnects	2.5%	
		DS1 Loop – New	4.0%	
		DS1 Loop – Disconnects	2.5%	
Resale	5%	Retail to Resale Migrations	2.0%	80% Res 20% Bus
		Resale – New	2.0%	
		Resale – Change	.5%	
		Resale – Disconnects	.5%	
Stand-alone Directory Listings	5%	Req. Type J	5.0%	NA
Totals	100%	Totals	100%	

The Capacity Testing input mix will have these additional properties:

1. It must create error conditions caused by purposeful mistakes in selected inputs which fail edit checks in the Pacific OSSs. Although a failed transaction requires no manual work in this test, the natural occurrence of error/reject messages will be integrated into the test process.
2. To attain a satisfactory volume of transactions, the mix may contain replications of transactions.

The distribution of the pre-order queries for the pre-order volume test will be determined by the Test Administrator/Manager. The queries to be considered consist of: CSR, Address Verification/Dispatch, Request for TN, Service Availability, Service Appointment Scheduling - Due Date, Facility Availability, PIC/LPIC, and Number of Rejects/Failed Inquiries. It is important to include each of these queries since each type of query produces a different level of processor capacity and yields a different response time (which is evaluated by at least one performance measurement.). For example, the expected response time of the

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Dispatch query is about three times that of the other queries but may comprise a small percent of the query mix.

6.4.5 The Scalability Analysis

The scalability analysis will be performed in two parts. The first will assess the LSC/LOC's ability to respond to increased workload level and provide satisfactory resources to complete the manual handling of the non flow-through LSRs. LSC/LOC force modeling procedures and the baseline assumptions that create the resource capacity requirements on a daily basis will be examined. The Test Administrator/Manager will perform an analysis to evaluate the scalability of staffing, workstation capacity, training, forecasting and responsiveness.

The LSC/LOC force model contains Average Work Times (AWTs) for each product included in the ordering Capacity Test. Using the average daily workload LSC/LOC resource levels can be estimated, and the processes for the timely addition or movement of resources will be demonstrated.

An evaluation of the largely manual process for large project coordination, which is not included in the Capacity or Functionality Tests, will also be conducted by the Test Administrator/Manager.

The second part of the Scalability Analysis will assess whether Pacific's OSS interfaces can quickly be made scalable to accommodate increases in CLEC volumes over the volume currently planned for the capacity test. The Test Administrator/Manager will perform this analysis based on documentation provided by Pacific which details how it has designed its OSS interfaces to be scalable for increased demand.

6.5 Test Evaluation Requirements

The requirements in this section clarify issues having to do with the test itself and how it will be conducted. Effects on the production Performance Measures are also discussed.

6.5.1 Test Documentation Requirements

There are several different kinds of documentation that will be produced to characterize the overall testing effort. This section provides the name and intent for each of these key documents.

6.5.1.1 Master Test Plan

This document is the Master Test Plan (MTP). It comprehensively describes the necessary test activities for completing the Functionality Test and the Capacity Tests. Since this document sets an overall framework for the testing activity, it must be baselined.

One of the goals of the MTP is to help achieve a high level of joint planning, cooperation and partnering with participants in all phases of the project in order to minimize overall test time and maximize test coverage.

6.5.1.2 *Test Generator Test Plan*

The Test Generator must document their test activities in a test plan. This plan is expected to follow a similar structure as the MTP. Specific details on the respective test approach for various activities will be provided. This document comprehensively describes the work of that Test Generator. The combination of the Test Generator Test Plan and the MTP together define the test specifics. Therefore, the Test Generator Test Plan should also be baselined.

Detailed Test Plans are usually “living” documents to be updated as modifications are made. It provides an understanding of responsibilities and expectations of the work efforts required among everyone.

The structure of the Test Generator Test Plan will generally follow that of the MTP:

- Introduction is optional based on Test Generator’s needs
- Environment must specify the physical test environment in complete detail, most importantly the systems interfacing to the Pacific OSSs must be detailed
- Administrative Process should not be necessary as this is already part of the MTP and it is expected Test Generator will support these processes
- Requirements and Assumptions should include complete descriptions of the physical realizations of Section 6.5, especially data collection, test accounts, and Test Centers
- Test Program should include descriptions of the items listed under Functionality Test Program or Capacity Test Program depending on the type of test in the test plan.

6.5.1.3 *Test Specification (test case)*

The Test Administrator/Manager will specify the activities involved and the results expected in each planned test case within their Test Specification documents. These documents also form the basis for the end-user Test Scripts.

The Test Specification defines the sequence of the testing and determines the contents and objectives for each test case. Clear and concise step-by-step activities will be contained within the test specifications such that another person can execute and analyze the tests.

6.5.1.4 Test Scripts

Test Scripts come in two varieties. The end-user test script instructs the end-user when to place calls, invoke features, etc. during the usage test cases. The load test script instructs the load generator which test cases and quantities are to be used during load testing.

The Test Administrator/Manager will produce Test Scripts detailing the execution of each test case. The Functionality Test scripts will provide for the LSRs. The Test End-Users will be used to provide for the call activities (e.g., use of the features) associated with particular LSRs (e.g., scenarios) relative to the Functionality Test. The mechanized test inputs are the Test Cases for the Capacity Test.

6.5.1.5 Test Administrator/Manager Results Document

The Test Administrator/Manager will analyze the tests and produce a Test Administrator/Manager Results Document. The Test Administrator/Manager will determine the structure and contents of the Results Document.

The Test Administrator/Manager Results should be planned so that data and calculations can be ready as soon as possible during and after the testing. The Daily Report should be an aid in early reporting.

6.5.1.6 Test Administrator/Manager Evaluation Report

The Test Administrator/Manager will observe/monitor the test, evaluate the test results, and evaluate the Test Generator's Final Test Report. The findings will be documented in the Test Administrator/Manager's Evaluation Report.

6.5.2 Success Criteria

6.5.2.1 Functionality Test Success Criteria

The Functionality Test success criteria consists of the Exit Criteria for the Execution Phase of the Functionality Test (Section 7.5.3):

6.5.2.2 Capacity Test Success Criteria

The Capacity Test success criteria consists of the Exit Criteria for the Execution Phase of the Capacity Test (Section 8.5.3):

6.5.2.3 Performance Measures Success Criteria

The matrix below details the Performance Measures appropriate for Functionality and Capacity Test. Most of the appropriate Performance Measures are associated with the Functionality Test. The parity and benchmark expectations for these measures are as defined in the JPSA or as ordered by the Commission (except for Measure 1, as agreed-to for this Test).

Functionality and Capacity Test Performance Measures

The applicable Functionality and Capacity Test related Performance Measures are defined in the matrix below. The evaluation column indicates for which performance measures there will be a parity/benchmark comparison made.

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Table 6-4, Performance Measurements

Process	Perf	Performance Measurement	Track FT	Evaluate FT	Track CT	Evaluate CT
Pre-Ordering	1	Average Response Time (to OSS Pre-Order Queries)	Y	Y	Y	Y
Ordering	2	Average FOC/Local Service Confirmation Notice Interval	Y	Y	Y	Y
Ordering	3	Average Reject Notice Interval	Y	Y	Y	Y
Ordering	4	Percentage of Flow-Through Orders	Y	N	Y	N
Provisioning	5	Percentage of Orders Jeopardized	Y	TBD	N	N
Provisioning	6	Average Jeopardy Notice Interval	Y	TBD	N	N
Provisioning	7	Average Completed Interval	Y	Y	N	N
Provisioning	8	Percent Completed Within Standard Interval	Y	Y	N	N
Provisioning	9	Coordinated Customer Conversion as a Percentage On-Time	Y	Y	N	N
Provisioning	10*	PNP Network Provisioning	Y	Y	N	N
Provisioning	11	Percent of Due Dates Missed	Y	Y	N	N
Provisioning	12	Percent of Due Dates Missed Due to Lack of Facilities	Y	N	N	N
Provisioning	13	Delay Order Interval to Completion Date (For Lack of Facilities)	N	N	N	N
Provisioning	14	Held Order Interval	N	N	N	N
Provisioning	15	Provisioning Trouble Reports (Prior to Service Order Completion)	Y	TBD	N	N
Provisioning	16	Percentage Troubles in 30 Days for New Orders	Y	TBD	N	N
Provisioning	17	Percentage Troubles in 7 Days for New Orders	N	N	N	N
Provisioning	18	Average Completion Notice Interval	Y	Y	N	N
Maintenance	19	Customer Trouble Report Rate	Y	TBD	N	N
Maintenance	20	Percentage of Customer Trouble Not Resolved Within Estimated Time	Y	Y	N	N
Maintenance	21	Average Time to Restore	Y	Y	N	N
Maintenance	22	POTS Out of Service Less Than 24 Hours	Y	TBD	N	N
Maintenance	23	Frequency of Repeat Troubles in 30 Day Period	Y	TBD	N	N
Net. Performance	24	Percent Blocking on Common Trunks	N	N	N	N
Net. Performance	25	Percent Blocking on Interconnection Trunks	N	N	N	N
Net. Performance	26	NXX Loaded by LERG Effective Date	N	N	N	N
Net. Performance	27	Network Outage Notification	N	N	N	N
Billing	28	Usage Timeliness	Y	Y	N	N
Billing	29	Accuracy of Usage Feed	N	N	N	N
Billing	30*	Wholesale Bill Timeliness	Y	Y	N	N
Billing	31	Usage Completeness	Y	Y	N	N
Billing	32	Recurring Charge Completeness	Y	Y	N	N
Billing	33	Non-Recurring Charge Completeness	Y	Y	N	N
Billing	34	Bill Accuracy	Y	Y	N	N
Billing	35	Duplicate Billing (Disconnect Bill Accuracy)	N	N	N	N
Billing	36	Accuracy of Mechanized Bill Feed	N	N	N	N
Database Update	37	Average Database Update Interval	Y	Y	N	N
Database Update	38	Percent Database Accuracy	Y	Y	N	N
Database Update	39	E911/911 MS Database Update Average	Y	Y	N	N
Colocation	40	Average Time to Respond to a Collocation Request	N	N	N	N
Colocation	41	Average Time to Provide a Collocation Arrangement	N	N	N	N
Interfaces	42	Percentage of Time Interface is Available	**	**	N	N
Interfaces	43	Average Notification of Interface Outages	**	**	N	N
Interfaces	44	Center Responsiveness	**	**	N	N

Key for Table 6-4:

Term	Definition
Track	Data will be gathered and reported
Evaluate	Data will be evaluated for parity performance or compliance with a benchmark
Y	The measure will be tracked or evaluated as a part of the results
N	The measure will NOT be tracked or evaluated as a part of the results
TBD	The Test Administrator will determine if sufficient statistical data is available for evaluation to be performed. The Commission may provide input on this.
*	Inclusion of this metric is inter-dependent on open issues pending CPUC decision.

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**	These cannot be isolated to Test Case input. Results of overall production environment reported during the test period will be considered by Test Administrator/Manager in preparing final report.
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Unplanned trouble will be differentiated from planned trouble in these trouble reporting measures as applies to Measures 15, 16, 19, 22, 23. Only unplanned troubles will be included in the report.

Parties will resolve benchmarks for 1 and 6. Commission to determine benchmarks for 2, 3 and 18.

Performance Measure 11: Production numbers do include Due dates missed due to lack of facilities. For the test, the Due Dates missed due to lack of facilities will be excluded.

6.5.3 Test Populations and Performance Measure Computation

Both Functionality Testing and Capacity Testing will be performed in the production environment. The workload activity presented to the system during the test execution interval will consist of activity representing three populations:

1. Test Generator
2. CLEC normal business
3. Pacific population

6.5.3.1 Population Differentiation

In order to support analysis of the test and normal production, Pacific must be able to separate Test End-Users data into the “test related” and “normal business” populations. This separation must be done in such a manner that the Performance Measures can be properly calculated.

There will be an agreement prior to the start of the Functionality Test that Test End-Users data will be distinguishable to allow easy separation from normal business production data. The Test Administrator agrees to distinguish LSR orders by four unique Operating Company Numbers (OCNs). The results of these LSRs will be combined for evaluation against Performance Measures. The Purchase Order Numbers (PONs) will be required in order to track LSRs manually. If the Capacity Test is run at a time of low production activity, the large numbers of test inputs would affect the computation of the production Performance Measures during the days of the test.

6.5.3.2 Production Performance Measure Computation

Pacific will be collecting the performance measure data for each production day. The results of these measures (both raw data for computation validation and computed PMs) will be provided to the Test Administrator/Manager. Using the collected data, Pacific must calculate the following (Note: Provision of the underlying data to the Test Administrator/Manager will assist in validation of the computations):

- The Performance Measures relevant to the Functionality Test (using only data from the Test End-Users and Pacific normal business)

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- The Performance Measures relevant to the Capacity Tests (using only data from the Capacity Testing traffic, since there is no relevant Pacific normal business data for the Capacity Testing)
- The Performance Measures relevant to production (using only data from Test End-Users normal business and Pacific normal business, during like periods, insofar as possible).

Each of the above measures must be computed using only the relevant data so that there is no interaction between the tests through the data. In addition, Capacity Test data must not affect existing production Performance Measures. As an example to show the problem, if the Capacity Test data were to be mixed with production data, the Performance Measures would include thousands of orders with successful FOCs and no SOCs.

6.5.3.3 Data Collection Validation

The Test Administrator/Manager will validate that OSS performance measures that serve as criteria for OSS Testing are consistent with the business rules, method of calculation and measurable standards as defined by the Amended Joint Partial Settlement Agreement (JPSA). Validation includes:

1. Verifying that data for computation of performance measures are accurately captured from the OSSs and accurately reflect the OSS activity.
2. Understanding and preventing possible sources of contamination/invalidation factors on the data.
3. Securing/Storing the raw and processed data to allow for verification of test results, re-computation and re-analysis of data.
4. Establishing an audit trail between processed computed data to the raw source data.
5. Establishing other data collection requirements that may be required to perform established scientific standards in performing statistical analysis.
6. Ensuring that data archiving is performed as defined in the OSS MTP

The Technical Advisor will review and validate that data is properly collected and properly used in computing the Performance Measures. This will include an audit of the process for collecting and processing performance measure data relative to accuracy and clarity. The complete set of Orders and Pre-orders will be sampled and the resulting sample tracked in DataGate, EDI, Verigate and LEX , and the associated data collection processes. Analysis will determine that each LSR is appropriately reflected in each metric it supports. The evaluation will emphasize the data sources and the definition of time stamps.

6.5.3.4 Test Data Aggregation

If a Performance Measure is to be calculated, then the test data will be used in the calculation (i.e., no test data will be eliminated unless a defined exclusion applies). Depending on the amount of data collected during the test and factors such as geographical distribution, it may be possible to have both a sufficient sample size and the desired geographical distribution such that the measure can be computed separately for each reporting region as identified in the JPSA. Otherwise, in order to assure that the Performance Measures will be computed only for large enough samples, the test data will be aggregated to the state level before computing the Performance Measures.

6.5.4 Test Data Collection and Management Issues

The test data for each test should include:

- All test scripts
- All test inputs and outputs
- All user-oriented test activities
- All end-user-oriented test activities
- All outputs used for results analysis

Pacific and the Test Administrator/Manager will be responsible for Pacific data collection for the relevant Pacific OSSs. The data to be used in the test must be specified as part of the test planning phase in order to allow for proper analysis and archiving.

6.5.4.1 Selective Sampling

In order to validate the tests, the Test Administrator must have access to test data. For example, the Test Administrator must be able to track the progress of a specific Test End-User's LSR through Pacific system-involved in both pre-ordering transactions and ordering for the LSR. If certain steps are manual, then part of the manual process must include manual tracking.

Ability to do selective sampling implies that the Test Administrator may have access to any systems included in the testing in order to help resolve problems.

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The Test Administrator will have the choice of obtaining data directly or of having the data prepared by an appropriate SME.

If problems occur during the test execution, the Test Administrator must have access to the data showing the failure. In addition, the Test Administrator must have access to SMEs who can explain the failure and indicate the scope of the impact.

6.5.4.2 Data Archiving

There must be an archiving period for the data. When the tests are completed, there will be a period after the test where the data will be analyzed and referenced in order to prepare a test analysis and validation report. Archiving the data allows for future reference to the data in case additional questions arise subsequently to the analysis period. The archiving period shall be as agreed in the JPSA and Amended JPSA.

6.5.4.3 Proprietary Data Considerations

The Test Administrator and Test Generator will abide by non-disclosure agreements applying to interface development and design.

6.5.5 Test Accounts/End User Data

Test accounts must be identified to provide for the functional/Performance Measures testing. There must be enough test accounts defined to support the test loading during the functional tests in order to support acquiring the right sample amount to determine Performance Measures with a high degree of confidence (i.e., a given sample amount will help statistically assure a certain confidence level). Since a production environment approach is being used, it must reflect "live" accounts and facilities. These accounts and the process used to identify them are referred to as Test End-Users.. The Test End-Users will be used to primarily provide for the usage related needs of the testing. The Test End-Users database (i.e., details of lines, customer data) will be managed by the Test Administrator/Manager, as they are responsible for the bulk of the Test End-Users related test.

A second or third line for the residential Test End-Users will be provisioned to each of the Test End-User's homes in order to ensure their existing service is not disrupted. Once the test has completed, these lines will be disconnected (i.e., taken out of service, the facilities will remain).

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The process used to identify and manage the Test End-Users consists of:

- Determine number of Test End-Users required
- Determine distribution of Test End-Users and locations
- Identify Test End-Users/locations
- Map (e.g., services and feature test mapping) Test End-Users/locations to test scenarios/call scenarios
- Create database of mapping relationships for easy understanding and review
- Provide for environmental needs required for Test End-Users (e.g., install a second line and third line as necessary in homes)
 - Determine the process of managing the Test End-User.

6.5.6 Test Centers

6.5.6.1 Test Center Physical Description

The Test Centers include locations where OSS testing activities occurs. This includes the LSC, the LOC, the Test Generator's site, and selected wire centers. There may be other sites as identified by the Test Administrator.

The Test Centers provide the physical location of the activities both in the Functionality and Capacity Tests. There are more Test Centers expected to support the Functionality Test since it is more complex and broader than the Capacity Test.

Generally speaking, the Test Generator will initiate test activities and be the end-user of test outputs. The Test Generator will utilize a simulated (i.e., non-production) approach with the only production part being the system interfacing to the Pacific OSSs (i.e., the systems sending data for processing).

Pacific Test Centers consist of the production operational environments, which will also process test data. This includes Pacific Test Centers, which are responsible for producing the performance measurements.

Part of the Test Generator's Test Plan is a complete description of each physical location where test activities are taking place and of what test activities are happening within the Test Centers.

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Colocation cages in wire centers will also be identified to support DSL and LNP.

6.5.6.2 Test Monitoring and Validation Plan

Besides supporting the tests, these Test Centers must also be observed/monitored by the Test Administrator/Manager and/or Technical Advisor. Part of test planning is to develop a monitoring plan which is both effective (i.e., proper observations are included) and efficient. For a long-duration test with multiple Test Centers (e.g., like the Functionality Test), the plan will depend on effective data gathering for the Daily Report and selective physical visits to the various facilities.

Test Monitoring and Validation Plan Audience

The Test Monitoring and Validation Plan audience will primarily consist of the Test Administrator/Manager, Technical Advisor, the Commission. The Commission may also review and provide comments to the Monitoring and Validation plan and may participate in the monitoring and validation activities. The plan will not be shared with Pacific to prevent the opportunity for inappropriate preparation activities to take place (e.g., key staff normally not part of the production processing environment available at the Test Center site unknowingly). The following sections provide a high-level view of the monitoring and validation activities so as to set the stage on expectations and focus.

Test Monitoring Plan Needs

The following steps are necessary for the Test Administrator/Manager and Technical Advisor to develop a monitoring plan for the Test Centers:

1. Obtain complete descriptions of each Test Center from the Pacific Bell and the Test Generator.
2. The Test Administrator/Manager will determine the key Test Centers to be monitored
3. The Test Administrator/Manager will prepare a monitoring plan consisting of data gathering on a daily basis and of physical visits. The physical visits will be scheduled during testing activities. Most visits will be unscheduled (i.e., unannounced) so as to help maintain a level of "blindness."

Test Monitoring and Validation Plan Structure

The Monitoring and Validation Plan will define expectations, processes, guidelines/approach and techniques of the Test Administrator/Manager required to meet the Master Test Plan responsibilities (i.e., primarily validate the test activities, most especially the results, and provide a final report). Key sections of the plan consists of:

- Monitoring and Validation Team Structure (e.g., Test Center teams, data analysis team, etc.)
- Monitoring and Validation Team Roles and Responsibilities (e.g., monitoring visit activities, analysis focus, reporting to other team members, etc.)
- Administrative Processes (e.g., reporting processes, documenting activities, etc.)
- Test Center Monitoring and Validation Guidelines/Approach (e.g., generic guidelines, approach taken, specific activities to monitor and validation, etc.). These will be structured based on the type of Test activity being monitored/validated (i.e., Functionality, Capacity or Other)
- Monitoring and Validating Concluding activities (e.g., creation of final report cleanup, closing down)
- Other details associated with Feedback Session, Final Report and Assumptions.

Test Monitoring and Validation Plan Approach

The purpose of monitoring is to assure that testing operations are being properly carried out. For Test Centers which are managing Test End-Users or with manual activities, the monitor should be able to observe actual testing activities. In addition, the monitor should be able to view the test data collection manual processes and to talk with the test personnel to assess understanding of their assignments.

For Test Centers which are manually processing both test data and production data (e.g., the Pacific LSC), monitoring should assure that test and production work is handled the same way. For Test Centers, which are production OSS sites, there should be no difference between processing test activities and processing production activities. The Pacific LSC will be visited prior to the execution of the

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test in order for the Test Administrator/Manager to gain an understanding of specific monitoring needs based on the structure, activities within, processes and support focus of the LSC.

There is also a Test Center charged with producing production (and test) Performance Measures. This Test Center will be visited prior to the Functionality Test in order for the Test Administrator/Manager to follow the generation of Performance Measures from data gathering through final computation. The Test Center(s) providing test data will be monitored during the test.

The Test Administrator/Manager expects to assign monitors familiar with the normal operations of a Test Center as a monitor for that center. The exact numbers of monitors will be determined as part of the monitoring and validation test planning.

6.5.6.3 Test Center Responsibilities Toward Monitors

Pacific and the Test Generator are responsible for providing for the needs of the monitors in their respective Test Centers. All Test Centers must be prepared for monitor visits at any given point in time during the test execution and analysis phases. There should be physical facilities for monitors to review data, observe activities and/or talk to staff. There should be a contact for the monitor to work with to expedite data gathering; this contact could either work at the Test Center or be an individual from the Pacific Bell assigned to travel with the monitor.

The Test Center test data records should be organized and available to the monitor, either for an overall inspection or for following details of a particular activity through the center (e.g., as part of a selective sampling).

6.6 Assumptions

6.6.1 General

The general assumptions that govern the testing consist of:

1. Wherever possible, activities will be streamlined and conducted in parallel
2. The Test Administrator and Test Generator will ensure the testing does not disrupt existing customer services (e.g., E911 and other major services)
3. Pacific does not participate in the monitoring of the tests (this is the Test Administrator/Manager's and Technical Advisor's responsibility) except as defined and/or requested by the Commission

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4. Test Generator access to all necessary documentation, systems (potentially including logins) and facilities (e.g., LSC, data center where system data is collected, etc.) is identical to access provided to CLECs
5. Capacity and Functionality Tests will be performed independent of each other
6. Access to sites, data and other necessary information (e.g., documentation, systems) is provided to the Test Administrator within the timeframe defined
7. Facilities for the Test Administrator will be provided as necessary (e.g., desk, phone, system access, printer for reports)
8. All legal and regulatory approvals have been obtained
9. All test data will be collected and retained for a pre-determined amount of time
10. This Master Test Plan will not include any Y2K analyses, assessment, remediation, testing or other services or deliverables related to the Y2K computer problem.
11. The Test Generator test input is easily identifiable in order to support the data extraction and test cleanup needs.
12. The cooperative test does not adversely impact Performance Measures

13. To preserve “blindness” of testing, the following will not be shared with Pacific:
- % of mix of errors
 - Details associated with the Test Specification and Test Cases
 - Details associated with test interval specifics
 - Details associated with test arrival rate
 - Details associated with Capacity Test specifics (e.g., specific dates of the test, arrival rate)
1. In addition, various monitoring techniques will be employed to validate “blindness” expectations and consistency
 2. A day refers to a business day consisting of a nine-hour workday of 8:00 A.M. to 5:00 P.M.
 3. Test data (e.g., Name, TN) will not be associated with “real” customers or existing test customers (i.e., those in the Test environment) so as to prevent clashes of data.

6.6.2 Environment

The assumptions associated with the environment are:

1. Testing will take place in Pacific’s production environment with input being driven from the Test Generator’s interfaces
2. Environment changes will not occur without notification, including details of impacts, to the Test Administrator consistent with the special Change Management Process, where applicable
3. Preparation of the environment needs for Test End-Users will not require significant infrastructure changes
4. All test facilities for the Functionality Test will be disconnected/removed upon approval of test analysis exit criteria
5. All testing will occur within a defined test environment (e.g., same release, communications, etc.) unless negotiated otherwise. The releases used will be

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the normal business releases. Release changes will be presented relative to impacts to the Test Administrator/Manager and other processing that may impact the testing (e.g., proposing a new release of LASR that provides for performance enhancements will impact the tests and thus testing needs to be scheduled appropriately).

6. Test activity will not affect the calculation of production Performance Measures
7. Capacity Test activity will not affect the calculation of Functionality Test Performance Measures.

6.6.3 Staffing

The assumptions associated with staffing are:

1. Pacific Staff performing the activities are the same as those performing those functions on behalf of CLECs. Test designers and executors (i.e., those creating the LSRs) are trained using standard Pacific Bell Training classes.
2. Pacific will provide SMEs as requested by the Test Administrator/Manager and or the CPUC.

6.6.4 Functionality Testing

6.6.4.1 *Functionality Test – General*

The assumptions associated with the Functionality Test are:

1. The final number of test cases will be defined by the Test Administrator, and will be spread across the 4 reporting regions.
2. Facilities to support -Users (e.g., additional lines, long distance charges, and coordination of activities) will be provided by Pacific under the direction of the Test Administrator.
3. Computation of Performance Measures is not dependent on the length of the Functionality Test, but is dependent on obtaining a sufficient sample size
4. The testing process will follow the typical processing order (e.g., pre-order, order, provisioning, and billing). M&R can be done anytime after provisioning and posting has occurred. The Test End-Users will be provided

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the usage activities for the test scripts.

5. A separate report will be generated for each performance measurement
6. The standard call centers are used for the test
7. M&R tests require validating the service orders are posted to completion in the CABS billing system prior to execution, since only posted service orders are downloaded to the back office OSSs
8. CABS BANs are established for appropriate bill periods
9. Test lines are pre-established as retail, resale, and UNE Loop with Port to be used for reconfiguration, change, and disconnects for the Functionality Test.

6.6.4.2 Functionality Test - Execution and Analysis

The assumptions associated with the Functionality Test execution and analysis are:

1. Test analysis will be done in parallel to execution where possible
1. Test data from Test Generator and the End User delivered as soon as it is available and within the intervals define
1. A defined bill period contains most test scenario execution (i.e., the scenarios occur within the bounds of the defined bill period)
1. There are 3 bill periods (relative to the wholesale bill) within a month (i.e., the 1st, 14th and 26th usually), only 2 will be targeted for full completion of test scenarios
1. A bill cycle is 30 days
1. Ordering, primarily dealing with sending the LSRs, supplements and changes as a result of scenarios, will occur within the defined interval
1. M&R tests require validating the service orders are posted to completion in the CABS billing systems prior to execution, since only posted service orders are downloaded to the backend OSSs.

6.6.5 Capacity Testing

6.6.5.1 Capacity Test – General

The assumptions associated with the capacity testing are:

1. The Capacity Test may be performed along with production activity
2. AOG-eligible LSRs are used unless deemed otherwise based on test conditions (i.e., LSRs are accurate and the only error conditions incorporated will be those intentionally provided as part of the test)
3. An extended “fictitious” due date (i.e., 12/24/99) used on the order will help prevent orders from being processed (i.e., FOC process occurs, but the provisioning process may be prevented)
4. Relative to any off-hours test, it is expected minimal system activity unrelated to testing will be occurring during the testing interval
5. A volume of 8,400 LSRs per test will be presented from the Test Generator through the LEX and EDI Interface
6. The volume mix is designed based on Pacific Bell and CLEC discussions held (June 7 through 16, 1999).
7. Hourly volumes will be determined based upon historical data by the Test Administrator/Manager

6.6.5.2 Capacity Test – Execution and Analysis

The assumptions associated with the Capacity Test execution and analysis are:

1. Pre-ordering and ordering Capacity Tests can be executed independent of each other
2. TNs associated with the Functionality Test will not be used for the Capacity Test
3. The Test Generator will perform all the Pre-Ordering Capacity Testing using DataGate such that the volume will support the defined workload.

7. FUNCTIONALITY TEST PROGRAM

During the Functionality Test, the pre-ordering, ordering, provisioning, maintenance and repair, and billing Functional Tests are executed. The pre-order process includes the following functions that should be tested across the appropriate scenarios: CSR, Address Verification/Dispatch, Request for TN, Service Availability, Service Appointment Scheduling - Due Date, Facility Availability, PIC/LPIC, and Number of Rejects/Failed Inquiries, and manual K1023 requests. The ordering process involves the actual transmittal of the LSR from the Test Generator to Pacific with the necessary information for issuance of a service order. Ordering/provisioning capabilities include order receipt, the return of acknowledgments, editing for valid information, the return of error information, order confirmation and the return of service order completion status. The provisioning process provides for the assignment of facilities and associated activity with providing the service. The billing process includes processing the wholesale bill and providing usage information. The M&R process provides for the ability to electronically request and receive status information on requests for M&R. It is not required that the M&R tests be run concurrently, but this can be done if it is convenient for the Functional Testing participants.

For more detail, see Sections 6.2 and 6.6.

7.1 Organization Of Functionality Test Section

The organization of Section 7.1 shows how the process will work:

- Section 7.1.1: lists the goals of the Functionality Test
- Section 7.1.2: lists the roles and responsibilities of Participants involved in the
- Section 7.1.3: lists the major steps to be accomplished in the overall process.

7.1.1 Goals of the Functionality Test

The Functionality Test will validate the capability of Pacific's systems from a mechanized and manual operations perspective. The goals are detailed below:

1. Demonstrate the ability for the CLECs to obtain pre-ordering information within the Performance Measures defined
1. Demonstrate the flow through capability for CLEC LSRs
1. Demonstrate Pacific is providing appropriate notifications (i.e., FOCs, SOCs, jeopardies and error notices)
1. Demonstrate Pacific is providing appropriate daily usage tapes and wholesale billing to CLECs to allow for timely and accurate billing and bill payment procedures
1. Demonstrate Pacific's OSSs correctly handle maintenance and repair requests initiated by the CLECs
1. Demonstrate "within parity" or "within benchmark" through computation of applicable Performance Measures using test data.

It is recognized that the statistical soundness of the analysis must be considered in determining the appropriate test conditions.

7.1.2 Roles and Responsibilities

This section defines the responsibilities of participants in the Functionality Test program. There are three major roles:

7.1.2.1 *Pacific Functional Test Participant*

Pacific is the provider of the OSSs under testing and has the following additional responsibilities in addition to those defined in Section 5.2.2:

1. Supply Test End-Users or locations as requested by the Test Administrator.
2. Provide SME availability throughout the testing process.

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7.1.2.2 Test Administrator/Manager

The Test Administrator/Manager evaluates the details of the Functional Test. The Test Administrator/Manager's responsibilities in addition to those defined in Section 5.2.4 include:

1. Refine the workload mix and define scheduling of transactions
1. Execute the testing in the Pacific production and Test Generator's environment (production level interfacing software to be used) according to the Master Test Plan and associated Pacific and Test Generator Test Plan
1. Monitor the testing during the Functionality Test based on monitoring the tests and analyzing the daily test progress reports produced by the Functional Testing Participants
1. Validate the workload mix of transactions based on the expected load and the Test Scenario Coverage in Attachment 1
1. Develop the feature matrix and combinations to be used in the tests
1. Create test scripts and test cases
1. Determine the number of scenarios and test cases necessary to have a statistically sound test.

7.1.2.3 Test Generator

The Test Generator inputs the Functional Testing data and receives the Functional Testing output. The Test Generator's responsibilities, in addition to those defined in Section 5.2.5, include:

1. Input the workload mix of transactions based on the Test Scenario Coverage in Attachment 1
2. Input the feature matrix and combinations to be used in the tests

7.1.3 Functionality Test Overall Process

There are three phases to the Functionality Test Program: Planning and Preparation, Execution, and Reporting. Each phase has three parts. Entrance criteria describe the necessary conditions to start a phase. Activities describe the

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work to be done during the phase. Exit criteria states the necessary conditions to complete a phase.

The three major steps to be scheduled for the Functionality Test Program are:

1. **Functionality Test Planning and Preparation Phase.** Pacific Bell, MCIW, the Test Administrator and the Test Generator are responsible for this step. See Section 7.3 for more detail. Entrance Criteria to Functional Test Planning and Preparation Phase. These criteria are explained in Section 7.2. This section is broken out separately from the rest of the Functionality Test Planning and Preparation Phase since there are more participants involved and since these high-level decisions are especially critical to the overall Functionality Test effort.
1. **Functional Test Execution Phase.** The Test Generator is responsible for this step. See Section 7.3.4 for more detail.
1. **Functional Test Report Phase.** The Test Administrator/Manager is responsible for this step. See Section 8.1 for more detail.

The exit criteria for test planning and preparation must be met before the test execution phase can begin. The Test Administrator/Manager will deviate from these criteria only with the agreement of the TAB. If the TAB does not agree, resolution will be sought with the Commission.

7.2 Entrance Criteria to Functionality Test Planning and Preparation Phase

The following are decisions which need to be made as part of the entrance criteria to the Functional Testing Planning and Preparation Phase, as there must be a firm understanding of the technical basis and objectives of the Functional Test before the rest of the planning can be done.

1. The Test Administrator selection has been finalized
1. The Test Generator selection has been finalized
1. The Master Test Plan has been finalized

Additional entrance requirements may be identified. The assumptions in Section 6.6 should also be reviewed to understand additional expectations and to assure necessary up-front decisions have been made to support detailed test planning and preparation.

7.3 Functionality Test Planning and Preparation Phase

7.3.1 Functional Test Planning and Preparation Entrance Criteria

Functional Testing entrance criteria are described in Section 7.2.

7.3.2 Functional Test Planning and Preparation Activities

Pacific Bell, MCIW, the Test Administrator and the Test Generator must prepare a test plan, which defines the testing approach and strategy, timeline, entrance and exit criteria for each phase. The individual test plans are the major outputs from the preparation and planning phase. It is expected that this step will require one or more face to face meetings at which the Test Administrator/Manager and/or Technical Advisor can validate the appropriateness and accuracy of the proposed plan against the testing requirements and assumptions. Other planning and preparation outputs may include additional inputs to entrance and exit criteria specific to other Functional Test phases.

Items to be considered in the test plan are:

1. Determine the complete test environment. The Test Generator environment must be specified. It will include at least interfaces to: Verigate, DataGate, LEX, EDI and PBSM.
2. Determine that the Functional Testing fits within the overall schedule and identify detailed timeline
3. The Test Generator should anticipate that Functional Testing arrival rates will be designed to reflect the projected typical daytime distribution of inputs
4. For any information not intended to be shared with all participants, determine specifics of how the data is to be handled
5. Determine the method for storing and reporting measurements and outcomes. This includes specifying all reports to be used in the Functional Testing analysis.
6. Functionality Test participants should disclose to the Test Administrator/Manager the intent to gather any necessary data
7. Specify the geographical distribution of the Test End-Users
8. Generate a plan relative to when, where, and how the Functional Testing should be monitored. This includes the physical locations and facilities for

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each monitor.

9. Determine test execution details if there is any difference from Pacific production PMO
10. Identify Pacific systems that generate data used in any of the Performance Measures, together with the actual data source and how the data source will be archived
11. Confirm the test data can be isolated from total production data, as explained in Section 6.5.3. Specify how to isolate the test data from the total production data, including any Test Generator responsibilities to support data isolation.
12. Identification of the Test End-Users
13. Cooperative testing in a test environment where possible, in the same manner as testing with CLECs to assure readiness of the test platforms associated tools, and test scenarios. If a test environment is not available for any GUI interface, the production environment will be used
14. Identification of CLEC colocation sites and network facilities.

7.3.2.1 Complete Functional Testing Test Plan Execution Schedule

Since the Functional Test is an activity taking place over many days and since the preparations for test execution may be completed for some of the test scenarios before others, a detailed execution schedule can optimize the timeline by allowing some execution to start before some other scenarios are ready. The Test Administrator will use this methodology and timeline interval to develop their detailed test execution schedule. However, the start and end of the test execution phase will be maintained. In addition, the Preparation Phase includes cooperative testing in a test environment, where possible, in the same manner as testing with CLECs to assure readiness of the test platforms, associated tools and test scenarios. If a test environment is not available (e.g. GUI interface) the production environment will be used. The cooperative testing (i.e., set of test scenarios) typically consists of a subset of the full test and provides coverage for the major functionality required for the full test. Cooperative testing helps determine whether the test scenarios and environment are at a state to allow for continued testing. This effort helps prevent “false starts”(e.g., all tests are executed immediately at the start of testing only to determine that a basic underlying functional need is missing. Thus, all tests fail when a smaller subset of tests could have uncovered this situation.).

For the ordering and pre-ordering part of the Functional Testing, it should be

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possible to break test execution scheduling up by order type or by geography. The additional tracking and management complications of this approach need to be addressed in the Test Plans.

For each separately scheduled part of the Functional Test, the planning and preparation phases may overlap. However, no separately scheduled execution may start until the planning and preparation phase for that separately scheduled execution are complete and approved, as determined by the Test Administrator on an exception basis.

Two (2) bill cycles will be spanned for the Functionality Test. A billing cycle is 30 days. The first cycle will consist of the majority of activities required for the tests. These activities must be completed by the required completion date for the particular bill period so they are posted by the required post date and the billing can be validated. The second will focus on potential errors and additional tests as deemed necessary. This will also support late usage situations (e.g., late cycle disconnects). Although most scenarios will require two billing cycles, on an exception basis, some will not.

Figure 2 depicts a typical generic scenario associated with provisioning UNE Loop with Port. This figure shows the progression of the test scenarios executed relative to activity initiated in Cycle 1. Similar processing will occur for subsequent cycles where the test scenarios originate as shown in the Cycle 1.2 provisioning interval in the second and third weeks, which may be associated with the change order process validation. This intends to also depict that it is not necessary to complete the entire ordering process for all test cases in Cycle 1.1 before Cycle 1.2 is started. Every scenario will be completed before the execution phase is completed, however. This staging is done to ensure the maximum amount of value added testing is performed and the ability to have test scenarios in different states in the event that additional testing is required. The test cleanups defined on the timeline will provide for the disconnect of all services and any other associated cleanup relative to the test activity. The test plans of the Test Administrator need to provide for an efficient test execution schedule. The failure of a test case will not preclude testing of other unrelated test cases.

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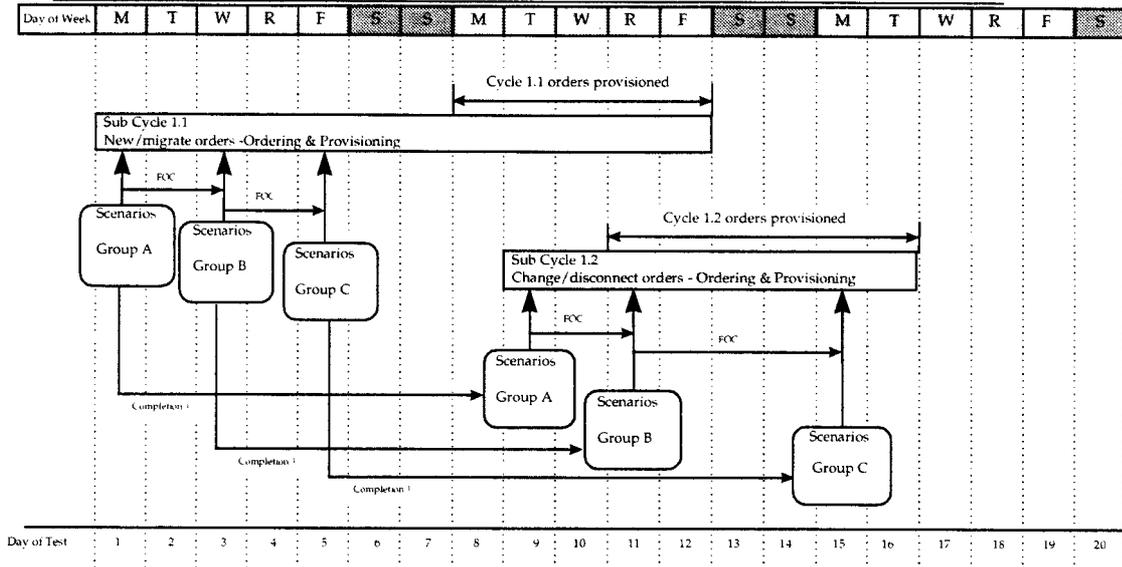


Figure 2: Generic Scenario Execution Schedule

7.3.2.2 Functionality Test Planning and Preparation Activities by Role and Responsibility

Test Generator

The Test Generator has these responsibilities:

1. Connectivity Test complete
1. Obtain User ID's (User access to all systems and interfaces)
1. Perform cooperative test in test environment or production environment if required
1. Receive test cases from the Test Administrator and prepare them for input.
1. Obtain Pacific documentation and training
1. Develop needed interfaces
1. Assess Training and Documentation

1.2.1.1.1 Test Administrator

The Test Administrator has these responsibilities:

1. Train Test End-Users or contacts at locations to verify understanding of the role and receipt of the test script.
2. Establish TAB
3. Certify when the test environment is stable and ready for testing
4. Assess Pacific documentation, training, etc.
5. Assess Test Generator readiness
6. Prepare detailed test scripts
7. Prepare detailed test cases

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8. Assign test scripts to the test end-use locations and capture in documentation.
9. Support the test end users.
10. Support Test End-Users for UNE Loop with Port and UNE Loop (Basic & xDSL)
11. Attend Pacific Bell Training

1.2.1.1.1 Pacific Bell:

The Pacific functionality test participant has these responsibilities:

1. Support the Test Administrator in data gathering or preparing for generating the test scripts as requested
1. Prepare the physical assignments of Test End-Users (e.g., new lines, etc.) to support test conditions without affecting customer service.

7.3.3 Functional Testing Planning and Preparation Exit Criteria

At this time, activities in the Test Plans necessary for start of test execution must be complete. See also Section 7.3.5. This phase requires test script review by the Test Administrator/Manager and Technical Advisor. The exit criteria for the Functional Test Planning and Preparation phase is that the work in the subsequent phases is understood by the Functional Testing participants and the Test Generator. In order to validate that the planning and preparation phase is complete, the Functional Testing participants will supply the written planning outputs to the Test Administrator/Manager and will, in addition, describe these outputs to the Test Administrator/Manager in a scheduled review session.

The exit criteria for the test planning and preparation phase consists of:

1. Baseline test plan for Functional Testing by Pacific Bell, MCIW, the Test Administrator and Test Generator
2. Test specifications and end-user scripts reviewed by the Test Administrator/Manager
3. The complete schedules, including critical path items and dependencies, defined.
4. Baselined Project Plan
5. Completed Risk Management assessment
6. Test End User List complete
7. Test Lines Installed
8. Test end-users certified and trained
9. Connectivity Test complete
10. Appropriate CLEC network facilities are in place
11. Cooperative Testing completed
12. 2Q Release (ELI) is implemented successfully (currently scheduled for 8/14/99)

7.3.4 Functionality Test Execution Phase

During the execution phase, the pre-ordering, ordering, provisioning, maintenance and repair, and billing elements of the Functional Testing are executed.

7.3.5 Functional Testing Execution Entrance Criteria

All outputs of the previous phase.

7.3.6 Functional Testing Execution Activities

The Functional Test execution activities will consist of executing the test cases as defined in the test specifications.

7.3.6.1 The Test Generator

The Test Generator Functional Test participant will:

1. Execute Test Cases
2. Report problems to Test Administrator/Manager
3. Record all relevant data as defined in the Test Plan, including all data to be used in the Results. This includes Test End-Users reports as well as systems and M&P reports.

7.3.6.2 The Test Administrator

The Test Administrator/Manager will:

1. Prepare daily report (see Section 5.3.2)
2. Monitor the testing. Schedule weekly TAB meetings as needed
4. Evaluate System Modification Requests (MR's)
5. Manage the Change Management Process
6. Perform Scalability Analysis
7. Produce Performance Measurements Reports
8. Analyze Test Results

7.3.6.3 Pacific Bell

Pacific will:

1. Induce maintenance troubles at the direction of the Test Administrator to initiate repair scenarios as agreed to during test planning
2. Capture relevant data as defined in its Test Plan
3. Prepare daily test activity report.

7.3.7 Functional Test Execution Exit Criteria

The Execution Phase is complete when the Test Administrator/Manager concurs that the following conditions are met:

1. Audit of Performance Measures applicable to test completed as provided for in JPSA and Amended JPSA, or validated in accordance with paragraph 6.5.3.3.
2. All test specifications are executed 100% and classified as completed according to their plan
3. All major system outputs (i.e. output files, user interfaces) have been produced and validated.
4. All severity 1 and 2 modification requests have been closed or cancelled.

MR Severity guidelines to be determined by Test Administrator/Manager:

Severity	8. Definition
Severity Level 1	Problem detected has halted testing progress; a fix required immediately for testing to continue. No acceptable workaround is available. The problem detected can prevent a major testing objective from being met in the current phase. Examples:abend, general protection fault, dialogue error <i>“Critical path – requires immediate attention and action”</i>
Severity Level 2	Problem has been detected in a specific area of the system, however an acceptable workaround exists. Preferably, the problem should be fixed before using a workaround or fixed in the next run. Examples: data problem, technical environment problem, incorrect system file <i>“Critical path – requires attention”</i>

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Severity Level 3	Problem has been detected: however, progress can continue as planned. Problem investigation and resolution can be pursued the following business day. The problem should be fixed prior to the next scheduled run or test phase. It is transparent to the customer, but not the user. Examples: Validation discrepancies (base/test), dialogue branching incorrect <u>“Non-critical path – should be fixed”</u>
Severity Level 4	Problem has been detected, however, progress can continue as planned. A determination must be made as to whether a fix will be required or deferred. Examples: Dialogue messages inconsistent, font is incorrect (screen or bill). <u>“Non-critical path – fix may not be necessary – possibly deferred”</u>
Severity Level 5	An enhancement has been requested, however, it is not needed immediately. The enhancement may or may not be within the scope of this release. Examples: Future user requirement, change size of a window. <u>“Non-critical path – enhancement may be deferred to a future release”</u>

1. Test Administrator is assured that no re-testing is needed.

8.1 Functionality Test Report Phase

In this phase, the data from the tests has been analyzed and is being incorporated in the final report. See also Section 7.3.2.1.

8.1.1 Functional Testing Report Entrance Criteria

This phase requires the exit criteria from the Execution Phase.

8.1.2 Functional Testing Report Activities

The Test Administrator/Manager will produce Functional Testing Results including at least:

1. Test results, using criteria for success as described in the Test Plan
2. Documentation of test inputs and outputs
3. Documentation of the test environment.

Pacific will produce Functional Testing Results documenting at least the test environment, the applicable Performance Measures, environmental issues, outstanding issues, and problem resolutions.

The Test Administrator/Manager's Evaluation Report will convey findings based on:

1. Monitoring all phases of the Functionality Test
2. Validating the Functionality Test data and results
3. Evaluating the Functional Testing Results.

In addition, the Test Administrator/Manager will:

1. Through sampling, verify the accuracy of each Functional Testing participant activity. This includes validating that the test scripts are completed in the prescribed manner and that the Performance Measures are computed accurately.
2. Verify the pricing in the wholesale bill is accurate
3. Verify the usage extract information is accurate
4. Verify the maintenance activities and measures.

8.1.3 Functional Testing Report Exit Criteria

The Test Administrator/Manager will be responsible of ensuring all documentation is complete.

These Results will be combined into a single report document and presented to the Commission as described in Section 2.0.

9. CAPACITY TESTING PROGRAM

9.1 Organization Of Capacity Test Section

A Capacity Test is very different from a Functionality Test, since it is constructed of a repeatable, controlled, simulated test workload.

The organization of Section 9.1 shows how the process will work:

- Section 9.1.1: lists the goals to be determined.
- Section 9.1.2: lists the roles and responsibilities of Participants involved in the Capacity Testing.
- Section 9.1.3: lists the major steps to be accomplished in the overall Capacity Testing process.

9.1.1 Goals of the Capacity Test

The Capacity Test will assess the capability of the Pacific OSS interfaces to handle defined volumes of pre-orders and orders. The validation process will consider two objectives:

1. Establishing the stability of these systems under the defined workload
2. Determining the ability to scale for larger workloads.

9.1.2 Roles and Responsibilities

This section defines the responsibilities of participants in the Capacity Test program. There are three major roles.

9.1.2.1 *Pacific Capacity Test Participant*

Pacific must be a Capacity Testing participant as the provider of the OSSs under testing and has the following additional responsibilities as well as those in Section 5.2.2:

1. Pacific will provide any OSS documentation required in the same manner as provided to CLECs and to the Test Administrator, as requested.

2. Provide reports on current system use (e.g., transaction volume) and overall report of results, as requested.
3. Define the log data to use for tracking required system performance analysis measurements.

9.1.2.2 Test Administrator/Manager

The Test Administrator/Manager is responsible for validating the Capacity Test. Test Administrator/Manager responsibilities beyond those in Section 5.2.4 include:

1. Refine the workload mix and scheduling of transactions. An initial specification for transaction mix and volume is given in Section 6.4.4.
2. Monitor and validate the pre-order and order Capacity Test activities
3. Provide timely feedback throughout the process
4. Statistically validate the workload (i.e., transactions) mix of transactions based on the expected workload
5. Validate test scripts.

9.1.2.3 Test Generator

The Test Generator inputs the Capacity Testing data and receives the Capacity Test output. The Test Generator responsibilities, in addition to those defined in Section 5.2.5, include:

1. Execute the testing using Verigate and DataGate for pre-ordering and LEX and EDI for ordering according to the workload staging during the test window
1. Provide timely feedback throughout the process.

9.1.3 Capacity Test Overall Process

Pre-order capacity testing and order capacity testing contain three phases: Planning and preparation, execution, and reporting. Each phase has three parts. Entrance criteria describe the necessary conditions to start a phase. Activities describe the work to be done during the phase. Exit criteria states the necessary products to complete a phase. Pre-ordering capacity testing and ordering capacity testing are each managed according to separate timelines, as they are not interdependent.

The three major steps to be scheduled for the Capacity Test Program are:

1. Capacity Test Planning and Preparation Phase. Pacific Bell, Test Administrator and the Test Generator are responsible for this step. See Section s for more detail. Entrance Criteria to Capacity Test Planning and Preparation Phase. These criteria are the same as the entrance criteria for the functionality test, described in Section 8.2. This section is broken out separately from the rest of the Capacity Test Planning and Preparation Phase since there are more Participants involved and since these high-level decisions are especially critical to the overall Capacity Test effort.
2. Capacity Testing Execution Phase. The Test Administrator and Test Generator are responsible for this step. See Section 9.3 for more detail.
3. Capacity Testing Report Phase. The Test Administrator/Manager and the Test Generator are responsible for this step. See Section 10.1 for more detail.

9.2 Capacity Test Planning and Preparation Phase

9.2.1 Capacity Test Planning and Preparation Entrance Criteria

Capacity Testing entrance criteria are the same as the entrance criteria for the Functionality Test Planning and Preparation Phase described in Section 7.2, with the addition of:

1. A valid test plan
2. A “live” (i.e., production) test environment
3. A scheduled date for the tests.

9.2.2 Capacity Test Planning and Preparation Phase Activities

The Test Administrator/Manager is responsible for planning the capacity test based on the requirements in Section 6. The first deliverable is a detailed plan for the pre-order and ordering testing, which will be provided to the Test Generator. Both Test Generator and Test Administrator will collaborate on the finalization of this plan. At a minimum, the test plans and test cases will address:

1. The complete test environment including Verigate, DataGate, LEX and EDI.
2. Entrance criteria for each phase
3. Exit criteria for each phase
4. The Capacity Testing fits within the overall schedule
5. The test execution schedule and how it integrates into the overall timeline
6. The Performance Measures that are applicable to the Capacity Testing. See Table 6-4.
7. The mechanism for generating the LSRs, which will simulate the arrival of live transactions
8. The method for storing and displaying measurements and outcomes
9. Determine the number of runs (of 8400) that would make up a statistically valid test (e.g. a baseline), for both ordering and pre-ordering capacity tests.

The pre-ordering and ordering Capacity Tests can be run independent of each other. They involve separate processing (i.e., the systems used for each are distinct). The additional tracking and management complications of this approach need to be addressed in the Test Plans.

9.2.3 Capacity Testing Planning and Preparation Activities by Role and Responsibility

Capacity Testing participants have these responsibilities:

1. The Test Administrator/Manager will prepare a test script outlining the input and the definition of expected observations for the pre-ordering Capacity Testing
2. The Test Administrator/Manager will prepare a test case outlining the input and the definition of expected observations for the ordering Capacity Testing
3. The Test Generator will debug the test scripts until they run as designed (including mechanized errors/rejects)
4. The Test Administrator/Manager will have the option to complete and verify a hands-on trial of selected test cases in the test script.
5. The Test Administrator/Manager will determine the number of runs required for a statistically valid capacity test.

9.2.4 Capacity Testing Planning and Preparation phase Exit Criteria

The exit criteria for the Capacity Testing Planning and Preparation phase are the same as the Functionality Test Planning and Preparation phase. This phase requires a test script validated by the Test Administrator/Manager. A review session is required to complete this phase. This phase requires a complete set of verified test scripts for the pre-order and test cases for the ordering tests.

9.3 Capacity Test Execution Phase

During the execution phase, the pre-ordering and the ordering Capacity Tests are executed. It is not anticipated that these tests be run at the same time.

9.3.1 Capacity Testing Execution Entrance Criteria

The testing requires:

Output for Planning/Preparation Phase

9.3.2 Capacity Testing Execution Activities

9.3.2.1 Test Generator

The Test Generator will:

1. Conduct the pre-order Capacity Testing
2. Conduct the ordering Capacity Testing
3. Record all relevant data.

9.3.2.2 Test Administrator/Manager

The Test Administrator/Manager will:

1. Observe /monitor the testing. If the Test Administrator/Manager determines that the test does not meet expected results, it will be repeated and the reasons will be noted.
2. Validate that the test scripts are completed in the prescribed manner
3. Analyze scalability documentation
4. Validate performance measurement calculations.

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9.3.3 Capacity Testing Execution Exit Criteria

A review session is required to complete this phase. The Execution Phase is complete when the Test Administrator/Manager concurs that the following conditions are met:

1. All test specifications are executed 100% and classified as completed according to their plan. The testing against all appropriate performance measurements including associated benchmarks by total LSR and by interface, will be pass/fail as indicated in Section 6.5.2.3.1.
2. All major system outputs (i.e. output files, user interfaces) have been produced and validated.
3. All severity 1 and 2 modification requests have been closed or cancelled.

MR Severity Guidelines to be assigned by Test Administrator/Manager:

Severity	10. Definition
Severity Level 1	Problem detected has halted testing progress; a fix required immediately for testing to continue. No acceptable workaround is available. The problem detected can prevent a major testing objective from being met in the current phase. Examples:abend, general protection fault, dialogue error <u>“Critical path – requires immediate attention and action”</u>
Severity Level 2	Problem has been detected in a specific area of the system, however an acceptable workaround exists. Preferably, the problem should be fixed before using a workaround or fixed in the next run. Examples: data problem, technical environment problem, incorrect system file <u>“Critical path – requires attention”</u>
Severity Level 3	Problem has been detected: however, progress can continue as planned. Problem investigation and resolution can be pursued the following business day. The problem should be fixed prior to the next scheduled run or test phase. It is transparent to the

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	customer, but not the user. Examples: Validation discrepancies (base/test), dialogue branching incorrect <u>“Non-critical path – should be fixed”</u>
Severity Level 4	Problem has been detected, however, progress can continue as planned. A determination must be made as to whether a fix will be required or deferred. Examples: Dialogue messages inconsistent, font is incorrect (screen or bill). <u>“Non-critical path – fix may not be necessary – possibly deferred”</u>
Severity Level 5	An enhancement has been requested, however, it is not needed immediately. The enhancement may or may not be within the scope of this release. Examples: Future user requirement, change size of a window. <u>“Non-critical path – enhancement may be deferred to a future release”</u>

1. Test Administrator/Manager determines that no retesting is required.

10.1 Capacity Test Report Phase

In this phase, the analysis of the tests are compiled and reported.

10.1.1 Capacity Testing Report Entrance Criteria

This phase requires the outcomes recorded in the test cases (i.e., a successful test execution).

10.1.2 Capacity Testing Report Activities

The Test Generator will produce Test Generator Test Results including at least:

1. Test results, using criteria for success as described in the Test Plan
2. Documentation of test inputs and outputs

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3. Documentation of the test environment.

Pacific will produce documentation for the test environment, the applicable Performance Measures, environmental issues, outstanding issues, and problem resolutions.

The Test Administrator/Manager's Evaluation Report will convey findings based on:

1. Monitoring the phases of the Capacity Test
2. Validating the Capacity Test data and results
3. Evaluating the Capacity Testing Test Generator's Results.

10.1.3 Capacity Testing Report Exit Criteria

These Results will be combined into a single report document and presented to the Commission.

The Test Administrator/Manager will be responsible of ensuring all documentation is complete.

11. Conclusion and Summary

This Master Test Plan defines the testing environment, approach and strategy to implement functionality and capacity testing of Pacific's OSS environment. It includes entrance and exit criteria for each phase, identifies roles and responsibilities for each participant, and identifies processes to be followed so that the work can be scheduled and progress is adequately tracked.

It identifies success criteria and a final report that will be produced after analysis is complete. The final report will include any non-compliance identified, as well as statistical evaluation of the data. In addition it will assess Pacific's documentation and training, as well as the scalability of the architecture and operations to accommodate future market growth. This report will be used by the Commission, and as appropriate, the FCC to determine whether Pacific OSSs provide to the CLEC's access that is at parity with Pacific's retail access, and a meaningful opportunity for CLEC's to compete.

12. TERMINOLOGY AND GLOSSARY

This attachment lists the terminology and acronyms used in this document.

Acronym	Term	Definition
AC	Alternate Current	
xDSL	Asymmetric Digital Subscriber Line	A general name for an evolving high speed transmission technology which uses existing copper wire from the telephone company central office to the subscriber's premise and has electronic equipment at the central office and at the subscriber's premises, and transmits and receives high speed digital signals
ALF	Access to LFACS Information	
AOG eligible	Automatic Order Generator eligible	LSRs that are identified by LASR as having the potential for mechanized service order generation
	Arrival Rate	Incoming number of transactions over a defined time period (typically an hour)
ASBS	Ancillary Services Billing System	
ASG	Access Service Group	
AWT	Average Work Time	
BAN	Billing Account Number	
	Baseline	To identify a "base" from which subsequent work can proceed. Approved by the Commission
	Basic Loop	A transmission path that connects an end-user's premises to a Pacific Central Office
CABS	Carrier Access Billing System	
CAFD	Comptroller AMA Format Description	
	Cannot Be Called	
	Cannot Call Out	
	Change Control	Process that provides an organized and formal method for managing change requests to baselined items.
CIC	Carrier Identification Code	

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Acronym	Term	Definition
CLEC	Competitive Local Exchange Carrier	A communications company which sells/re-sells communications services in direct competition with the Incumbent Local Exchange Carrier (ILEC)
CLLI	Common Language Location Identifier	An 11 digit alphanumeric code used as a method of identifying physical locations and equipment i.e., central offices relay racks etc.
CO	Central Office	
CPE	Customer Premise Equipment	Customer-owned equipment
CPUC	California Public Utilities Commission	
CSR	Customer Service Record	A record of customer specific information such as name, address, telephone number, telecommunication services subscribed to and certain other data relating to the services provided.
Capacity Testing	Capacity Test	Test ability of new mechanized systems to support expected 2Q2000 workloads. (). A pre-ordering and ordering test will be performed for purposes of this test.
DC	Direct Current	
DOJ	Department of Justice	
DSLAM	Digital Subscriber Line Access Multiplexer	Network Multiplexing equipment needed to support xDSL testing.
ECCKT	Exchange Carrier Circuit ID	
EDI	Electronic Data Interchange	Interface protocol that provides for mechanized order processing. Both the CLECs and Pacific will have systems (EDI Interface) to support the EDI functionality
	End-to-End Testing	For the purposes of this testing end-to-end is defined as testing to demonstrate the flow-through capability of providing local service requests to the CLECs in parity to existing retail.
	Fatal Errors	Errors that have been returned to LEX or EDI from Pacific's OSSs. They can either be corrected (fatal) with a supplemental request or with a new request (super fatal).
FCC	Federal Communications Commission	
FDD	Flexible Due Date	
FOC	Firm Order Confirmation	Response from the service order processor that acknowledges successful receipt of a CLEC order (i.e., provides notification SORD edits have passed).
Functional Testing	Functionality Test	A documented set of instructions designed to test and/or validate specific functions of a process or system.

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Acronym	Term	Definition
Functional testing	Federal Telecommunications Act	Referring to the Telecommunications Act of 1996
GUI	Graphical User Interface	A simplified method of accessing programs within a computer by using a mouse to point to icons, which in turn cause the programs to perform a specific function.
ILEC	Incumbent Local Exchange Carrier	Digital services designed for use with desktop applications, telephone switches, computer telephony and voice processing systems
ISDN	Integrated Services Digital Network	Long-haul, long distance interLATA carriers for voice, video and data traffic.
IXC	Inter-exchange Carrier	A notice that is issued whenever a key project milestone and/or commitment is at risk according to the Master Test Plan.
JPSA	Joint Partial Settlement Agreement	Agreement on Performance Measures standards between Pacific and CLECs. Filed in R.97-10-16/1.97-10-017.
LASR	Local Access Service Request	Pacific data system which receives Local Service Requests
LATA	Local Access and Transport Area	As defined in 47 U.S.C. Section 3 (25)
LD	Long Distance	Long distance call services between LATAs, currently provided by non-Pacific company
LEX	Local Service Request Exchange	Ordering interface
LIDB	Line Information Data Base	Database used primarily for residential customers.
LNP	Local Number Portability	
LOC	Local Operations Center	Local Operations Center that provides for provisioning and maintenance needs
LPIC	Local Primary Interexchange Carrier	Local primary interexchange carrier selected by end-user.
LSC	Loop	A transmission path that connects an end-user's premises to a Pacific Central Office
LSOR	Local Service Center	
	Local Service Ordering Requirements	Document that defines the service order detailed requirements that aid the CLEC in requesting Resale and UNE services from Pacific. This document is based on the OBF Local Service Ordering Guidelines and Pacific usage definitions and rules of application.
LSR	Local Service Request	A form prepared by the CLEC to request Pacific to provide the services as specified in the specific tariffs/contracts agreements. Information required for administration, billing and contact details is provided for in the various fields within the LSR.
M&P	Methods and Procedures	Current methods and procedures (e.g., tasks) defined to support operations required. These tasks are thoroughly planned out, explained and typically are outlined in detailed steps.
M&R	Maintenance and Repair	Ability to provide for requests, status and resolution of potential troubles

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Acronym	Term	Definition
	Mechanized orders	LSRs that can flow-through Pacific's electronic ordering system without manual intervention
	Migration	Refers to "conversion as is" or "conversion as specified."
MLT	Mechanized Loop Test	A mechanized test used to determine loop situations
MTP	Master Test Plan	
MTU	Maintenance Test Unit	
NDT	No Dial Tone	
	Non Fatal Errors	Errors that LASR sends to AOG error report in Folders for LSC review and processing.
NP	Number Portability	
OBF/TCIF	Ordering and Billing Forum/ Telecommunications Interface Forum	Industry Standards Organizations dedicated to resolving critical issues such as billing format issues between competing local exchange carriers, etc.
OC&C	Other Charges & Credits	Other Charges and Credits Bill Section
OCN	Operating Company Number	A four-digit number assigned to uniquely identify CLECs.
OSMOP	Operator Services Marketing Order Process	Provides LIDB access.
OSS	Operations Support Systems	For purposes of this test OSS refers to systems that provide for the mechanized flow-through processing
PBSM	Pacific Bell Service Manager	A Pacific developed character based stand-alone system that provides access to Pacific's maintenance and repair functionality.
PBX	Private Branch Exchange	
PFA	Products and Feature Availability	
	Phase	A period within the life cycle of the project where all activities have a common goal and includes many related activities. Occurs over a specified time frame (start and end date). Examples: Planning, Preparation and Execution. The phases may overlap each other in order to streamline the process as much as possible.
PIC	Primary Inter-exchange Carrier	Primary interexchange carrier selected by end-user.
PM	Performance Measures	As defined in JPSA.
PMO	Present Method of Operation	Current methods and procedures used, which are typically manual and mechanized operations currently deployed and implemented that take into account present processes and functions.
PON	Purchase Order Number	
	Port	Unbundled switching Option A only.
POTS	Plain Old Telephone Service	

OSS Master Test Plan

Acronym	Term	Definition
RFP	Request For Proposal	
	Resale	Service that allows a CLEC to purchase Pacific retail services in order to resell these services to their own end-user.
	Risk Management	Balancing costs of risk avoidance and the consequences of the risk
SME	Subject Matter Expert	Expert in defined area
SNI	Standard Network Interface	
SOC	Service Order Completion	Response from the service order processor that acknowledges the provisioning systems provided a successful completion of the request (LSR) (i.e., provides notification the service has been provisioned).
SORD	Service Order Retrieval and Distribution	Pacific system used to create, store and distribute service orders to various work groups to establish service.
	Test Case	Test Cases are comprised of Test Scenarios duplicated with different Test End-Users to make up the required number of test cases as they relate to UNE 3 rd Party Testing (i.e., 600 Test Cases for Functionality Testing and 8,400 for Capacity Testing).
	Test Scenario	A specifically defined request and activity as it relates to UNE 3 rd Party Testing. These Test Scenarios total 256 for Functionality Testing and 184 for Capacity Testing.
	Test Specification	Document defining test case scenarios, purpose, method, expected results required for various test phases
TN	Telephone Number	A number associated with a telephone service, typically 7 digits in length; the first 3 digits are associated with the prefix and the last 4 with a specific range
UNE	Unbundled Network Elements	As defined in FTA.
	UNE Loop	A transmission path that connects an end-user's premises to a Pacific Central Office
USOC	Universal Service Order Codes	
USOP	Universal Service Order Practice	

13. APPENDIX A: ATTACHMENTS

13.1 Attachment 1 – Test Scenario Coverage Matrix

13.1.1 Attachment 1A - Functionality Test

As Attached

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTIVITY REQ/TYP	Feature Code(s)	Activity	Res Res SL	Bus SL	Bus ML	Htg	Main Listing	Non Pub	Directory Listings Addl Line	Dual Name	Non-Listed	Non-Caption	Directory Scenario As Specified except where noted	911	Usage
1-20	Retail to L w/P	V/M	EVB, ESM	Reconfig 1 Res Line with 2 CCS Feature	X						X				Add Dual Name	X	X
2-20	Retail to L w/P	V/M	ESM, CCR	Reconfig 1 Res Line with 2 CCS Feature	X					X					As Is	X	X
3-20	Retail to L w/P	V/M	CCR, CCB	Reconfig 1 Res Line with 2 CCS Feature	X						X				Add Line of Information	X	X
4-20	Retail to L w/P	V/M	CCB, ESX	Reconfig 1 Res Line with 2 CCS Feature	X				X						As Is	X	X
5-20	Retail to L w/P	V/M	ESX, EVD	Reconfig 1 Res Line with 2 CCS Feature	X								X		Change to Non-Listed	X	X
6-20	Retail to L w/P	V/M	EVD, CLP	Reconfig 1 Res Line with 2 CCS Feature	X						X				As Is	X	X
7-20	Retail to L w/P	V/M	CLP, CSF	Reconfig 1 Res Line with 2 CCS Feature	X						X				Change Line of Information Ornit Listed Address from Directory	X	X
8-20	Retail to L w/P	V/M	CRP, ESL	Reconfig 1 Res Line with 2 CCS Feature	X				X						As Is	X	X
9-20	Retail to L w/P	V/M	CSF, ESC	Reconfig 1 Res Line with 2 CCS Feature	X						X				As Is	X	X
10-20	Retail to L w/P	V/M	ESL, CNM	Reconfig 1 Res Line with 2 CCS Feature	X							X			Change Dual Name	X	X
12-20	Retail to L w/P	V/M	ESL, CALTR	Reconfig 1 Res Line with 2 CCS Feature	X					X					Change to Non-Pub	X	
13-20	Retail to L w/P	V/M	ESC, CNMBK	Reconfig 1 Res Line with 2 CCS Feature	X						X				Add Line of Information	X	
14-20	Retail to L w/P	V/M	CNM, CALTR, ESL	Reconfig 1 Res Line with 3 CCS Feature	X				X						As Is	X	
15-20	Retail to L w/P	V/M	ESL, EVB, ESC	Reconfig 1 Res Line with 3 CCS Feature	X								X		Change to Non-Listed	X	X
16-20	Retail to L w/P	V/M	CALTR, ESM, ESL	Reconfig 1 Res Line with 3 CCS Feature	X						X				Remove Line of Information	X	
17-20	Retail to L w/P	V/M	EVB, CCR, CSF	Reconfig 1 Res Line with 3 CCS Feature	X						X				Change Line of Information	X	
18-20	Retail to L w/P	V/M	TBE, CCB, CRP	Reconfig 1 Res Line with 2 CCS Feature	X				X						As Is	X	
19-20	Retail to L w/P	V/M	CL1, ESX, CLP	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X							X			Change to Dual Name	X	
20-20	Retail to L w/P	V/M	CL2, EVD, ESC, CL1	Reconfig 1 Res Line Change ISCB Option 2 to 1	X							X			Add Dual Name	X	
21-20	Retail to L w/P	V/M	CL2	Reconfig 1 Res Line Change ISCB Option 3 to Option 2	X					X					Change to Non-Pub	X	
22-20	Retail to L w/P	V/M	CL1	Reconfig 1 Res Line with ISCB Option 1 and no Features	X						X				As Is	X	
23-20	Retail to L w/P	V/M	CNMBK	Reconfig 1 Res Line with 1 CCS Feature	X				X						Change MNL	X	
24-20	Retail to L w/P	V/M	EVB, ESM, RAF, CL2	Reconfig 1 Res Line with ISCB Option 2 and 3 CCS Features	X								X		Change to Non-Listed	X	
25-20	Retail to L w/P	V/M	CCR, CCB, TBE	Reconfig 1 Res Line with Toll Billing Exception and 2 CCS Feature	X					X					Remove Line of Information	X	

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACT/REQ/TP Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML	Htg	Main Listing	Non Pub	Dir Add	Dir Name	Dir Non-Listed	Dir Caption	Dir Scenario noted	911 Usage
26-20	Retail to L w/P	ESX, EVD, CL1	Retail Residence Reconfig with ISCB Option 1 and 2 CCS Features	X							X				Change Line of Information Omit Listed Address from Directory	X
27-20	Retail to L w/P	CLP, CRP, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X				X								X
28-20	Retail to L w/P	CSF, ESL, CL3	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X							X				Change to Dual Name	X
29-20	Retail to L w/P	ESC, CNM	Reconfig 1 Res Line with 2 CCS Features and 1 CCS Feature	X							X				Add Dual Name	X
30-20	Retail to L w/P	ESL, CALTR, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X					X						As Is	X
31-20	Retail to L w/P	ESM, CL3	Reconfig 1 Res Line with ISCB Option 3 and 1 CCS Features	X				X			X				Add Line of Information	X
32-20	Retail to L w/P	CCR, CL1	Reconfig 1 Res Line with ISCB Option 1 and 1 CCS Feature	X					X						As Is	X
33-20	Retail to L w/P	CCB, CL3	Reconfig 1 Res Line with ISCB Option 3 and 1 CCS Features	X								X			Change to Non-Listed	X
34-20	Retail to L w/P	ESX, CL1	Reconfig 1 Res Line with ISCB Option 1 and 1 CCS Feature	X						X	X				Remove Line of Information	X
35-20	Retail to L w/P	ESX, TBE	Reconfig 1 Res Line with Toll Billing Exception and 1 CCS Feature	X							X				Change Line of Information	X
36-20	Retail to L w/P	CLP, CL1, EVD	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X				X							Omit Listed Address from Directory	X
37-20	Retail to L w/P	CRP, CL2, CSF	Reconfig 1 Res Line with ISCB Option 1 and 3 CCS Features	X							X				Change to Dual Name	X
38-20	Retail to L w/P	CSF, CL3, ESL	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X							X				As Is	X
39-20	Retail to L w/P	ESC, CNM	Reconfig 1 Res Line with 2 CCS Features	X						X					Change to Non-Pub	X
40-20	Retail to L w/P	ESL, CL1, CALTR	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X						X					Add Line of Information	X
41-20	Retail to L w/P	EVB, CCR, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X				X							Change MNL	X
42-20	Retail to L w/P	ESX, CLP, CL3	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X								X			Change to Non-Listed	X
43-20	Retail to L w/P	CSF, ESC, ESL, CL1, CNM	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 1	X						X					Remove Line of Information	X
44-20	Retail to L w/P	CNM, ESM, CCB, CL2, RAF	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 2	X						X					Change Line of Information	X
45-20	Retail to L w/P	EVD, CRP, ESL, ESC, CL3	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 3	X				X							Omit Listed Address from Directory	X
46-20	Retail to L w/P	CNM, CALTR, EVB, CCR	Reconfig 1 Res Line with 4 CCS Feature	X							X				Change to Dual Name	X
47-20	Retail to L w/P	CNM, CCR, EVD, ESM, TBE	Reconfig 1 Res Line with 4 CCS Feature & Toll Billing Exception	X							X				Add Dual Name	X
48-20	Retail to L w/P	ESM, CSF, RAF	Reconfig 1 Res Line with 3 CCS Features	X					X						Change to Non-Pub	X

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTY/REQTY/ Feature Code(s)	Activity	Res. Res. SL. ML.	Bus. Res. SL. ML.	Hq.	Directory Listings	Directory Scenario	911	Usage
							Listing Non Pub Addi Dual Non-Listed	As Specified except where noted		
49-20	Retail to L w/P	V/M	CRP	Reconfig 1 Res Line with 1 CCS Feature	X			Add Line of Information	X	
50-20	Retail to L w/P	V/M		Reconfig 1 Res Line with no CCS Features & Toll billing Exception	X		X	Change MNL	X	
51-20	Retail to L w/P	V/M	TBE	Reconfig 1 Res Line with no CCS Features & ISCB Option 1	X			As Is	X	
52-20	Retail to L w/P	V/M	CL1	Reconfig 1 Res Line with no CCS Features & ISCB Option 2	X		X	Remove Line of Information	X	
53-20	Retail to L w/P	V/M	CL2	Reconfig 1 Res Line with no CCS Features & ISCB Option 3	X		X	Change Line of Information	X	
54-20	Retail to L w/P	V/M	CL3	Reconfig 1 Res Line with no CCS Features & ISCB Option 3	X		X	Ornit Listed Address from Directory	X	
58-20	Retail to L w/P	V/M	CALTR, CNMBK, ESX, ESM	Reconfig 1 Res Line with 4 CCS Feature	X		X	Change to Dual Name	X	
59-20	Retail to L w/P	V/M	ESL, EVB, CLP, CNM, CCR	Reconfig 1 Res Line with 5 CCS Feature	X		X	Add Dual Name	X	
60-20	Retail to L w/P	V/M	ESM, RAF, CRP, ESL, CCR, CCB	Reconfig 1 Res Line with 6 CCS Feature	X		X	As Is	X	
61-20	Retail to L w/P	V/M	CRP	Reconfig 1 Res Line with 6 CCS Features	X		X	Add Line of Information	X	
62-20	Retail to L w/P	V/M	ESL, CALTR, CNMBK, EVB, CCR, CCB	Reconfig 1 Res Line with 6 CCS Feature	X		X	As Is	X	
63-20	Retail to L w/P	V/M	ESM, CCR, CCB, ESX, CNMBK, EVB	Reconfig 1 Res Line with 6 CCS Feature	X		X	Change to Non-Listed	X	
64-20	Retail to L w/P	V/M	EVD, CLP, CRP, CSF, ESC, EVB	Reconfig 1 Res Line with 6 CCS Feature	X		X	Remove Line of Information	X	
65-20	Retail to L w/P	V/M	ESL, ESC, CNM, CALTR, ESM, EVB	Reconfig 1 Res Line with 6 CCS Feature	X		X	Change Line of Information	X	
66-20	Retail to L w/P	V/M	CNMBK, EVB, ESM, CCR, TBE, CLP, CRP	Reconfig 1 Res Line with 6 CCS Features	X		X	Ornit Listed Address from Directory	X	
67-20	Retail to L w/P	V/M	CCB, ESX, EVD, CLP, CL1, ESC, CCR	Reconfig 1 Res Line with ISCB Option 1 and 6 CCS Features	X		X	Change to Dual Name	X	
68-20	Retail to L w/P	V/M	CSF, ESL, ESC, CNM, CL2, CRP, EVB	Reconfig 1 Res Line with ISCB Option 2 and 6 CCS Features	X		X	As Is	X	
69-20	Retail to L w/P	V/M	ESL, CALTR, EVB, ESM, CL3, CNM, ESC	Reconfig 1 Res Line with ISCB Option 3 and 6 CCS Features	X		X	Change to Non-Pub	X	
70-20	Retail to L w/P	V/M	CCR, CCB, ESX, EVD, CNM, ESC	Reconfig 1 Res Line with 6 CCS Features	X		X	Add Line of Information	X	
71-20	Retail to L w/P	V/M	CLP, CRP, CSF, ESL, ESC, CNM, CCR	Reconfig 1 Res Line with 7 CCS Features	X		X	Change MNL	X	
72-20	Retail to L w/P	V/M	CNM, ESL, CALTR, EVB, ESM, ESC, ESX	Reconfig 1 Res Line with 7 CCS Feature	X		X	Change to Non-Listed	X	
73-20	Retail to L w/P	V/M	CNMBK, CCR, CCB, ESX, EVD, ESC, ESL	Reconfig 1 Res Line with 7 CCS Feature	X		X	As Is	X	
74-20	Retail to L w/P	V/M	CLP, CRP, CSF, ESL, ESC, CNMBK, ESM	Reconfig 1 Res Line with 7 CCS Feature	X		X	Ornit Listed Address from Directory	X	

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	"ACT"/REQTY/P	Feature Code(s)	Activity	Res SL	Res Bus SL	Bus SL	Htg	Directory Listings	As Specified except where noted	\$11	Usage				
									Main Listing	Non Pub	Add Line	Dual Name	Non-Listed	Caption		
75-20	Retail to L w/P	V/M	CNM, ESL, CALTR, ESC, CSF, CRP, CLP	Reconfig 1 Res Line and with 7 CCS Feature	X							X		Change to Dual Name	X	
76-20	Retail to L w/P	V/M	CCB, CL1, CRP, CLP	Reconfig 1 Res Line with ISCB Option 1 and 3 CCS Features	X							X		Add Dual Name	X	
77-20	Retail to L w/P	V/M	CRP, CL2, CNM, CCR	Reconfig 1 Res Line with ISCB Option 2 and 3 CCS Features	X					X				Change to Non-Pub	X	
78-20	Retail to L w/P	V/M	ESF	Reconfig 1 Bus Line with 1 CCS Feature		X					X			Add Line of Information	X	X
79-20	Retail to L w/P	V/M	TBE, ESC	Reconfig 1 Bus Line with Toll Billing Exception and 1 CCS Features		X			X					As is	X	
80-20	Retail to L w/P	V/M	CCB	Reconfig 1 Bus Line with IDDB and 1 CCS Features		X						X		Change to Non-Listed	X	
81-20	Retail to L w/P	V/M	CL1, CLP	Reconfig 1 Bus Line with ISCB Option 1 and 1 CCS Feature		X				X				Change Line of Information	X	
82-20	Retail to L w/P	V/M	CL2, ESX	Reconfig 1 Bus Line with ISCB Option 2 and 1 CCS Feature		X			X					Onli Listed Address from Directory	X	
83-20	Retail to L w/P	V/M	ESX, EVB, CCR	Reconfig 1 Bus Line with 3 CCS Features		X					X			As is	X	X
84-20	Retail to L w/P	V/M	ESC, EVD, CLP	Reconfig 1 Bus Line with 3 CCS Features		X					X			Change Dual Name	X	X
85-20	Retail to L w/P	V/M	CNMBK, ESL, ESC	Reconfig 2 Res Lines with Circular Hunting and 3 CCS Features	X									Add 1-Line Caption	X	
86-20	Retail to L w/P	V/M	CNM, CCR, CRP, ESC	Partial Reconfig 3 Res Lines with Circular Hunting and 4 CCS Features	X								X	Change 1-Line Caption	X	
87-20	Retail to L w/P	V/M	CL1, CNMBK, ESC, ESF, ESM	Reconfig 3 Bus Lines with ISCB Option 1, 4 CCS Features & Circular Hunting		X					X			Remove 1-Line Caption	X	
88-20	Retail to L w/P	V/M	CL2, CALTR, ESF, CNM, ESC, HMP	Reconfig 4 Bus Lines with ISCB Option 2, IDDB, 5 CCS Feature & Series Completion Hunting		X						X		Change to Non-Listed	X	
89-20	Retail to L w/P	V/M	ESM, ESF, ESC, CRP	Reconfig 3 Bus Line with Circular Hunting with 4 CCS Feature		X				X				Change Line of Information	X	
90-20	Retail to L w/P	V/M	CNM, CALTR, TBE, ESL, CSF	Reconfig 2 Res Lines with Toll Billing Exception and 4 CCS Features	X									As is	X	
91-20	Retail to L w/P	V/M	ESM, RAF, ESX, CCR, CCB, CNMBK, ESL	Reconfig 3 Res Lines with 7 CCS Features		X							X	Establish 1-Line Caption	X	
92-20	Retail to L w/P	V/M	CNM, CCR, CCB, ESX, CL1, CALTR, ESC	Partial Reconfig 2 Bus Lines with ISCB Option 1 and 6 CCS Feature		X							X	Establish 1-Line Caption	X	
93-20	Retail to L w/P	V/M	ESF, CNMBK, ESX	Reconfig 3 Bus Lines with IDDB & 3 CCS Feature		X							X	Change 1-Line Caption	X	
94-20	Retail to L w/P	V/M	CNM, ESC, CCB, CCR, CL1, ESC	Reconfig 4 Bus Lines with ISCB Option 1 and 5 CCS Feature		X				X				Add Line of Information	X	
95-20	Resale to L w/P	V/E	EVB, CCR, CCB, ESX, ESM	Reconfig 1 Res Line with 5 CCS Feature	X				X					Change MNL	X	X

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTIVITY/REQ/TP	Feature Code(s)	Activity	Res. SL	Res. ML	Bus SL	Bus ML	Hig	Main Listing	Non-Pub	Directory Add	Directory Listings	Dual Name	Non-Listed	Caption	Directory Scenario noted	911	Usage
96-20	Resale to L w/P	V/E	EVD, CLP, CRP, CSF, ESL, ESX	Reconfig 1 Res Line with 6 CCS Features	X										X	Change to Non-Listed		X	X
97-20	Resale to L w/P	V/E	CALTR, CL1, ESC, CCR, CNM	Reconfig 1 Res Line with ISCB Option 1 and 4 CCS Features	X							X				Change Line of Information		X	
98-20	Resale to L w/P	V/E	ESM, CCR, CCB, ESX, ESC, CLP, CRP, ESC, CSF, CL1, ESM	Reconfig 1 Res Line with 5 CCS Feature	X					X						Omit Listed Address from Directory		X	X
99-20	Resale to L w/P	V/E	ESL, CNM, CALTR, CCR, TBE, EVB	Reconfig 1 Res Line with Toll Billing Exception and 5 CCS Feature	X								X			Change to Dual Name		X	
100-20	Resale to L w/P	V/E	EVB, ESM, RAF, CCR, ESC, CL2, CNMBK	Reconfig 1 Res Line with ISCB Option 2 and 6 CCS Features	X					X						Change to Non-Pub		X	
101-20	Resale to L w/P	V/E	ESC, CCR, CCB	Reconfig 1 Bus Line with IDDB and 3 CCS Features		X										Add Line of Information		X	
102-20	Resale to L w/P	V/E	ESF, ESC, CCR, EVB, CL3, ESM	Reconfig 1 Bus Line with ISCB Option 3, IDDB and 5 CCS Features		X				X						Change MNL		X	
103-20	Resale to L w/P	V/E	CNM, ESL, CALTR, CCR, ESC	Reconfig 2 Res Lines with Circular Hunting and 5 CCS Feature	X				X						X	Change to Non-Listed		X	
104-20	Resale to L w/P	V/E	ESC, CCR, CRP	Reconfig 4 Bus Lines with Series Completion Hunting and 3 CCS Feature			X			X						Change Line of Information		X	
105-20	Resale to L w/P	V/E	HMP, CNM, TBE, CRP	Reconfig 2 Res Lines with Toll Billing Exception and 3 CCS Feature	X											Omit Listed Address from Directory		X	
106-20	Resale to L w/P	V/E	ESM, ESF, CNMBK, CALTR, EVB	Reconfig 4 Bus Lines with 5 CCS Features				X								Remove 1-Line Caption		X	
107-20	Resale to L w/P	V/E	EVB, ESM, RAF	New Connect Loop w/Port and 3 CCS Features	X					X						Add new Main List		X	X
108-20	L w/P New	N/M	CCR, CCB	New Connect Loop w/Port and 2 CCS Features	X											Add new Main List		X	X
109-20	L w/P New	N/M	ESX, EVD, CLP	New Connect Loop w/Port and 3 CCS Features	X											Add new Main List		X	X
110-20	L w/P New	N/M	CRP, CSF, ESC	New Connect Loop w/Port and 3 CCS Features	X											Add new Main List		X	X
111-20	L w/P New	N/M	CNMBK, EVB, CNM, CALTR	New Connect Loop w/Port and 4 CCS Features	X					X						Add new Main List		X	X
112-20	L w/P New	N/M	CCR, CCB, ESX, ESC	New Connect Loop w/Port and 4 CCS Features	X					X						Add new Main List		X	X
113-20	L w/P New	N/M	EVD, CLP, CRP, CSF	New Connect Loop w/Port and 4 CCS Features	X											Add new Main List		X	X
114-20	L w/P New	N/M	ESL, ESC, CNM, CALTR, CL1	New Connect Loop w/Port and 4 CCS Features	X											Add new Main List		X	X
115-20	L w/P New	N/M		New Connect Loop w/Port and 4 CCS Features	X					X						Add new Main List		X	X

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTY/REQTY/ Feature Codex)	Activity	Res Res			Bus Bus			Htg	Directory Listings					Directory Scenario <i>As Specified except where noted</i>	911	Usage	
				SL	ML	SL	ML	SL	ML		Main Listing	Non Pub	Add Line	Dual Name	Non-Listed				
116-20	L w/P New	N/M CNMBK, EVB, ESM, CCR, CL1	New Connect Loop w/Port and ISCB Option 1 & 4 CCS Features	X							X						Add new Main List	X	
117-20	L w/P New	N/M CCB, ESX, EVD, CLP, CL2	New Connect Loop w/Port and ISCB Option 2 & 4 CCS Features	X							X						Add new Main List	X	
118-20	L w/P New	N/M CRP, CSF, ESL, ESC, CL3	New Connect Loop w/Port and ISCB Option 3 & 4 CCS Features	X							X						Add new Main List	X	
119-20	L w/P New	N/M EVB, CLP, CNMBK, CALTR, CRP	New Connect Loop w/Port and 5 CCS Features	X							X						Add new Main List	X	X
120-20	L w/P New	N/M ESC, ESL, CSF, CRP, TBE	New Connect Loop w/Port and 4 CCS Features	X							X						Add new Main List	X	X
121-20	L w/P New	N/M CLP, EVD, ESX, CCB, CCR	New Connect Loop w/Port and 5 CCS Features	X							X						Add new Main List	X	
122-20	L w/P New	N/M ESM, RAF, EVB, CNMBK, CALTR	New Connect Loop w/Port and 5 CCS Features	X							X						Add new Main List	X	
123-20	L w/P New	N/M CALTR, ESX, CNM, ESC, ESL, TBE	New Connect Loop w/Port and Toll Billing Exception & 5 CCS Features	X							X						Add new Main List	X	
124-20	L w/P New	N/M ESC, CSF, CNM, CRP, CCR, CL1	New Connect Loop w/Port and ISCB Option 1 & 5 CCS Features	X							X						Add new Main List	X	
125-20	L w/P New	N/M EVB, CNM, ESL, ESM, CALTR	New Connect Loop w/Port & 5 CCS Features	X							X						Add new Main List	X	
126-20	L w/P New	N/M EVB, CCR, EVD, CRP, CSF	New Connect Loop w/Port and 5 CCS Features		X						X						Add new Main List	X	X
127-20	L w/P New	N/M ESF, CNM, ESC, CCB, ESX, ESM	New Connect Loop w/Port and 6 CCS Features		X						X						Add new Main List	X	X
128-20	L w/P New	N/M ESC, CNM, CCB	New Connect Loop w/Port and Circular Hunting & 4 CCS Features	X							X						Add new Main List	X	X
129-20	L w/P New	N/M ESM, ESC, EVB, CALTR, CNMBK	New Connect Loop w/Port and Series Completion Hunting & 5 CCS Features		X						X						Add new Main List	X	
130-20	L w/P New	N/M HMP, CNM, ESL, ESC, ESX, CCR	New Connect Loop w/Port and 6 CCS Features	X							X						Add new Main List	X	
131-20	L w/P New	N/M CCR, EVB, ESM, CNM, ESF, TBE	New Connect Loop w/Port and Toll Billing Exception & 5 CCS Features		X						X						Add new Main List	X	
132-20	L w/P Changes	C/M CNM, ESX, ESM, RAF	Number Change with Referral of Calls	X							X						Change Telephone #	X	
133-20	L w/P Changes	C/M CNM, ESC, EVB, ESX	Add Call Waiting	X															
134-20	L w/P Changes	C/M EVB	Add Busy Call Forwarding	X															
135-20	L w/P Changes	C/M CNM, ESC, CCB	Number Change with Referral of Calls	X							X						Change Telephone #	X	

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTY/REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML	Htg	Main Listing	Non Pub	Dir Add	Dir Line	Dual Name	Non-Listed	Dir Scenario noted	911	Usage
136-20	L w/P Changes	C/M	CL3, ESM, RAF	add ISCB Option 3	X													
137-20	L w/P Changes	C/M	EVD, CL1	add ISCB Option 1	X													
138-20	L w/P Changes	C/M	CLP, CRP, CL2	add ISCB Option 2	X													
139-20	L w/P Changes	C/M	ESL, CL3	add ISCB Option 3	X													
140-20	L w/P Changes	C/M	CL1, TBE	Add TBE	X													
141-20	L w/P Changes	C/M	CSF, ESL	Add Speed Call 8	X													
142-20	L w/P Changes	T/M	ESL, CNM	Outside Move same #	X					X								X
143-20	L w/P Changes	T/M	ESC, CALTR	Outside Move diff # with a referral of calls	X					X								X
144-20	L w/P Changes	S/M	CNM, CCB, CALTR	Suspend Service	X													
145-20	L w/P Changes	B/M	ESC, ESX	Restore Service	X													
147-20	L w/P Changes	C/M	ESX	Add Call Waiting	X													
148-20	L w/P Changes	C/M	CSF, CCB	Add 2 CCS Features	X													
149-20	L w/P Changes	C/M	CNM, ESM, CCR	Add 3 CCS Features	X													
150-20	L w/P Changes	C/M	CNM, ESX, ESL, CRP	Add 4 CCS Features	X													
151-20	L w/P Changes	C/M	EVB, CLP, CNM, ESC	Remove 1 CCS Feature only	X													
152-20	L w/P Changes	C/M	CNM, ESL, CALTR	Remove all CCS Features	X													
153-20	L w/P Changes	C/M	CRP, CCR	Add Call Return	X													
154-20	L w/P Changes	C/M	CSF, ESL, IDDBK	Remove IDDBK	X													
155-20	L w/P Changes	C/M	EVB	Add Call Forward Busy Line	X													
156-20	L w/P Changes	C/M	ESM, CL1, CL2	Change ISCB Option 1 to Option 2	X													
157-20	L w/P Changes	C/M	CNM, ESX, TBE	Add Toll Blocking Exception only	X													
158-20	L w/P Changes	C/M	CNM, ESX, CL1	Remove ISCB Option 1 only	X													
159-20	L w/P Changes	C/M	CLP, CRP, CL2	Remove ISCB Option 2 only	X													
161-20	L w/P Changes	C/M	CL1, ESX, ESC	Remove ISCB Option 1 only	X													
162-20	L w/P Changes	C/M	CNM, ESM, CCR, TBE	Remove Toll Blocking Exception	X													
163-20	L w/P Changes	C/M	CNM, ESX, ESL, CRP	Remove all CCS	X													
164-20	L w/P Changes	C/M	CNM, ESM, ESX, CLP, RAF	Remove 1 CCS Feature only	X													
165-20	L w/P Changes	C/M	CCR, CRP, ESC, ESL, CALTR, ESX	Remove 1 CCS Feature only	X													

3RD PARTY TEST SCENARIOS
Loop w/Port

Scenario-Test Case	Order Type	ACTY/REQTY/ Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML	Htg	Main Listing	Non Pub	Add Line	Dual Name	Non-Listed Caption	Directory Scenario As Specified except where noted	911	Usage
166-20	L w/P Changes	C/M	ESF, CRP, CCR			X			X					Change Telephone #	X	
167-20	L w/P Changes	C/M	ESL, ESC, EVB			X										
168-20	L w/P Changes	C/M	CNM, CALTR, CL1	Add ISCB Option 1 only		X										
169-20	L w/P Changes	C/M	ESM, CCB, CNM, CLP, CL2	Remove ISCB Option 2 only		X										
170-20	L w/P Changes	T/M	CSF, EVD, ESX	Outside Move with # change & Change the # of rings on EVD		X			X					Change Telephone # and Address	X	
171-20	L w/P Changes	C/M	EVB, CCR, CRP	Number Change with Referral of Calls		X			X					Change Telephone #	X	
172-20	L w/P Changes	C/M	CL1, CCB, CNM	Add Circular Hunting only	X			X								
173-20	L w/P Changes	C/M	ESF, CLP, NHN	Add 1 new line outside of the Hunt Group			X	X								
174-20	L w/P Changes	C/M	ESF, CLP, ESM, RAF, ESC, CRP, TBE	Disconnect 1 Line and the associated Series Completion Hunt		X	X	X								
175-20	L w/P Changes	C/M	CNM, CCB, ESM	# Change without referral with Circular Hunting			X	X	X					Change Telephone #	X	
176-20	L w/P Changes	C/M	ESL, ESC, CNM	Add Caller ID	X											
177-20	L w/P Changes	T/M	ESF, CNMBK, CRP, ESC	Outside Move with # change			X	X	X					Change Telephone # and Address	X	
178-20	L w/P Changes	C/M	CNM, EVD, TBE	Remove Toll Blocking Exception			X									
179-20	L w/P Disc	D/M	ESC, ESL, CRP, CLP	Disconnect Service	X									Remove Listing	X	
180-20	L w/P Disc	D/M	CL3, ESF, ESX, CRP	Disconnect Service		X								Remove Listing	X	
181-20	L w/P Disc	D/M	ESC	Disconnect Service	X			X						Remove Listing	X	
182-20	L w/P Disc	D/M	ESX, TBE	Disconnect Service			X							Remove Listing	X	
183-20	L w/P Disc	D/M	ESL, ESM, CNM, CALTR	Disconnect Service	X									Remove Listing	X	
184-20	L w/P Disc	D/M	ESF, CRP, CNMBK	Disconnect Service		X								Remove Listing	X	
Total Scenarios: 178																

ATTACHMENT 1A - FUNCTIONALITY TEST

Feature Description

Code	Description
1DDBK	International Direct Distance Dialing Blocking - Business only
CALTR	Call Trace
CCB	Call Screen
CCR	Call Return
CL1	900/976 Blocking Option 1
CL2	900/976 Blocking Option 2 - Residence Only
CL3	900/976 Blocking Option 3 - Residence Only
CLP	Priority Ringing
CNM	Caller ID
CNMBK	Caller ID Blocking
CRP	Repeat Dialing
CSF	Select Call Forwarding
ESC	Three Way Calling
ESF	Speed Calling 30
ESL	Speed Calling 8
ESM	Call Forwarding Variable
ESX	Call Waiting
EVB	Busy Call forwarding
EVC	Busy Call forwarding Extended - 1/1AESS only
EVD	Delayed Call Forwarding
HMP	Intercom Plus - 1AESS only
RAF	Remote Access to Call Forwarding - 5E/DMS100 only
TBE	Toll Billing Exception (Billed Number Screening)

Note: These Codes are used on Retail and Resale UNE for Business and Residence

3RD PARTY TEST SCENARIOS
Basic Loop

Scenario- Test Case	Order Type	ACT/ REQ/TYP	CLEC Dataset	Activity	Res SL	Res ML	Bus SL	Bus ML	Htg	No Feat	Single Feat	Mult Feat	Main Listing	Non Pub	Add Line	Add Listing	Non- Listed	Non- Caption	Directory Scenario	911	Usage			
185-20	Retail to B Loop	V/A	LINK, EUM	Reconfigure Residence Retail Line to Basic Loop	X																			
186-20	Resale to B-Loop	V/A	LINK, RSLE	Reconfigure Residence Resale to Basic Loop	X																	Remove from Gateway		
187-20	Retail to B Loop	V/A	LINK, EUM	Reconfigure Business Retail Line to Basic Loop			X																Remove from Gateway	
188-20	Resale to B-Loop	V/A	LINK, RSLE	Reconfigure Business Resale Line to Basic Loop			X																	
189-20	New B- Loop	N/A	LINK	Basic Loop Residence New Connect	X																			
190-20	New B- Loop	N/A	LINK	Basic Loop Business New Connect			X																	
191-20	Disc B- Loop	D/A	LINK	Disconnect Basic Loop - Residence	X																			
192-20	Disc B- Loop	D/A	LINK	Disconnect Basic Loop - Business			X																	
193-20	Port Out B Loop	V/A	LINK, EUM, OLNP	Port Out Basic Loop Residence with LNP	X																			
194-20	Port Out B Loop	V/A	LINK, EUM, OLNP	Port Out Basic Loop Business with LNP			X																	
Total Scenarios: 10																								

3RD PARTY TEST SCENARIOS
+DSL Capable Loop

Scenario-Test Case	Order Type	ACTY/REQTY	CLEC Dataset	Activity	Res SL	Res ML	Bus SL	Bus ML	Htg	No Feat	Single Feat	Mult Feat	TBE	SOB	IDDD Bkg	Main Listing	Non-Pub	Adtl Line	Adtl Listing	Non-Listed	Caplion	Directory Scenario	911	Usage
195-20	Retail to Loop	V/A	LINK,EUM	Reconfigure to ADSL Loop	X																			
196-20	Retail to Loop	V/A	LINK,EUM	Reconfigure to ADSL Loop			X																	
197-20	New Loop	N/A	LINK	ADSL Loop New Connect	X																			
198-20	New Loop	N/A	LINK	ADSL Loop New Connect			X																	
199-20	Disc Loop	D/A	LINK	ADSL Loop Disconnect	X																			
200-20	Disc Loop	D/A	LINK	ADSL Loop Disconnect			X																	
201-20	New Loop	N/A	LINK	IDSL Loop New Connect	X																			
203-20	New Loop	N/A	LINK	IDSL Loop New Connect			X																	
204-20	New Loop	N/A	LINK	HDSL Loop New Connect	X																			
205-20	New Loop	N/A	LINK	HDSL Loop New Connect			X																	
206-20	New Loop	N/A	LINK	SDSL Loop New Connect	X																			
207-20	New Loop	N/A	LINK	SDSL Loop New Connect			X																	
Total Scenarios: 12																								

Scenario- Test Case	Order Type	ACT/ RECTYP	CLEC Dataset	Activity	Order Number	Telephone Number	Res SL	Res ML	Bus SL	Bus ML	Htg	No Feat	Single Feat	Mult Feat	TBE	ISCB	IDDD Blkg	Main Listing	Non Pub	Add Line	Add Listing	Non- Listed	Caption	Directory Scenario	911 Usage	
	Retail to B- Loop	V/A	LINK; EUM	Reconfigure Residence Retail Line to Assured Loop			X																			
208-20	Resale to Assured Loop	V/A	LINK; RSL; E	Reconfigure Residence Resale Line to Assured Loop			X																		Remove from Gateway	
209-20	Retail to Assured Loop	V/A	LINK; RSL; E	Reconfigure Residence Retail Line to Assured Loop				X																	Remove from Gateway	
210-20	Resale to Assured Loop	V/A	LINK; EUM	Reconfigure Business Resale Line to Assured Loop					X																Remove from Gateway	
211-20	New Assured Loop	V/A	LINK; RSL; E	Reconfigure Business Resale Line to Assured Loop					X																	
212-20	New Assured Loop	N/A	LINK	Assured Loop Residence New Connect			X																			
213-20	New Assured Loop	N/A	LINK	Assured Loop Business New Connect					X																	
214-20	Disc Assured Loop	D/A	LINK	Disconnect Assured Loop - Residence			X																			
215-20	Disc Assured Loop	D/A	LINK	Disconnect Assured Loop - Business					X																	
216-20	Port Out Assured Loop	V/A	LINK; EUM; OLNP	Port Out Assured Loop Residence with LNP			X																			
217-20	Port Out Assured Loop	V/A	LINK; EUM; OLNP	Port Out Assured Loop Business with LNP					X																	
Total Scenario s: 10																										

Scenario- Test Case	Order Type	*ACTY/ RECIYP	GLEC Delete	Activity	Order Number	Telephone Number	Res SL	Res ML	Bus SL	Bus ML	Htg	No Feat	Single Feat	Mult Feat	TBE	ISCB	IDDD Blkg	Directory Listings				Directory Scenario	813 Usage
																		Main Listing	Non Pub	Add Line	Non- Listed		
218-20	New Loop	N/A	LINK	DS1 Loop Business New Connect					X														
219-20	Disc Loop	D/A	LINK	DS1 Loop Business Disconnect					X														
Total Scenarios 2																							

Scenario- Test Case	Order Type	ACTY/ REQTY/P	CLEC Dataset	Activity	Bus SL	Bus ML	EDT	TBCC	Directory Listings						Directory Scenario	911 Usage	
									Main Listing	Non Pub	Add Line	Add Listing	Non- Listed	Caption			
220-20	LNP	V/C		Single Line Port	X		X					X			Swap as Is (ML, AL)	X	
221-20	LNP	V/C		Single Line Port	X										Migrate as Specified, ML, Add Caption & Line of Information	X	
222-20	LNP	V/C		Single Line Port	X			X							Swap as Is (ML)	X	
223-20	LNP	V/C		Port Block of 20 DID	X		X								Swap as Is (ML, AL, Non- Listed TN)	X	
224-20	LNP	V/C		Port Block of 20 DID	X			X							Migrate as Specified, ML, Change 1 Line to Non- Listed, Remove Caption	X	
225-20	LNP	V/C		Partial Migration, 80 of a block of 100 w/Hunting	X			X							Swap as Is (ML, Foreign Listing & LCR)	X	
226-20	LNP	V/C		Single Line Port & 1 CLEC Native	X			X							Migrate as Specified, Change ML from Ported TN to CLEC Native	X	
227-20	LNP	V/C		Partial Migration of 2 lines (1 w/BTN)	X		X								Swap as Is (ML, LOI & LCR)	X	
228-20	LNP	V/C		Partial Block of 40, Port 20 & Disconnect 20	X			X							Migrate as Specified, Change ML of CLEC Native to Ported TN; Change LOI, Change one line to non pub	X	
229-20	LNP w/Loop	V/B		Single Line Port w/ 1 Loop	X		X								Swap as Is (ML, AL)	X	
230-20	LNP w/Loop	V/B		Single Line Port w/1 Loop	X			X							Swap as Is (ML)	X	
231-20	LNP w/Loop	V/B		Port Block of 20 DID w/10 Loops	X			X							Migrate as Specified, ML, Change 1 Line to Non- Listed, Remove Caption	X	
232-20	LNP w/Loop	V/B		Partial Migration, 20 of a block of 40 w/Hunting, w/14 Loops	X			X							Swap as Is (ML, Foreign Listing & LCR)	X	
233-20	LNP w/Loop	V/B		Partial Migration of 2 lines (1 w/BTN) w/2 Loops	X		X								Swap as Is (ML, LOI & LCR)	X	
234-20	LNP w/Loop	V/B		Partial Block of 40, Port 20 w/14 Loops & Disconnect 20	X			X							Migrate as Specified, Change ML of CLEC Native to Ported TN; Change LOI	X	

3RD PARTY TEST SCENARIOS
Supplementals (5%)

Scenario- Test Case	Order Type	ACT/ REQTYP	Feature Code(s)	Original Activity	Supplement Activity	Res SL	Res ML	Bus SL	Bus ML	Order Number	Telephone Number
1-20	Retail to L w/P	V/M	EVB, ESM	Reconfig 1 Res Line with 2 CCS Feature	Add CCR	X					
19-20	Retail to L w/P	V/M	CL1, ESX, CLP EVB, ESM, RAF, CL2	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature Reconfig 1 Res Line with ISCB Option 2 and 3 CCS Features	Do not add CLP	X					
24-20	Retail to L w/P	V/M	RAF, CL2	Option 2 and 3 CCS Features	Add ESX	X					
25-20	Retail to L w/P	V/M	CCR, CCB, TBE	Reconfig 1 Res Line with Toll Billing Exception and 2 CCS Feature	Add CRP						
26-20	Retail to L w/P	V/M	ESX, EVD, CL1	Retail Residence Reconfig with ISCB Option 1 and 2 CCS Features	Add ESM	X					
43-20	Retail to L w/P	V/M	CSF, ESC, ESL, CL1, CNM	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 1	Do not add CNM	X					
44-20	Retail to L w/P	V/M	CNMBK, ESM, CCB, CL2, RAF	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 2	Do not add CCB	X					
45-20	Retail to L w/P	V/M	EVD, CRP, ESL, ESC, CL3 CNMBK, CCR, EVD, ESM, TBE	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 3 Reconfig 1 Res Line with 4 CCS Feature & Toll Billing Exception	Do not add ESC	X					
47-20	Retail to L w/P	V/M	TBE	Reconfig 1 Res Line with 1 CCS Feature	Change CNMBK to CNM	X					
49-20	Retail to L w/P	V/M	CRP	Reconfig 1 Res Line with 1 CCS Feature	Change CRP to CALTR	X					
56-20	Retail to L w/P	V/M	CALTR, CNMBK, ESX, ESM	Reconfig 1 Res Line with 4 CCS Feature	Do not add CALTR	X					
59-20	Retail to L w/P	V/M	ESL, EVB, CLP, CNM, CCR	Reconfig 1 Res Line with 5 CCS Feature	Do not add CCR	X					
60-20	Retail to L w/P	V/M	ESM, RAF, CRP, ESL, CCR, CCB	Reconfig 1 Res Line with 6 CCS Feature	Change ESL to ESF	X					
61-20	Retail to L w/P	V/M	CSF, ESL, ESC, CNM, CLP, CRP	Reconfig 1 Res Line with 6 CCS Features	Change CNM to CNMBK	X					
62-20	Retail to L w/P	V/M	ESL, CALTR, CNMBK, EVB, CCR, CCB	Reconfig 1 Res Line with 6 CCS Features	Change EVB to EVD	X					
63-20	Retail to L w/P	V/M	ESM, CCR, CCB, ESX, CNMBK, EVB	Reconfig 1 Res Line with 6 CCS Features	Change EVB to EVC	X					

ATTACHMENT 1A - FUNCTIONALITY TEST

3RD PARTY TEST SCENARIOS
Supplementals (5%)

Scenario-Test Case	Order Type	ACT/REQ TYP	Feature Code(s)	Original Activity	Supplement Activity	Res SL	Res ML	Bus SL	Bus ML	Order Number	Telephone Number
64-20	Retail to L w/P	V/M	EVD, CLP, CRP, CSF, ESC, EVB	Reconfig 1 Res Line with 6 CCS Features	Do not add EVD	X					
65-20	Retail to L w/P	V/M	ESL, ESC, CNM, CAL TR, ESM, EVB	Reconfig 1 Res Line with 6 CCS Features	Do not add ESC	X					
66-20	Retail to L w/P	V/M	CNMBK, EVB, ESM, CCR, TBE, CLP, CRP	Reconfig 1 Res Line with 6 CCS Features	Change CCR to CCB	X					
67-20	Retail to L w/P	V/M	CCB, ESX, EVD, CLP, CL1, ESC, CCR	Reconfig 1 Res Line with ISCB Option 1 and 6 CCS Features	Add ESM	X					
78-20	Retail to L w/P	V/M	ESF	Reconfig 1 Bus Line with 1 CCS Feature	Add CNM			X			
79-20	Retail to L w/P	V/M	TBE, ESC	Reconfig 1 Bus Line with Toll Billing Exception and 1 CCS Features	Change ESC to ESM			X			
80-20	Retail to L w/P	V/M	CCB	Reconfig 1 Bus Line with IDDDDB and 1 CCS Features	Change CCB to CCR			X			
81-20	Retail to L w/P	V/M	CL1, CLP	Reconfig 1 Bus Line with ISCB Option 1 and 1 CCS Feature	Change CLP to CRP			X			
82-20	Retail to L w/P	V/M	CL2, ESX	Reconfig 1 Bus Line with ISCB Option 2 and 1 CCS Feature	Change ESX to ESC			X			
85-20	Retail to L w/P	V/M	CNMBK, ESL, ESC	Reconfig 2 Res Lines with Circular Hunting and 3 CCS Features	Change ESC to ESX		X				
86-20	Retail to L w/P	V/M	CNM, CCR, CRP, ESC	Partial Reconfig 3 Res Lines with Circular Hunting and 4 CCS Features	Change CRP to CSF		X				
87-20	Retail to L w/P	V/M	CL1, CNMBK, ESC, ESF, ESM	Reconfig 3 Bus Lines with ISCB Option 1, 4 CCS Features & Circular Hunting	Add ESX			X			
90-20	Retail to L w/P	V/M	CNM, CAL TR, TBE, ESL, CSF	Reconfig 2 Res Lines with Toll Billing Exception and 4 CCS Features	Change CSF to CRP		X				
91-20	Retail to L w/P	V/M	ESM, RAF, ESX, CCR, CCB, CNMBK, ESL	Reconfig 3 Res Lines with 7 CCS Features	Change ESL to ESF		X				
Total Scenarios: 30											

3RD PARTY TEST SCENARIOS - Usage (5%)

Scenario Test Case	Res SL	Bus SL	Call Type	Traffic Type	AMA Call Code	Bill Correct? (Y/N)	Human Error? (Y/N)	System Error? (Y/N)	Error Explanation	Fix Date	Relest Date
1-70	X		Toll Unbundled to IEC 800	22	141						
2-70	X		Toll Unbundled to Feature Group D Busy Line Verify Unbundled to P*B Operator	24	110						
3-70	X		Unbundled to DA	27	198						
4-70	X		Local Interswitch Unbundled to P*B Operator	28	194						
5-70	X		Toll Unbundled to P*B Operator	29	196						
6-70	X		Toll Unbundled to CLEC	29	074						
8-70	X		Local Interswitch Unbundled to Wireless Service Provider (WSP)	14	006						
9-70	X		Local Interswitch Unbundled to P*B	16	001, 002						
10-70	X		Local Interswitch Unbundled to P*B	20	002						
15-70	X		Toll Interswitch Unbundled to P*B	20	001						
78-70		X	Toll Interswitch Unbundled to P*B	20	006						
83-70		X	Toll CLEC to Unbundled	2	066						
84-70		X	Toll P*B to Unbundled Local Intraswitch Unbundled to	8	006						
95-70	X		Toll Unbundled to Unbundled	09, 10	002						
96-70	X		Toll Unbundled to Unbundled	09, 10	006						
Total Scenarios: 15											

3RD PARTY TEST SCENARIOS
Maintenance and Repair (5%)

Scenario- Test Case	UNE Service	Res SL	Bus SL	Trouble Condition	Associated Inducement	Trouble Found? (Y/N)	Date & Time Trouble Reported	Date & Time Trouble Cleared
12-80	Loop w/Port	X		No Dial Tone	Remove Coil In CO			
13-80	Loop w/Port	X		Features Not Working	Change Translations			
14-80	Loop w/Port	X		Features Not Provisioned	Change Translations			
15-80	Loop w/Port	X		Cannot Accept Collect Calls	Change Translations			
16-80	Loop w/Port	X		Static/Noise On Line	Install Defective Coil In CO			
17-80	Loop w/Port	X		Cannot Call 411	Change Translations			
18-80	Loop w/Port	X		Cannot Call Out	Remove Coil in CO			
29-80	Loop w/Port	X		Cannot Call 555-1212	Change Translations			
39-80	Loop w/Port	X		Cannot Call Long Distance	Change Translations			
46-80	Loop w/Port		X	Cannot Be Called (Intrawitch)	Translate Incorrectly			
48-80	Loop w/Port		X	Cannot Be Called	Remove Coil in CO			
187-80	Basic Loop	X		No Dial Tone	None (no trouble found)			
193-80	ADSL Loop	X		No Dial Tone	None (no trouble found)			
Total Scenarios: 13								

ATTACHMENT 1A - FUNCTIONALITY TEST

REQTYP Description

Type of Request	Type of Service	Description
A	Loop (Link)	Assured, Basic, CENTREX, Coin, Copper D Alarm, DS1, Digital Connectivity, ISDN, PBX or VG (Voice Grade) Loop
B	Loop with NP (Number Portability)	Assured, Basic, CENTREX, Coin, Digital Connectivity, ISDN, or PBX Loop with Local Number Portability
C	NP	Local Number Portability
D	Retail Bundled Service	Migrate Retail Service as is
E	Resale	Exchange Services
F	Port	Basic POTS, CENTREX, COPT/Coin, ISDN or PBX Port with Option A or B Routing
M	Loop with Port	Basic, Centrex, COPT/Coin, ISDN or PBX loop and Port with Option A or B Routing

ATTACHMENT 1A - FUNCTIONALITY TEST

Activity Description

ACT	Description
N	New Installation
C	Change or modification to an existing service
D	Disconnection of service
T	Outside move of end user location
R	Record activity for ordering administrative changes
V	Conversion of service to new LSP (Local Service Provider/CLEC)
W	Conversion as is (Apply to REQ TYP E only)
S	Suspend (Apply to REQ TYPs E, F & M only)
B	Restore (Apply to REQ TYPs E, F & M only)

13.1.2 Attachment 1B - Capacity Test

As Attached

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS
Loop with Port

ETE Scenario	Order Type	ACT TM REQ TYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
1-20	Retail to L w/P	V/M	EVB, ESM	Reconfig 1 Res Line with 2 CCS Feature	X			
2-20	Retail to L w/P	V/M	ESM, CCR	Reconfig 1 Res Line with 2 CCS Feature	X			
3-20	Retail to L w/P	V/M	CCR, CCB	Reconfig 1 Res Line with 2 CCS Feature	X			
4-20	Retail to L w/P	V/M	CCB, ESX	Reconfig 1 Res Line with 2 CCS Feature	X			
5-20	Retail to L w/P	V/M	ESX, EVD	Reconfig 1 Res Line with 2 CCS Feature	X			
6-20	Retail to L w/P	V/M	EVD, CLP	Reconfig 1 Res Line with 2 CCS Feature	X			
7-20	Retail to L w/P	V/M	CLP, CSF	Reconfig 1 Res Line with 2 CCS Feature	X			
8-20	Retail to L w/P	V/M	CRP, ESL	Reconfig 1 Res Line with 2 CCS Feature	X			
9-20	Retail to L w/P	V/M	CSF, ESC	Reconfig 1 Res Line with 2 CCS Feature	X			
10-20	Retail to L w/P	V/M	ESL, CNM	Reconfig 1 Res Line with 2 CCS Feature	X			
11-20	Retail to L w/P	V/M	CNM, ESL	Reconfig 1 Res Line with 2 CCS Feature	X			
12-20	Retail to L w/P	V/M	ESL, CALTR	Reconfig 1 Res Line with 2 CCS Feature	X			
13-20	Retail to L w/P	V/M	ESC, CNMBK	Reconfig 1 Res Line with 2 CCS Feature	X			
14-20	Retail to L w/P	V/M	CNM, CALTR, ESL	Reconfig 1 Res Line with 3 CCS Feature	X			
15-20	Retail to L w/P	V/M	ESL, EVB, ESC	Reconfig 1 Res Line with 3 CCS Feature	X			
16-20	Retail to L w/P	V/M	CALTR, ESM, ESL	Reconfig 1 Res Line with 3 CCS Feature	X			
17-20	Retail to L w/P	V/M	EVB, CCR, CSF	Reconfig 1 Res Line with 3 CCS Feature	X			
18-20	Retail to L w/P	V/M	TBE, CCB, CRP	Reconfig 1 Res Line with 3 CCS Feature	X			
19-20	Retail to L w/P	V/M	CL1, ESX, CLP	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X			
20-20	Retail to L w/P	V/M	CL2, EVD, ESC, CL1	Reconfig 1 Res Line Change ISCB Option 2 to 1	X			
21-20	Retail to L w/P	V/M	CL2	Reconfig 1 Res Line Change ISCB Option 3 to Option 2	X			
22-20	Retail to L w/P	V/M	CL1	Reconfig 1 Res Line with ISCB Option 1 and no Features	X			

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS
Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
23-20	Retail to L w/P	V/M	CNMBK	Reconfig 1 Res Line with Caller ID Blocking and 1 CCS Feature	X			
24-20	Retail to L w/P	V/M	EVB, ESM, RAF, CL2	Reconfig 1 Res Line with ISCB Option 2 and 3 CCS Features	X			
25-20	Retail to L w/P	V/M	CCR, CCB, TBE	Reconfig 1 Res Line with Toll Billing Exception and 2 CCS Feature	X			
26-20	Retail to L w/P	V/M	ESX, EVD, CL1	Retail Residence Reconfig remove ISCB Option 1 and 2 CCS Features	X			
27-20	Retail to L w/P	V/M	CLP, CRP, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X			
28-20	Retail to L w/P	V/M	CSF, ESL, CL3	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X			
29-20	Retail to L w/P	V/M	ESC, CNM	Reconfig 1 Res Line with 2 CCS Features	X			
30-20	Retail to L w/P	V/M	ESL, CALTR, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X			
31-20	Retail to L w/P	V/M	ESM, CL3	Reconfig 1 Res Line with ISCB Option 3 and 1 CCS Features	X			
32-20	Retail to L w/P	V/M	CCR, CL1	Reconfig 1 Res Line with ISCB Option 1 and 1 CCS Feature	X			
33-20	Retail to L w/P	V/M	CCB, CL3	Reconfig 1 Res Line with ISCB Option 3 and 1 CCS Features	X			
34-20	Retail to L w/P	V/M	ESX, CL1	Reconfig 1 Res Line with ISCB Option 1 and 1 CCS Feature	X			
35-20	Retail to L w/P	V/M	ESX, TBE	Reconfig 1 Res Line with Toll Billing Exception and 1 CCS Feature	X			
36-20	Retail to L w/P	V/M	CLP, CL1, EVD	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X			
37-20	Retail to L w/P	V/M	CRP, CL2, CSF	Reconfig 1 Res Line with ISCB Option 1 and 3 CCS Feature	X			
38-20	Retail to L w/P	V/M	CSF, CL3, ESL	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X			
39-20	Retail to L w/P	V/M	ESC, CNM	Reconfig 1 Res Line with 2 CCS Features	X			

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS

Loop with Port

ETE Scenario	Order Type	"ACT"/REQ TYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
40-20	Retail to L w/P	V/M	ESL, CL1, CALTR	Reconfig 1 Res Line with ISCB Option 1 and 2 CCS Feature	X			
41-20	Retail to L w/P	V/M	EV/B, CCR, CL2	Reconfig 1 Res Line with ISCB Option 2 and 2 CCS Features	X			
42-20	Retail to L w/P	V/M	ESX, CLP, CL3	Reconfig 1 Res Line with ISCB Option 3 and 2 CCS Feature	X			
43-20	Retail to L w/P	V/M	CSF, ESC, ESL, CL1, CNM	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 1	X			
44-20	Retail to L w/P	V/M	CNMBK, ESM, CCB, CL2, RAF	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 2	X			
45-20	Retail to L w/P	V/M	EVD, CRP, ESL, ESC, CL3	Reconfig 1 Res Line with 4 CCS Feature & ISCB Option 3	X			
46-20	Retail to L w/P	V/M	CNM, CALTR, EVB, CCR	Reconfig 1 Res Line with 4 CCS Feature	X			
47-20	Retail to L w/P	V/M	CNMBK, CCR, EVD, ESM, TBE	Reconfig 1 Res Line with 5 CCS Feature & Toll Billing Exception	X			
48-20	Retail to L w/P	V/M	ESM, CSF, RAF	Reconfig 1 Res Line with 3 CCS Features	X			
49-20	Retail to L w/P	V/M	CRP	Reconfig 1 Res Line with 1 CCS Feature	X			
50-20	Retail to L w/P	V/M		Reconfig 1 Res Line with no CCS Features	X			
51-20	Retail to L w/P	V/M	TBE	Reconfig 1 Res Line with no CCS Features & Toll billing Exception	X			
52-20	Retail to L w/P	V/M	CL1	Reconfig 1 Res Line with no CCS Features & ISCB Option 1	X			
53-20	Retail to L w/P	V/M	CL2	Reconfig 1 Res Line with no CCS Features & ISCB Option 2	X			
54-20	Retail to L w/P	V/M	CL3	Reconfig 1 Res Line with no CCS Features & ISCB Option 3	X			
55-20	Retail to L w/P	V/M	CNM, CCB, CSF, CL1	Reconfig 1 Res Line and remove all CCS Features and ISCB Option 1	X			
56-20	Retail to L w/P	V/M	CALTR, CCR, CRP, CL2	Reconfig 1 Res Line and remove all CCS Features and ISCB Option 2	X			

3RD PARTY TESTING SCENARIOS
Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTY/P	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
57-20	Retail to L w/P	V/M	ESL, CCB, CSF, CL3	Reconfig 1 Res Line and remove all CCS Features and ISCB Option 3	X			
58-20	Retail to L w/P	V/M	CALTR, CNMBK, ESX, ESM	Reconfig 1 Res Line with 4 CCS Feature	X			
59-20	Retail to L w/P	V/M	ESL, EVB, CLP, CNM, CCR	Reconfig 1 Res Line with 5 CCS Feature	X			
60-20	Retail to L w/P	V/M	ESM, RAF, CRP, ESL, CCR, CCB	Reconfig 1 Res Line with 6 CCS Feature	X			
61-20	Retail to L w/P	V/M	CSF, ESL, ESC, CNM, CLP, CRP	Reconfig 1 Res Line with 6 CCS Feature	X			
62-20	Retail to L w/P	V/M	ESL, CALTR, CNMBK, EVB, CCR, CCB	Reconfig 1 Res Line with 6 CCS Feature	X			
63-20	Retail to L w/P	V/M	ESM, CCR, CCB, ESX, CNMBK, EVB	Reconfig 1 Res Line with 6 CCS Feature	X			
64-20	Retail to L w/P	V/M	EVD, CLP, CRP, CSF, ESC, EVB	Reconfig 1 Res Line with 6 CCS Feature	X			
65-20	Retail to L w/P	V/M	ESL, ESC, CNM, CALTR, ESM, EVB	Reconfig 1 Res Line with 6 CCS Feature	X			
66-20	Retail to L w/P	V/M	CNMBK, EVB, ESM, CCR, TBE, CLP, CRP	Reconfig 1 Res Line with 6 CCS Features	X			
67-20	Retail to L w/P	V/M	CCB, ESX, EVD, CLP, CL1, ESC, CCR	Reconfig 1 Res Line with ISCB Option 1 and 6 CCS Features	X			
68-20	Retail to L w/P	V/M	CCB, ESX, EVD, CLP, CL1, ESC, CCR	Reconfig 1 Res Line with ISCB Option 1 and 6 CCS Features	X			

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS

Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
69-20	Retail to L w/P	V/M	ESL, CALTR, EVB, ESM, CL3, CNM, ESC	Reconfig 1 Res Line with ISCB Option 3 and 6 CCS Features	X			
70-20	Retail to L w/P	V/M	CCR, CCB, ESX, EVD, CNM, ESC	Reconfig 1 Res Line with 6 CCS Features	X			
71-20	Retail to L w/P	V/M	CLP, CRP, CSF, ESL, ESC, CNM, CCR	Reconfig 1 Res Line with 7 CCS Features	X			
72-20	Retail to L w/P	V/M	CNM, ESL, CALTR, EVB, ESM, ESC, ESX	Reconfig 1 Res Line with 7 CCS Feature	X			
73-20	Retail to L w/P	V/M	CNM, ESL, CALTR, EVB, ESM, ESC, ESX, EVD, ESC, ESL	Reconfig 1 Res Line with 7 CCS Feature	X			
74-20	Retail to L w/P	V/M	CLP, CRP, CSF, ESL, ESC, CNMBK, ESM	Reconfig 1 Res Line with 7 CCS Feature	X			
75-20	Retail to L w/P	V/M	CNM, ESL, CALTR, ESC, CSF, CRP, CLP	Reconfig 1 Res Line and with 7 CCS Feature	X			
76-20	Retail to L w/P	V/M	CCB, CL1, CRP, CLP	Reconfig 1 Res Line with ISCB Option 1 and 3 CCS Features	X			
77-20	Retail to L w/P	V/M	CRP, CL2, CNM, CCR	Reconfig 1 Res Line with ISCB Option 2 and 3 CCS Features	X			
78-20	Retail to L w/P	V/M	ESF	Reconfig 1 Bus Line with 1CCS Feature			X	
79-20	Retail to L w/P	V/M	TBE, ESC	Reconfig 1 Bus Line with Toll Billing Exception and 1 CCS Features			X	
80-20	Retail to L w/P	V/M	CCB	Reconfig 1 Bus Line with IDDDDB and 1 CCS Features			X	
81-20	Retail to L w/P	V/M	CL1, CLP	Reconfig 1 Bus Line with ISCB Option 1 and 1 CCS Feature			X	

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS
Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
82-20	Retail to L w/P	V/M	CL2, ESX	Reconfig 1 Bus Line with ISCB Option 2 and 1 CCS Feature			X	
83-20	Retail to L w/P	V/M	ESX, EVB, CCR	Reconfig 1 Bus Line with 3 CCS Features			X	
84-20	Retail to L w/P	V/M	ESC, EVD, CLP	Reconfig 1 Bus Line with 3 CCS Features			X	
90-20	Retail to L w/P	V/M	CNM, CALTR, TBE, ESL, CSF	Reconfig 2 Res Lines with Toll Billing Exception and 4 CCS Features		X		
91-20	Retail to L w/P	V/M	ESM, RAF, ESX, CCR, CCB, CNMBK, ESL	Reconfig 3 Res Lines with 7 CCS Features		X		
92-20	Retail to L w/P	V/M	CNM, CCR, CCB, ESX, CL1, CALTR, ESC	Partial Reconfig 2 Bus Lines with ISCB Option 1 and 6 CCS Feature				X
93-20	Retail to L w/P	V/M	ESF, CNMBK, ESX	Reconfig 3 Bus Lines with IDDDB & 3 CCS Feature				X
94-20	Retail to L w/P	V/M	CNM, ESC, CCB, CCR, CL1, ESC	Reconfig 4 Bus Lines with ISCB Option 1 and 5 CCS Feature				X
108-20	L w/P New	N/M	EVB, ESM, RAF	New Connect Loop w/Port and 3 CCS Features	X			
109-20	L w/P New	N/M	CCR, CCB	New Connect Loop w/Port and 2 CCS Features	X			
110-20	L w/P New	N/M	ESX, EVD, CLP	New Connect Loop w/Port and 3 CCS Features	X			
111-20	L w/P New	N/M	CRP, CSF, ESC	New Connect Loop w/Port and 3 CCS Features	X			
112-20	L w/P New	N/M	CNMBK, EVB, CNM, CALTR	New Connect Loop w/Port and 4 CCS Features	X			
113-20	L w/P New	N/M	CCR, CCB, ESX, ESC	New Connect Loop w/Port and 4 CCS Features	X			
114-20	L w/P New	N/M	EVD, CLP, CRP, CSF	New Connect Loop w/Port and 4 CCS Features	X			

3RD PARTY TESTING SCENARIOS

Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/ REQTYYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
115-20	L w/P New	N/M	ESL, ESC, CNM, CALTR, CL1	New Connect Loop w/Port and 4 CCS Features	X			
116-20	L w/P New	N/M	CNMBK, EVB, ESM, CCR, CL1	New Connect Loop w/Port and ISCB Option 1 & 4 CCS Features	X			
117-20	L w/P New	N/M	CCB, ESX, EVD, CLP, CL2	New Connect Loop w/Port and ISCB Option 2 & 4 CCS Features	X			
118-20	L w/P New	N/M	CRP, CSF, ESL, ESC, CL3	New Connect Loop w/Port and ISCB Option 3 & 4 CCS Features	X			
119-20	L w/P New	N/M	EVB, CLP, CNMBK, CALTR, CRP	New Connect Loop w/Port and 5 CCS Features	X			
120-20	L w/P New	N/M	ESC, ESL, CSF, CRP, TBE	New Connect Loop w/Port and 4 CCS Features	X			
121-20	L w/P New	N/M	CLP, EVD, ESX, CCB, CCR	New Connect Loop w/Port and 5 CCS Features	X			
122-20	L w/P New	N/M	ESM, RAF, EVB, CNMBK, CALTR	New Connect Loop w/Port and 5 CCS Features	X			
123-20	L w/P New	N/M	CALTR, ESX, CNM, ESC, ESL, TBE	New Connect Loop w/Port and Toll Billing Exception & 5 CCS Features	X			
124-20	L w/P New	N/M	ESC, CSF, CNM, CRP, CCR, CL1	New Connect Loop w/Port and ISCB Option 1 & 5 CCS Features	X			
125-20	L w/P New	N/M	EVB, CNM, ESL, ESM, CALTR	New Connect Loop w/Port & 5 CCS Features	X			
126-20	L w/P New	N/M	EVB, CCR, EVD, CRP, CSF	New Connect Loop w/Port and & 5 CCS Features			X	
127-20	L w/P New	N/M	ESF, CNM, ESC, CCB, ESX, ESM	New Connect Loop w/Port and & 6 CCS Features			X	

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TESTING SCENARIOS

Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTY	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
130-20	L w/P New	N/M	HMP, CNM, ESL, ESC, ESX, CCR	New Connect Loop w/Port and 6 CCS Features		X		
131-20	L w/P New	N/M	CCR, EVB, ESM, CNM, ESF, TBE, CNM, ESC, EVB, ESX	New Connect Loop w/Port and Toll Billing Exception & 5 CCS Features				X
133-20	L w/P Changes	C/M	ESX	Add Call Waiting	X			
134-20	L w/P Changes	C/M	EVB	Add Busy Call Forwarding	X			
136-20	L w/P Changes	C/M	CL3, ESM, RAF	add ISCB Option 3	X			
137-20	L w/P Changes	C/M	EVD, CL1	add ISCB Option 1	X			
138-20	L w/P Changes	C/M	CLP, CRP, CL2	add ISCB Option 2	X			
139-20	L w/P Changes	C/M	CLP, CRP, CL2	add ISCB Option 2	X			
140-20	L w/P Changes	C/M	CL1, TBE	Add TBE	X			
141-20	L w/P Changes	C/M	CSF, ESL	Add Speed Call 8	X			
147-20	L w/P Changes	C/M	ESX	Add Call Waiting	X			
148-20	L w/P Changes	C/M	CSF, CCB	Add 2 CCS Features	X			
149-20	L w/P Changes	C/M	CNM, ESM CCR	Add 3 CCS Features	X			
150-20	L w/P Changes	C/M	CNM, ESX, ESL, CRP	Add 4 CCS Features	X			
151-20	L w/P Changes	C/M	EVB, CLP, CNM, ESC	Remove 1 CCS Feature only	X			
152-20	L w/P Changes	C/M	CNM, ESL, CALTR	Remove all CCS Features	X			
153-20	L w/P Changes	C/M	CRP, CCR	Add Call Return	X			
154-20	L w/P Changes	C/M	CSF, ESL, IDDBK	Remove IDDBK	X			
155-20	L w/P Changes	C/M	EVB	Add Call Forward Busy Line	X			
156-20	L w/P Changes	C/M	ESM, CL1, CL2	Change ISCB Option 1 to Option 2	X			
157-20	L w/P Changes	C/M	CNM, ESX, TBE	Add Toll Blocking Exception only	X			

3RD PARTY TESTING SCENARIOS
Loop with Port

ETE Scenario Test Cases	Order Type	"ACT"/REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
158-20	L w/P Changes	C/M	CNM, ESX, CL1	Remove ISCB Option 1 only	X			
159-20	L w/P Changes	C/M	CLP, CRP, CL2	Remove ISCB Option 2 only	X			
161-20	L w/P Changes	C/M	CL1, ESX, ESC	Remove ISCB Option 1 only	X			
162-20	L w/P Changes	C/M	CNM, ESM, CCR, TBE	Remove Toll Blocking Exception	X			
163-20	L w/P Changes	C/M	CNM, ESM, CCR, TBE	Remove Toll Blocking Exception	X			
164-20	L w/P Changes	C/M	CNM, ESM, ESX, CLP, RAF	Remove 1 CCS Feature only	X			
165-20	L w/P Changes	C/M	CCR, CRP, ESC, ESL, CALTR, ESX	Remove 1 CCS Feature only	X			
167-20	L w/P Changes	C/M	ESL, ESC, EVB	Add Three Way Calling			X	
168-20	L w/P Changes	C/M	CNM, CALTR, CL1	Add ISCB Option 1 only			X	
169-20	L w/P Changes	C/M	ESM, CCB, CNM, CLP, CL2	Remove ISCB Option 2 only			X	
176-20	L w/P Changes	C/M	ESL, ESC, CNM	Add Caller ID		X		
178-20	L w/P Changes	C/M	CNM, EVD, TBE	Remove Toll Blocking Exception				X
179-20	L w/P Disc	D/M	ESC, ESL, CRP, CLP	Disconnect Service	X			
182-20	L w/P Disc	D/M	ESX, TBE	Disconnect Service				X
183-20	L w/P Disc	D/M	ESL, ESM, CNM, CALTR	Disconnect Service		X		
184-20	L w/P Disc	D/M	ESF, CRP, CNMBK	Disconnect Service				X
Total Scenarios: 146								

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TEST SCENARIOS

Basic Loop without NP

Scenario- Test Case	Order Type	"ACT"/ REQTYP	CLEC Dataset	Activity	Res SL	Res ML	Bus SL	Bus ML
185-20	Retail to B Loop	V/A	LINK,EUM	Reconfigure Residence Retail Line to Basic Loop	X			
187-20	Retail to B Loop	V/A	LINK,EUM	Reconfigure Business Retail Line to Basic Loop			X	
189-20	New B- Loop	N/A	LINK	Basic Loop Residence New Connect	X			
190-20	New B- Loop	N/A	LINK	Basic Loop Business New Connect			X	
191-20	Disc B- Loop	D/A	LINK	Disconnect Basic Loop - Residence	X			
192-20	Disc B- Loop	D/A	LINK	Disconnect Basic Loop - Business			X	
Total Scenarios: 6								

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TEST SCENARIOS

Basic Loop with NP

Scenario- Test Case	Order Type	"ACT"/ REQTYP	CLEC Dataset	Activity	Res SL	Res ML	Bus SL	Bus ML
	Retail to B Loop	V/B	LINK,EUM, OLNP	Reconfigure Residence Retail Line to Basic Loop w/NP	X			
193-20	Retail to B Loop	V/B	LINK,EUM, OLNP	Reconfigure Business Retail Line to Basic Loop w/NP			X	
Total Scenarios: 2								

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TEST SCENARIOS

Stand-Alone LNP

Scenario- Test Case	Order Type	"ACT"/ REQTYP	CLEC Dataset	Activity	Res SL	Res ML	Bus SL	Bus ML
	Retail to LNP	V/C	OLNP,EUM	Port Out 1 Residence Line	X			
195-20	Retail to LNP	V/C	OLNP,EUM	Port Out 1 Business Line			X	
196-20								
Total Scenarios: 2								

3RD PARTY TEST SCENARIOS
Resale (No UNE)

Scenario- Test Case	Order Type	"ACT"/ REQ/TYP	CLEC Dataset	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
197-20	Retail to Resale	V/E	RSLE, EUM	EVB, ESM	Reconfigure Residence Retail Line to Resale with 2 CCS Features	X			
198-20	Retail to Resale	V/E	RSLE, EUM	ESM, CCR	Reconfigure Residence Retail Line to Resale with 2 CCS Features	X			
199-20	Retail to Resale	V/E	RSLE, EUM	CNM, CALTR, ESL	Reconfigure Residence Retail Line to Resale with 3 CCS Features	X			
200-20	Retail to Resale	V/E	RSLE, EUM	CSF, ESC, ESL, CNM	Reconfigure Residence Retail Line to Resale with 4 CCS Features	X			
201-20	Retail to Resale	V/E	RSLE, EUM	CCR, CCB	Reconfigure Business Retail Line to Resale with 2 CCS Features			X	
202-20	Retail to Resale	V/E	RSLE, EUM	CCB, ESX	Reconfigure Business Retail Line to Resale with 2 CCS Features			X	
203-20	Retail to Resale	V/E	RSLE, EUM	EVB, CCR, CSF	Reconfigure Business Retail Line to Resale with 3 CCS Features			X	
204-20	Retail to Resale	V/E	RSLE, EUM	CALTR, CNMBK, ESX, ESM	Reconfigure Business Retail Line to Resale with 4 CCS Features			X	
205-20	Retail to Resale	V/E	RSLE, EUM	ESM, CCR	Reconfigure Residence Retail Line to Resale with 2 CCS Features		X		
206-20	Retail to Resale	V/E	RSLE, EUM	EVB, CCR, CSF	Reconfigure Business Retail Line to Resale with 3 CCS Features				X
207-20	Resale New	N/E	RSLE	ESX, EVD, CLP	New Connect Residence with 3 CCS Features	X			
208-20	Resale New	N/E	RSLE	CRP, CSF, ESC	New Connect Residence with 3 CCS Features	X			
209-20	Resale New	N/E	RSLE	EVB, ESM, RAF	New Connect Residence with 3 CCS Features	X			
210-20	Resale New	N/E	RSLE	CCR, CCB	New Connect Residence with 2 CCS Features	X			

ATTACHMENT 1B - CAPACITY TEST

3RD PARTY TEST SCENARIOS
Resale (No LNE)

Scenario- Test Case	Order Type	"ACT"/ REQTYP	CLEC Dataset	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
211-20	Resale New	N/E	RSLE	CRP, CSF, ESC	New Connect Business with 3 CCS Features			X	
212-20	Resale New	N/E	RSLE	EVD, CLP, CRP	New Connect Business with 3 CCS Features			X	
213-20	Resale New	N/E	RSLE	ESL, ESC, CNM	New Connect Business with 3 CCS Features			X	
214-20	Resale New	N/E	RSLE	CNMBK, EVB	New Connect Business with 2 CCS Features			X	
215-20	Resale Change	C/E	RSLE	ESX	Add Call Waiting	X			
216-20	Resale Change	C/E	RSLE	EVB	Add Busy Call Forwarding	X			
217-20	Resale Change	C/E	RSLE	CSF, CCB CNM, ESM	Add 2 CCS Features			X	
218-20	Resale Change	C/E	RSLE	CCR	Add 3 CCS Features			X	
219-20	Resale Disc	D/E	RSLE		Disconnect Residence Resale Line	X			
220-20	Resale Disc	D/E	RSLE		Disconnect Residence Resale Multi-Line		X		
221-20	Resale Disc	D/E	RSLE		Disconnect Business Resale Line			X	
222-20	Resale Disc	D/E	RSLE		Disconnect Business Resale Multi- Line				X
Total Scenarios: 26									

3RD PARTY TESTING SCENARIOS
Cancellations

Scenario- Test Case	Order Type	"ACT"/ REQTYP	Feature Code(s)	Activity	Res SL	Res ML	Bus SL	Bus ML
2-20	Retail to L w/P	V/M	ESM, CCR	Reconfig 1 Res Line with 2 CCS Feature	X			
12-20	Retail to L w/P	V/M	ESL, CALTR	Reconfig 1 Res Line with 2 CCS Feature	X			
Total Scenarios : 2								

ATTACHMENT 1B - CAPACITY TEST

Feature Description (3)

Code	Description
1DDBK	International Direct Distance Dialing Blocking - Business only
CALTR	Call Trace
CCB	Call Screen
CCR	Call Return
CL1	900/976 Blocking Option 1
CL2	900/976 Blocking Option 2 - Residence Only
CL3	900/976 Blocking Option 3 - Residence Only
CLP	Priority Ringing
CNM	Caller ID
CNMBK	Caller ID Blocking
CRP	Repeat Dialing
CSF	Select Call Forwarding
ESC	Three Way Calling
ESF	Speed Calling 30
ESL	Speed Calling 8
ESM	Call Forwarding Variable
ESX	Call Waiting
EVB	Busy Call forwarding
EVC	Busy Call forwarding Extended - 1/1AESS only
EVD	Delayed Call Forwarding
HMP	Intercom Plus - 1AESS only
RAF	Remote Access to Call Forwarding - 5E/DMS100 only
TBE	Toll Billing Exception (Billed Number Screening)

Note: These Codes are used on Retail and Resale UNE for Business and Residence

REQTYP Description

Type of Request	Type of Service	Description
A	Loop (Link)	Assured, Basic, CENTREX, Coin, Copper D Alarm, DS1, Digital Connectivity, ISDN, PBX or VG (Voice Grade) Loop
B	Loop with NP (Number Portability)	Assured, Basic, CENTREX, Coin, Digital Connectivity, ISDN, or PBX Loop with Local Number Portability
C	NP	Local Number Portability
D	Retail Bundled Service	Migrate Retail Service as is
E	Resale	Exchange Services
F	Port	Basic POTS, CENTREX, COPT/Coin, ISDN or PBX Port with Option A or B Routing
M	Loop with Port	Basic, Centrex, COPT/Coin, ISDN or PBX loop and Port with Option A or B Routing

Activity Description

ACT	Description
N	New Installation
C	Change or modification to an existing service
D	Disconnection of service
T	Outside move of end user location
R	Record activity for ordering administrative changes
V	Conversion of service to new LSP (Local Service Provider/CLEC)
W	Conversion as is (Apply to REQTYP E only)
S	Suspend (Apply to REQTYPs E, F & M only)
B	Restore (Apply to REQTYPs E, F & M only)

13.2 Attachment 2 – Test Case Specification Template and Example

Test Specification Template

The Test Specification Template below identifies the key components and guidelines for developing and documenting the Test Specification. The test scenario to be validated is specified and test cases and tests to support this validation are detailed.

Table A-2: Test Specification Template

<p>Test Specification Template <Test Id>, <Author> (maps to the high level Test Scenarios) Test identifier is to be a unique identifier usually consisting of the requirement identifier and an agreed up suffix/prefix along with identifier of major process tested (e.g., Retail to UNE Loop with Port Reconfiguration, etc.) Introduction – Provide definition of the high level test scenario 1a. Test Case #1 – Pre-ordering (requirements tested) Purpose - details what the test case is trying to prove. Dependencies: <ul style="list-style-type: none"> • Environment needs (e.g., generic overview of process consisting of front-end systems (e.g., LEX, EDI Interface) and associated releases involved for functionality tests) • Setup activities (e.g., how handle Test End-Users) Entrance Criteria <ul style="list-style-type: none"> • Method - Detail the actual steps to be taken to implement the purpose statement. Include: For example, create a table to help track steps, expected results, etc. </p>				
Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
<p>1b. Test Case #2 – Ordering (requirements tested) Repeat steps 1 through 5 of test Case #1 1c. Test Case #3 – Billing (requirements tested) Repeat steps 1 through 5 of test Case #1 1d. Test Case #4 – Maintenance (Requirements tested) Repeat steps 1 through 5 of Test Case #1</p>				

Test Specification Example

Test specification example: Retail to UNE Loop with Port Reconfiguration (Residence and Business):

Introduction

The purpose of testing scenarios in this category is to test the ability to convert a Pacific Retail Account to a CLEC UNE Loop with Port Account. Scenarios in this category will include Residential single and multi-lines, Business single and multi-lines, Hunting, accounts without features, accounts with single features, accounts with multiple features, and the different types of Directory Listings.

Pre-Ordering

Purpose – The purpose of Pre-Order activity is CSR, Address Verification/Dispatch, Request for TN, Service Availability, Service Appointment Scheduling - Due Date, Facility Availability, PIC/LPIC, and Number of Rejects/Failed Inquiries.

Dependencies – The only system required to do the Pre-Order activity is DataGate. DataGate is a system used to confirm information on an LSR before submittal. Access to DataGate is real-time.

Entrance Criteria – The entrance criteria for pre-ordering is access to DataGate. Pacific can provide access to DataGate and assign needed ID's. Pacific retail line(s) with associated features and directory listing information will be installed before the conversion can take place.

Table A-3: Pre-Ordering Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Pull CSR	Obtain CSR		Obtain CSR	
Check Service Availability	Obtain Service Availability List		Obtain Service Availability List	
Check Due Date	Obtain Due Date		Obtain Due Date	
Pull CLLI code	Obtain CLLI Code		Obtain CLLI Code	

OSS Master Test Plan

Ordering

Purpose – The purpose of the ordering function is to actually write the LSR to convert a customer from a Pacific retail account to a CLEC UNE Loop with Port account.

Dependencies – In order to process an order, the LSR must be generated and processed through the Test Generator EDI Interface. Once an order has been sent from a Test Generator EDI Interface, it will be received into the Pacific EDI Interface. The order will then process through LASR for certain edits, then process through AOG to enter SORD and Pacific backend systems for processing. If an order is not capable of passing through AOG, it will fall out to the Pacific LSC for manual processing into SORD. In order to set up the ordering process, connectivity must be provided to the Pacific EDI Interface.

Entrance Criteria – Test Generator EDI Interface is available in order to process orders to Pacific.

Table A-4: EDI Ordering Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Generate LSR from CSR pulled in Pre-Order	Send 850 to Pacific			
Send clean 850 through the EDI Interface	Receive 997 Confirmation and 855 notifying CLEC of clean order		Receive 997 Confirmation and 855 notifying CLEC of clean order	
Send 850 with non-fatal errors through the EDI Interface	Receive 997 Confirmation and 855 notifying CLEC that 850 had non-fatal errors		Receive 997 and 855	CLEC will now be required to send an 860 to correct non-fatal errors
Send 860 to correct non-fatal errors	Receive 997 and 865 notifying CLEC of clean order		Receive 997 and 865	
Send 850 with fatal errors through the EDI Interface	Receive 997 and 855 notifying CLEC of fatal errors		Receive 997 and 855	CLEC will now be required to send a new 850 to correct the fatal errors
Send clean 850 to correct previous 850 with fatal errors	Receive 997 and 855 notifying CLEC of clean order		Receive 997 and 855	

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Billing

Purpose – To test the ability of Pacific to render a complete and accurate wholesale bill for orders converting a Pacific retail account to a CLEC UNE Loop with Port account.

Dependencies – Copies of Wholesale invoice, Customer Service Records, service orders, usage feeds and Pacific post billing ad-hoc reports and Pacific post billing systems.

Entrance Criteria – Access to Pacific backend billing systems and Pacific OSSs.

Table A-5: Billing Usage Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Dial from Unbundled to Pacific	AMA Call Code 002, MBI01 Local intraswitch (Detail)		Local intraswitch (Detail)	
Unbundled to Directory Assistance (DA)	AMA Call Code 009, 194 End Office DA		End Office DA	

Maintenance

Purpose – The purpose of testing maintenance is to test the ability of Pacific to respond and reconcile maintenance issues and verify MLT functionality for UNE Loop with Port.

Dependencies – Access to Pacific Bell Service Manager. Also, escalation for maintenance issues is handled through Pacific's Local Operating Center. Need to ensure PBSM access and ID's for Trouble Administration. Ensure the service orders are posted to completion in the CABS billing systems prior to execution, since only posted service ordered are downloaded to the back office OSSs.

Entrance Criteria – Access to PBSM.

Table A-6: Maintenance Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Administer MLT Test	Obtain MLT Test		Obtain MLT Test	
Submit Trouble Report	Receive Trouble Ticket Number & expected time for repair		Trouble is resolved	

An Order Test Scenario Example (Validation Perspective)

A high level perspective of the testing functionality consists of:

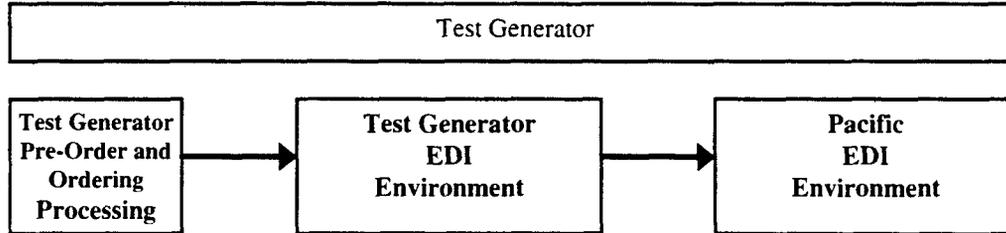


Figure A-1: Example POTS Ordering Test Flow/Environment

From a high level perspective the following shows a typical scenario to be used in the ordering portion of the validation testing. Within each scenario a variety of data will be used to exercise various situations that can occur. Scenario testing focuses on the flow-through processing which represents typical common processing. It does not intend to validate each and every feature and all the combinations of features since lower levels of testing provide for these types of tests. It would be cost-prohibitive and uncommon to test all features and combinations of features for the various services in a flow-through manner. Rather, the Test Administrator has determined the scope of each of the various types of tests to be executed.

Example of basic scenario execution activities may consist of:

Test Generator requests to bring existing Pacific retail service over to a CLEC as “conversion as specified” to UNE Loop with Port:

- Execute Process for Data Gathering - use DataGate for pre-ordering process
- Execute Process for Placing Order
- Execute Process for Status, Order Completion and follow-up
- Execute Process for Billing Request
- Provide Bill Verification.

Test End-User reports no dial tone:

- Execute creation of Trouble Ticket
- Access status of Trouble Ticket

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- Access Trouble Ticket completion

An example of scenario testing validation activities is:

- Pre-ordering
 - Test Generator can verify TN
 - Test Generator can verify customer account information.
- Ordering
 - LSR reflects template
 - Output reflects order content
 - Billing Order reflects Order.
- Maintenance
 - Test Generator can refer as appropriate
 - Test Generator can identify features subscribed to by customer.
- Billing
 - Test Generator can create various adjustments (credits, etc.)
 - Test Generator can identify features subscribed to by customer
 - Bill reflects Sales Request.

13.3 Attachment 3 - Proposed Daily Report - Test Status and Assessment Form

OSS Master Test Plan

Daily Report- Proposed Test Status and Assessment Form

Test Status and Assessment Form	
Product:	Date:
Assessment (green, yellow, or red):	

	Milestone	Initial Plan	Current Plan

Problems

Severity	Open (ui)	Closed	Total
Critical (1)			
Serious (2)			
Minor (3)			
<i>Total</i>			

Test Cases and Other Test Parameters

Planned	Executed	Passed	Failed	Time in Testing	Time Remaining

Issues

General Notes

PURPOSE:

Instructions for Completing

The Test Status and Assessment template provides an arena for documenting the status of the tests as they move through flow-through testing.

To easily document the outcome, simply use this worksheet as a guide for each scenario. The spaces provided will make it easy to identify what is being tested, as well as when it is being tested, and the assessments of the designated milestones. These assessments will be assigned a color of green, yellow, or red based on the overall status of being on schedule relative to completing final validation and functionality.

For each milestone in the template, enter the dates and commentary as they apply to the initial plan and the current plan.

The next aspect to this template is a designated section labeled "Problems". The chart addresses the severity of the problems, if any. The severity is separated into three distinctions: Critical, which is identified by (1), Serious, which is identified by a (2), and Moderate, which is identified by a (3). Each of these severities will be applied to the following categories in regard to the scenario, Open (UI) and Closed. There is also a Total column as well as a Total row to tally up the different severalties as they occur.

The final aspect to this template is a designated section labeled "Test Cases and Other Test Parameters". This chart consists of five columns: planned, executed, passing, failing and time in testing. These should be filled out on the product being tested, as the information becomes available.

14. Appendix B: Special Change Management Process

Purpose

Expedited Interface Change Management Process for Third Party OSS Testing: Pacific Bell and Competitive Local Exchange Carrier (CLEC)

This documents the process by which Pacific Bell (PACIFIC) will notify CLECs and OSS Testing Third Parties of changes to the OSS interfaces during the execution phase of Third Party OSS Testing, tentatively scheduled to begin in August, 1999 and to end in October, 1999. The parties intend for this expedited process to be used only for changes to interfaces included in the OSS Test that directly impact the ability to proceed with Third Party Testing. This Expedited Change Management Process for changes not related to testing (e.g. would not apply to changes to interfaces not included in the Test, to the introduction of new interfaces or to the retirement of interfaces).

Scope

This process pertains to all ordering, pre-ordering, provisioning and maintenance electronic interfaces included in the Third Party OSS Test as determined by the Commission and reflected in the final Master Test Plan.

This document applies to PACIFIC, Third Party OSS Test participants, and all CLECs operating in California.

Types of Changes

This Expedited Change Management Process manages the same types of changes as the standard Change Management Process, but is focused on those software changes needed in the production environment in order to proceed with OSS Testing.

Change Categories

Unlike the standard Change Management Process, changes for GUI and Gateway interfaces will be handled using the same process, as described below.

Steps in the Expedited Process:

1. During the planning phase of the OSS Test and to facilitate communications regarding the Expedited Change Management Process during the OSS Test, the Test Administrator will be provided with a list of all CLECs that are on the standard Change Management Process distribution list ("CMP CLECs").
2. The Test Administrator and/or CPUC Staff will notify all CLECs of this process.

OSS Master Test Plan

The Test Administrator will chair the Technical Advisory Board (TAB) and will advise CMP CLECs to elect three to five representatives to the TAB.

3. CLEC representatives on the TAB will meet with any interested CMP CLECs to develop and document and expedited CLEC communication process (e.g. contact lists, mode of distributing information, etc.) prior to the start of the execution phase of the OSS Test.
4. Prior to making any changes subject to this Expedited Change Management Process, PACIFIC will issue written Change Notices to the entire TAB detailing any proposed changes as well as the proposed implementation dates for the changes. Proposed implementation dates will be selected so as to balance the needs of the OSS Test against the potential disruption of services to CLECs in production. The Chair will convene the TAB within one (1) business day to discuss the proposed changes.
5. CLEC representatives on the TAB will have two (2) business days after the meeting to poll CLECs and either confirm the lack of objections or raise questions and issues via a written response to the Chair and Pacific Bell.
6. PACIFIC may proceed to implement the change on the proposed implementation date if there are no outstanding issues. However, if outstanding issues exist, the Chair will convene a special session of the TAB within one (1) business day of the written response in Step 5. During that session, TAB members will work in good faith to discuss and reach consensus on a resolution those issues. If the chair is unable to resolve the dispute, it will take the issue to the Commission staff. If no agreement can be reached during that meeting, Pacific will proceed to implement the noticed changes only with the approval of the commission.

Emergency Situations

Emergency releases or emergency implementation date changes required during the course of the OSS Test will be handled as with existing emergency processes.

Emergency releases are releases that address major software problems, production system failure or an interface failure. These also include releases that address significant production problems and the failure of scheduled release enhancements.

The notification process interval will be handled on a case by case basis and will depend on the type and extent of the emergency. Notification to the TAB will be sent as soon as reasonably practicable after the emergency is recognized. The emergency notification need not be in the form of a written Change Notice, and may be sent via other expedited means (e.g., broadcast fax).

Managing the Process and Environment

A standing agenda item at the weekly TAB meeting will provide an opportunity for TAB members to assess the effectiveness of this Expedited Change Management Process and the need for any revisions. The TAB will consider any proposed changes to the

OSS Master Test Plan

execution.

TAB representatives will use this opportunity to identify issues and concerns and commit to taking the appropriate action(s).

Parties are free to pursue available legal remedies as referenced in the standard Change Management Process.

15. Appendix C: Military-style Testing

The MTP is a diagnostic evaluation of OSS readiness. In a Military Style test philosophy, a mindset of “test until you pass” is generally adopted. The test process works as follows:

- An interface, system, or process tested by the Test Generator/Test Administrator does not meet objective criteria, standards or expectations.
- The Test Generator/Test Administrator would create a written Exception Report describing the issue(s) raised.
- The Exception Report would be delivered to the Test Administrator, as required.
- If Exception Report affects business rules or interface, it will be brought to the TAB.
- Pacific Bell would prepare a written response to the exception describing any intended fix (es).
- Pacific advises the Test Administrator that the fix is complete. The Test Administrator gives to the Test Generator.
- If the results meet the criteria, standards, or expectations, then the process is considered complete.
- If the results affect business rules or interface, the Test Administrator will inform the TAB.
- If the applicable criteria have not been met, then repeat the process until the criteria is met.

16. Appendix D: Pacific Flow-through Plan

As Attached

Pacific/Nevada Bell Flow Through Plans - LEX/EDI

Revised April 28, 1999

Product Type (LSR REQ TYP)	Expected Implementation Date/Current Scope ¹ (LSR ACT.)	Exceptions
1. Loop & Port Combo: 2 wire 8db basic analog loop with POTS-like Port (REQ. M)	<ul style="list-style-type: none"> • Conversion as Specified (retail) (ACT. V): exists • New Connect (ACT. N): exists • Change (ACT. C): exists • Disconnect (ACT D): exists • Outside Moves (ACT. T) - no plans • Restores (ACT B) - no plans • Suspends (ACT S) - no plans • Record Changes (ACT R) - no plans • Sourcing of VTE –TBD • Eliminate QDT as an exception - 6/99 	<ul style="list-style-type: none"> • Flow Through Project Threshold:20 • Supplemental Orders • Hunting • Related Requests (RPONS) • Number Changes • Expedites • Changes to Number Referral Services • Extended and split referrals • Changes to PIN for remote access to call forwarding • Intercom Plus • Working Service on Prem. (WSOP-valid value V) • CHC • QDT (when new service is business) • VTE • Complex products (non-POTS) • Special conditions on existing retail service

¹ All existing and future flow through listed in this document are for Pacific Bell except where Nevada Bell is indicate.

PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB. PB/NB's Flow Through Plan reflects PB/NB's intent to modify or enhance the OSS offered by PB/NB, as of the time that the Plan was prepared. Facts and circumstances upon which the Plan is based (e.g., Local Wholesale Customer demands, regulatory obligations) may change over time. Accordingly, PB/NB reserves the right to modify the Plan, in its sole discretion.

In addition, PB/NB is sharing its Flow Through Plan with Local Wholesale Customers in an effort to encourage meaningful discussions between PB/NB and Local Wholesale Customers regarding PB/NB's perception of their needs or desires for future OSS modifications and enhancements. In some instances, such discussions may lead to changes in PB/NB' Flow Through Plans.

Because PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB, Local Wholesale Customers should not rely on the Flow Through Plan. The official notices disseminated by PB/NB announcing anticipated OSS modifications and enhancements reflect PB/NB's actual plan.

Pacific/Nevada Bell Flow Through Plans - LEX/EDI

Revised April 28, 1999

Product Type (LSR REQ TYP)	Expected Implementation Date/Current Scope ¹ (LSR ACT.)	Exceptions
2?? 2 wire Loop with (REQ. B) & without LNP* (REQ. A) Basic & Assured	<ul style="list-style-type: none"> • Conversion as Specified (ACT. V) (retail): exists • Conversion as specified (ACT V) Nevada Bell - 10/99 • New Connect (ACT. N) - - 4/99 • New Connect (ACT N) Nevada Bell - 10/99 • Disconnect (ACT. D) Basic & Assured: - 6/99 • Disconnect (ACT D) Nevada Bell - 10/99 • Increase Flow-Through Project Threshold Quantity to 40 -10/99 • Changes (ACT. C) - no plans • Record Changes (ACT R) - no plans • Interim fix for SPID problem – exists 	<ul style="list-style-type: none"> • Flow Through Project Threshold 20 • Supplemental orders • Related Requests (RONS) • Expedites • Special conditions on existing retail service
3. Directory Service Requests - Standalone (REQ. J) for UNE and LNP	<ul style="list-style-type: none"> • 6/99 (ACT. R) 	<ul style="list-style-type: none"> • No exceptions
4. xDSL capable 2 wire loop with (REQ. B) and without (REQ. A) LNP	<ul style="list-style-type: none"> • Conversion as specified (ACT. V) - 10/99 • New Connect (ACT. N) - 10/99 • Disconnect (ACT. D): - 6/99 • Change (ACT. C) - no plans • Record Changes (ACT R) - no plans • Conversion as specified for retail ADSL loops - TBD • Conversion as specified and New Connect for loops > 12,000 ft. and Loop qualification has been performed (TRANS ID) - TBD 	<ul style="list-style-type: none"> • Flow Through Project Threshold-10 • Supplemental orders • Related Requests (RONS) • Expedites • Special conditions on existing retail service • IDSL • TRANS ID (pre-qualification)
5. Stand Alone LNP* (REQ. C)	<ul style="list-style-type: none"> • Conversion as specified: (ACT. V) exists • Interim fix for SPID problem – exists 	<ul style="list-style-type: none"> • Flow Through Project Threshold - 100 numbers • Supplemental orders • Related Requests (RONS) • CHC • Special conditions on existing retail service • Complex products (non-POTS)

PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB. PB/NB's Flow Through Plan reflects PB/NB's intent to modify or enhance the OSS offered by PB/NB, as of the time that the Plan was prepared. Facts and circumstances upon which the Plan is based (e.g., Local Wholesale Customer demands, regulatory obligations) may change over time. Accordingly, PB/NB reserves the right to modify the Plan, in its sole discretion.

In addition, PB/NB is sharing its Flow Through Plan with Local Wholesale Customers in an effort to encourage meaningful discussions between PB/NB and Local Wholesale Customers regarding PB/NB's perception of their needs or desires for future OSS modifications and enhancements. In some instances, such discussions may lead to changes in PB/NB's Flow Through Plans.

Because PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB, Local Wholesale Customers should not rely on the Flow Through Plan. The official notices disseminated by PB/NB announcing anticipated OSS modifications and enhancements reflect PB/NB's actual plan.

Pacific/Nevada Bell Flow Through Plans - LEX/EDI

Revised April 28, 1999

Product Type (LSR REQ TYP)	Expected Implementation Date/Current Scope ¹ (LSR ACT.)	Exceptions
6. Resale Basic Exchange (POTS only) (REQ. E)	<ul style="list-style-type: none"> • Conversion as is (ACT. W): exists • Conversion as specified (ACT. V): exists • Change (ACT C): exists • New (ACT N): exists • Disconnect (ACT D): exists • Outside Moves (ACT T) - no plans • Restores (ACT B) - no plans • Suspends (ACT S) - no plans • Record Changes (ACT R) - no plans 	<ul style="list-style-type: none"> • Flow-Through Project Threshold : 20 • Supplemental Orders • Related Requests (RPONS) • Expedites • Hunting • Number Changes • Working Service on Prem. (WSOP) • Consolidate/De-consolidate account structure • IDDD Blocking • ROAR • Changes to Number Referral Services • Changes to PIN for Remote Access to Call Forwarding • Promotions • CHC • QDT (when new service is business) • Complex products (non-POTS) • Special conditions on existing retail service
7. 4 wire DS1 capable loop without LNP	<ul style="list-style-type: none"> • New Connect (ACT. N) - 4/99 • Disconnect (ACT. D) - 6/99 • Conversion as Specified (ACT. V) - no plans • Changes (ACT. C) - no plans • Record Changes (ACT R) - no plans 	<ul style="list-style-type: none"> • Flow-Through Project Threshold : 6 lines • Supplements • Expedites • Related Orders
8. All other Complex Products including: Resale PBX, Centrex, ISDN; Loop & Port Combo: 2 wire ISDN capable loop & port; 2 wire loop & coin compatible port; 2 wire loop & Centrex capable port; 2 wire loop & PBX capable port, etc.	No Flow Through Plans	

PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB. PB/NB's Flow Through Plan reflects PB/NB's intent to modify or enhance the OSS offered by PB/NB, as of the time that the Plan was prepared. Facts and circumstances upon which the Plan is based (e.g., Local Wholesale Customer demands, regulatory obligations) may change over time. Accordingly, PB/NB reserves the right to modify the Plan, in its sole discretion.

In addition, PB/NB is sharing its Flow Through Plan with Local Wholesale Customers in an effort to encourage meaningful discussions between PB/NB and Local Wholesale Customers regarding PB/NB's perception of their needs or desires for future OSS modifications and enhancements. In some instances, such discussions may lead to changes in PB/NB's Flow Through Plans.

Because PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB, Local Wholesale Customers should not rely on the Flow Through Plan. The official notices disseminated by PB/NB announcing anticipated OSS modifications and enhancements reflect PB/NB's actual plan.

Pacific/Nevada Bell Flow Through Plans - LEX/EDI

Revised April 28, 1999

Definitions

Expected Implementation Date/Current Scope:

- "Conversion as is" conversion of an existing service from the current service provider to the ordering CLEC with no changes.
- "Conversion as Specified" conversion of an existing service from the current service provider to the ordering CLEC, specifying the associated features and characteristics.
- "Exists" flow through capability currently in place.
- "No Flow Through Plans" Pacific has no plans for offering flow through.

Exceptions: a known circumstance which prevents automatic flow through and requires manual processing.

- "Project Quantity" represents the minimum number of lines which constitute a "project" which requires a check for the availability of facilities prior to processing the order. Threshold for establishing due dates may be different (see CLEC Handbook).
- "Supplemental Orders" are changes to an existing order.

Special Conditions on Existing Retail Service that bring about exception handling.

- Conversion of existing CLEC service where Pacific Bell is still the network service provider.
- Pending Order
- Hunting
- Pending certification for ULTS, DDTP
- Partial account conversion
- Warm Line (ONA)
- Gift Billing
- Extended and Split Referrals

- "Hunting" is a service which routes a call to a customer's other number when the number dialed is not available; includes non-hunt indicator.
- "Pending certification for ULTS, DDTP" means that a retail end user customer has asked for benefits under the Universal Lifeline Telephone Service and/or Deaf and Disabled Telecommunications Program (now known as Pacific Bell Accessibility Resources) and Pacific is waiting for certification confirming eligibility to be returned by the customer.
- "Partial account conversion" means that an end user customer has chosen to have a CLEC provide some of the services it currently receives. Consequently, part of the account is being converted to the CLEC, but not all of the account (BTN level).

PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB. PB/NB's Flow Through Plan reflects PB/NB's intent to modify or enhance the OSS offered by PB/NB, as of the time that the Plan was prepared. Facts and circumstances upon which the Plan is based (e.g., Local Wholesale Customer demands, regulatory obligations) may change over time. Accordingly, PB/NB reserves the right to modify the Plan, in its sole discretion.

In addition, PB/NB is sharing its Flow Through Plan with Local Wholesale Customers in an effort to encourage meaningful discussions between PB/NB and Local Wholesale Customers regarding PB/NB's perception of their needs or desires for future OSS modifications and enhancements. In some instances, such discussions may lead to changes in PB/NB's Flow Through Plans.

Because PB/NB's Flow Through Plan is subject to change and is not binding on PB/NB, Local Wholesale Customers should not rely on the Flow Through Plan. The official notices disseminated by PB/NB announcing anticipated OSS modifications and enhancements reflect PB/NB's actual plan.

EXHIBIT C



Public Utility Commission of Texas

1701 N. Congress Avenue
P. O. Box 13326
Austin, Texas 78711-3326
512 / 936-7000 • (Fax) 936-7003
Web Site: www.puc.state.tx.us

MAY - 3 1999 *Burke, J.*
Pat Wood, III
Chairman

Judy Walsh
Commissioner

Brett Perlman
Commissioner

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Please file the attached baselined Master Test Plan (146 total pages) dated April 22, 1999 in the above referenced docket.

Attachment 1 – Test Scenario Coverage Matrix (24 pages) is located at the end of the Master Test Plan.

Attachment 6 – Project Schedule/Timeline (9 pages) is located after Attachment 1.

This document is subject to supplementation/revision as deemed necessary.

cc: All Parties of Record in Docket 16251 and
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**The Public Utility Commission
of Texas
Southwestern Bell (SWB)
OSS Evaluation
Master Test Plan**

Project No. 20000 Investigation of Southwestern Bell Telephone (SWB) Company's Entry into the Texas inter Local Area Transport Area (interLATA) Telecommunications Market

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- TAG Team
- Third Party Consultant
- The Commission Representatives

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Project Funding Year: 1999

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Document Control Sheet

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Record of Issues

Issue No	Issue Date	Nature of Change
1	3/3/99	Comments from the Commission, SWB and CLECs
2b	3/15/99	Commission review
2b	3/19/99	Appropriate TAG review comments incorporated
2a	4/7/99	Final updates (from TAG, Commissioner, DOJ reviews)
2	4/12/99	Final reviews
3	4/21/99	Baseline approval
3.1	4/22/99	Removed proprietary marking, minor other changes
3.1	4/22/99	Baseline (Commission to file). Note: all subsequent changes to be managed under the change control process

Documentation Schedule/History

The milestone dates of this document availability and reviews are:

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Redirect of Development Responsibilities	0	2/10/99
Master Test Plan Rough Preliminary Draft to the Commission	A	2/23/99
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Draft Master Test Plan to the Commission	B	3/1/99
Comments Due	B	3/2/99
Draft Master Test Plan to TAG	1	3/3/99
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Updates to the Commission	2-a	3/11/99
Review Updates with the Commission	2-b	3/15/99
TAG Review	2-b	3/16/99
Review via Conference calls with TAG	2-b	4/1/99
DOJ Comments	2-b	4/7/99
Final Updates	2	4/12/99
Baseline Approval Request	3	4/21/99
The Commission signoff	3.1	4/22/99
Baselined (to be filed)	3.1	4/22/99

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The Public Utility Commission of Texas Southwestern Bell (SWB) OSS Evaluation Master Test Plan

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Executive Overview

Attached is the Master Test Plan which once executed will demonstrate to the Texas Public Utility Commission (PUC), FCC and DOJ, the operational readiness, performance and capability of SWB to provide pre-ordering, ordering, provisioning, repair & maintenance and billing Operations Support Systems (OSSs) functionality to the Competitive Local Exchange Carriers (CLECs). This Master Test Plan incorporates the functionality requested in Project No. 20000 as outlined by the Texas PUC with oversight and input from the Texas PUC staff and the Third Party Consultant (Telcordia).

This Master Test Plan provides for the investigation of Southwestern Bell Telephone Company's (SWB) entry into the Texas interLATA Telecommunications Market. The goal of the test plan is to provide a plan to validate/assess SWB's readiness and capability to provide pre-ordering, ordering, provisioning, maintenance and repair and billing OSSs functionality to CLECs. The validation will include an assessment of functionality including parity/performance, and capacity (relative to mechanized (EDI) systems) for the SWB OSSs. These tests will primarily take place in addition to normal retail and CLEC activity in a production environment. The test focus, including performance/parity, consists of:

- **Functionality Test** - will test end-to-end processes from pre-ordering through provisioning and billing. Testing will be performed with SWB's production OSSs and processes. Test will focus Resale, UNE-P, UNE-Loop, UNE-Loop with Number Portability and Number Portability types of services (Note: An additional stand-alone test will be completed for ADSL).
- **Capacity Test** - will test the capacity of SWB's pre-ordering and ordering processes for Resale, UNE-P, UNE-Loop, UNE-Loop with Number Portability and Number Portability types of service. Testing will be performed with SWB's production systems and processes.

The test strategy and approach, test case scope and focus, timeline, responsibilities, risks and various phases (planning, preparation, execution/analysis/assessment and approval) and their associated activities required by SWB to achieve approval for entering the interLATA Telecommunications market. Focusing the scope of testing in various phases, identifying teaming, roles and responsibilities and specific accountabilities will help expedite the necessary steps to achieve completion. Implementation requires the support of the TAG team and its supportive representatives (e.g., test execution and analysis staff). The TAG team CLEC participants currently include, but are not limited to, AT&T, MCI WorldCom (MCIW), Allegiance Telcom, Inc., NorthPointCom and Covad/Nightfire. Testing will be done in a co-operative manner with SWB and the CLECs. The PUC and the Third Party Consultant will oversee the execution and assess the processes and test execution. The Test Participants will use their production environments for testing as appropriate (i.e., the Test Participant will use production level systems for those interfaces that are connected to SWB production OSSs). This Master Test Plan provides the framework for the detailed test plans, which will be developed by the Test Participants.

The Project No. 16251 Final Staff Status Report on Collaborative Process, November 18, 1998 document, accessible letters, CLEC forecasts, business rules (for performance measures process definition) and the PUC "Scope of Work" are the primary requirements that will govern the work efforts defined. A major aspect of this testing is relative to the performance measures which have been defined by the PUC to help ensure parity (equal treatment within a defined standard between

SWB's retail services and those provided to the CLECs) or benchmarks when parity is not applicable.

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1 Introduction

The Texas Public Utility Commission (the Commission) is currently investigating Southwestern Bell Telephone Company's (SWB) entry into the Texas inter Local Area Transport Area (interLATA) telecommunications market, pursuant to Section 271 of the Federal Telecommunications Act. As part of this investigation, the Commission is undertaking an evaluation of SWB's Operations Support Systems (OSSs), including the interfacing process which allow competitive local exchange companies (CLECs) to compete with SWB for local telephone service. These OSSs include those that provide for the mechanized CLEC interfaces for pre-ordering, ordering, provisioning, maintenance and repair and billing capabilities necessary for CLECs to provide Local Service in SWB's serving areas. The evaluation will test whether SWB OSSs provide parity or nondiscriminatory access with meaningful opportunity to compete to CLECs by using the real world environment of CLECs providing service in SWB territory in Texas, where available. The evaluation will also determine the ability of the SWB OSSs to support the commercial CLEC volumes provided by the CLECs 1Q2000 forecast.

The FCC ultimately determines whether SWB has proven its openness to local competition. However, the FCC relies upon the Texas Commission to develop a report and formulate a recommendation. Additionally, the Department of Justice (DOJ) will provide a recommendation to the FCC.

SWBT filed its 271 application on March 1998 with the Texas Commission. In April 1998, the Commission held meetings that established the need for a collaborative process to address the public interest, competitive checklist, performance measures, Operations Support Systems (OSSs), and FTA Section 272 compliance issues. The Texas Commission documented the requirements for these in the "Final Staff Status Report on Collaborative Process, November 18, 1998" document. A technical advisory group (TAG) consisting of membership from the Texas Commission, SWB, the CLECs and a Third Party Consultant was formed to address the testing of SWB OSSs and associated performance measures in a collaborative manner. All CLECs were solicited for participation and as a result the TAG CLEC members currently includes, but are not limited to, AT&T, MCI WorldCom (MCIW), Allegiance Telcom, Inc., NorthPointCom and Covad/Nightfire. The Commission then chose Telcordia Technologies (Telcordia) to be the Third Party Consultant.

1.1 Purpose and Goals

This Master Test Plan (MTP) has been developed to assess SWB's OSS readiness to support CLECs in the state of Texas. It outlines the strategy for the evaluation of the readiness of SWB's OSS to handle CLEC business. It includes the test scope, requirements, overall schedule/timeline, test environment, entrance and exit criteria for each phase, test approach and responsibilities among the Test Participants. It provides the framework for the detailed test execution plans, which will be developed by the Test Participants. By defining the overall test process, this document will serve to reduce the amount of unanticipated problems that may impede progress of this test.

The test cases defined by the TAG and verified by the Third Party Consultant are not included in this Master Test Plan document. These details will be provided in the Test Specifications document to be created by the appropriate Test Participants as part of their test planning process defined in the functionality and Capacity Test planning sections. The test scope will be defined in a collaborative manner by the TAG to assure coverage and the necessity/ability to provide certain test scenarios considering current support and the use of a production environment (e.g., the M&R technicians abilities to fix problems will not directly be tested).

The Goals of this Master Test Plan include:

- Define the testing process that will be used to perform the SWB OSS evaluation following the OSS recommendations specified by the Commission, and the performance measures established in the Project No. 16251, including but not limited to, the Final Staff Status Report on Collaborative Process, November 18, 1998.
- Provide overall framework for the test activities and validation of the testing
- Provide for a collaborative approach among the CLECs, the Commission, SWB, and the Third Party Consultant as appropriate
- Provide expeditious sequencing of activities
- Define project dependencies and provide the approach for managing them closely
- Maintain consistency with generally accepted industry practices and processes.

1.2 Scope

The scope of the testing has been developed from discussions in the TAG meetings, and further refining the scope defined in the Scope document provided by the Commission. The evaluation will cover the various order types associated with the three modes of CLEC entry: Resale, UNE-P and UNE-L (i.e., with and without Number Portability) and Number Portability. For each mode of entry the functional areas of pre-ordering, ordering and provisioning, billing, and maintenance and repair will be tested. Testing will include both residence and business orders and will encompass new, conversion "as specified", partial migrations change, disconnect, cancel, and suspend and restore order types. From an ordering perspective, the SWB OSSs will generate acknowledgements, error rejections, Firm Order Confirmations (FOCs), Service Order Completions (SOCs), and manual jeopardy notifications to the CLECs. In addition, testing will also include items such as a variety of feature combinations, directory listings, hunting, 900/976 blocking, toll restrictions, and extended area calling. Detailed requirements for the functionality to be tested are given in Section 4.

There are two types of tests that will be conducted:

1. A Functionality Test, which will focus on both the mechanized and manual support functions. It will also include the evaluation of SWB OSSs' ability to meet a set of pre-defined performance measures defined in the Final Staff Status Report on Collaborative Process Document. These performance measures will be used to evaluate parity or applicable benchmarks between the service SWB provides to its own retail customers and the service it provides to its CLEC customers.
2. A Capacity Test, which will focus on the ability of the SWB OSSs to support a given mechanized workload (clean LSRs that are MOG eligible¹) based upon the CLEC 1Q2000 forecast.

Table 1-1 provides a summary of the test areas and types of testing to be performed.

¹ MOG eligible refers to those LSRs that do not require manual intervention

Table 1-1: Test Areas and Types of Testing

Function	Functionality Test	Capacity Test
Pre-ordering	X	X
Ordering	X	X ²
Provisioning	X	
Maintenance and Repair	X	
Billing	X	
Flow-through Tests	X	
Performance Measures	X	X ³

In general, testing will be conducted for a pre-determined set of error free test scenarios. However, for the Functionality Test, a set of the most common error scenarios (i.e., scenarios determined by the CLECs based on previous experiences or expectations) will be covered under this evaluation. The TAG team will define the number and type of error scenarios to be covered. The number of error scenarios will not be shared with SWB so as to maintain a level of "blindness".

The Competitive Checklist (i.e., 271), the Public Interest and Section 272 compliance issues defined in the Final Staff Status Report on the Collaborative Process document will not be addressed directly, although they may be covered as part of OSS testing. Moreover, the information collection methods for the performance measures will be reviewed to determine compliance with the commission approved business rules. All the performance measures (including those not associated with the tests) will be evaluated for statistical validity and a sample of them will also be evaluated for correctness of the calculations.

¹ Up to and including the service order distribution process (i.e., for purposes of this test plan all steps following are considered provisioning).

³ Limited number of performance measures as defined in Attachment 3

1.3 Audience

The audience for this document is expected to be the Commission, the FCC, the DOJ, SWB, CLECs, and the Third Party Consultant.

Note: this document was created as a result of a collaborative process. The Third Party Consultant and the Commission support and approve this Master Test Plan; however, some of the views primarily reflect the collaborative process agreements.

2 Environment

2.1 Architectural Blueprint

The systems included in this test environment are expected to be production systems and thus, will be monitored and supported by the test participants' staff. The Test Participants are responsible for their liability associated with using their production environments for this test. They are responsible for modifications made to their systems, potential disruption to or impairments of Test Participants telecommunications services or customers as a result of this test.

Any tools required for this test will be supported, administered and maintained by the respective participants. The following depicts the architectural blueprint of the environment to be used for testing:

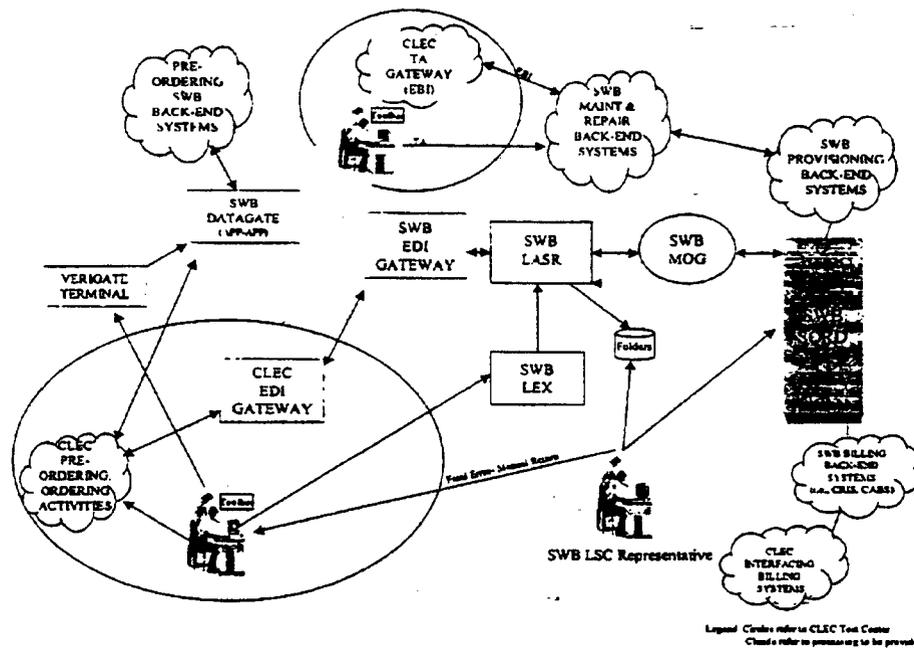


Figure 1: Architectural Blueprint

2.2 Operations Support Systems (OSSs)

The following sections detail the various systems included in this test. Details are provided on the new systems⁴ developed by SWB to handle CLEC customer service requests which provide for a mechanized process flow and those that provide the CLEC access to the SWB OSS in case they do not have their own mechanized (i.e., application to application) interface developed. The releases associated with these systems are typically expected to remain the same for the duration of the tests. However, since the environment to be used for testing is the production environment, changes are expected to be required, therefore, deviations from the baseline environment must be identified to the TAG and Third Party Consultant along with an impact statement associated with the changes within the release that may impact this testing. Then a decision will be made relative to subsequent actions/activities.

The Third Party Consultant anticipates that the environment will be the current SWB production environment, with inputs supplied according to the PMO (Present Method of Operation). Each CLEC environment must also be specified, with emphasis on any differences from CLEC FMO (Future Method of Operation) such as a future mechanized process, which will be performed manually for the Functionality Test (FT) or will be simulated for the FT.

2.2.1 Pre-Ordering

The Verigate and DataGate systems provide for the pre-ordering functionality. Both Verigate and DataGate allow a CLEC to acquire the following information on-line:

1. *Customer Service Record* - view current service records as a result of a customer providing authorization for a change
2. *Address Verification* - verify service address information as registered
3. *Reserve Telephone Number* - reserve one or more telephone numbers for new connections. Reserved TNs are available for 30 days
4. *Service Availability* - retrieve a list of services and features that are provided from a particular local serving office (note: applicable for Resale and UNE-P, the CLEC Handbook and the CLEC interconnection agreements define specifics)
5. *Due Date* - view available dates and appointment times for the verified address (note: applicable for Resale and UNE-P)
6. *Common Language Location Identification (CLLI) Code* - represents the switch that provides service to the telephone number requested
7. *Connecting Facility Assignment (CFA)* -allows the CLEC to view the status of DS1 and DS3 facilities leased from SWB
8. *Dispatch* - allows the CLEC to view whether dispatch is required for connection of a new line of service at a verified residential address. This transaction also provides Facilities, spare and defective pair information for residential customers at the verified address.
9. *Preferred InterExchange (IXC) Carrier (PIC) selection* - identifies the available IXC selections for customer PIC selection at the switch level.

⁴ These SWB systems include Verigate, DataGate, EDI Gateway, LASR, MOG and Folders

2.2.1.1 Verigate – Manual Access

Verigate is the graphical user interface (GUI) that provides the CLECs with real-time access to SWB OSSs for pre-order information.

2.2.1.2 DataGate – Mechanized Access

DataGate provides for pre-ordering capabilities from an application to application interface. Therefore, with DataGate CLECs can build a mechanized (i.e., electronic) interface to the SWB pre-ordering OSS.

2.2.2 Ordering

There are several SWB systems involved in the ordering process. They are LEX, EDI Gateway, LASR, MOG, and SORD.

2.2.2.1 LEX– Manual Access

LEX is the GUI that provides online manual access to create, maintain, submit and status (e.g. issued, FOC, SOC, etc.) LSRs submitted to SWB. LSRs submitted by CLECs which pass initial edits are processed by SWB OSSs to create service orders and provide for subsequent provisioning of the requested services.

2.2.2.2 EDI Gateway- Mechanized Access

The EDI Gateway receives LSRs from the CLECs and translates them to a format acceptable by SWB internal systems. For LSRs that are received via this interface their status is also returned via this interface (e.g. acknowledgement, fatal error, FOC, SOC, etc.). The CLEC LSRs which pass initial edits are processed by the SWB OSSs to create service orders and to provide for subsequent provisioning of the requested services.

2.2.2.3 LASR – Mechanized Access

LASR provides for the mechanized functionality of the service ordering process. LASR receives LSRs from either the EDI Gateway or LEX. If the LSR contains an error/rejection condition it is sent back to the CLEC across the same mechanism it was received (i.e., a mechanized request is returned with a mechanized status). After the LSR passes LASR edits, LASR determines if an LSR is "MOG eligible".

2.2.2.4 Mechanized Order Generator (MOG)– Mechanized Access

Mechanized Order Generator (MOG) provides for the mechanized functionality of the service ordering process. MOG creates a service order from the entries on the LSR as well as and from additional tables, to obtain data that is not required on the LSR but is necessary for service order creation. MOG then processes it and creates the service orders. If the service orders are

successfully created, MOG attempts to distribute them to SORD for downstream processing. During processing, MOG encounters one of the following situations:

- Creates the service order (which can be multiple) on MOG eligible LSRs and thus, successfully distributes the service order over 1st tier SORD
- Creates the service order but is unable to successfully distribute the service order over 1st tier SORD
- Finds "Non Fatal" Error in which the LSR must be processed manually. Service orders will be manually created or the LSR may be manually returned to the CLEC for supplemental request
- Finds "Fatal Error" in which the order cannot be created and returns the LSR to the CLEC for supplemental request. The error status is returned to the CLEC using the same mechanism as it was received.

2.2.2.5 Folders- LSR Database

Folders is a database system for LASR that provides SWB LSC representatives with the ability to view LSRs and provide reports of LSR status during the processing of CLEC LSRs. LSRs input to LASR from either the EDI Gateway or LEX are stored in the Folders database.

2.2.2.6 Service Order Retrieval and Distribution (SORD) - Mechanized Access

Service Order Retrieval and Distribution (SORD) - provides the service order distribution and assignment processing and associated information. SORD provides the Firm Order Confirmation (FOC) and Service Order Completion (SOC) status back to the CLEC via LASR to either EDI or LEX whichever mechanism in which it was received. The FOC is a response from the service order processor that represents the acknowledgement of receipt of an order from a CLEC. The SOC is a response from the service order processor that represents the acknowledgement of successful completion of the service order. Manual input is provided to create the service orders for complex orders (e.g., otherwise MOG presents the workload) and UNE-L with number portability requests, which are not "MOG eligible" at this time. However, these orders are expected to be MOG eligible after 5/1/99 and thus will be verified during the capacity test.

2.2.3 Provisioning - Backend Systems

Several SWB backend systems provide for the provisioning functions. These systems are generally not directly accessed by the CLECs. These systems support processing for functionality provided to the CLECs as they do for SWB retail customers. They will provide for the provisioning needs consisting of assignment of facilities, work orders, and the like.

2.2.4 Maintenance and Repair

2.2.4.1 Trouble Administration (TA) – Manual Access

Trouble Administration (TA) is a SWB developed GUI system that resides on the SWB Toolbar and provides access into the maintenance and repair functionality. TA enables the CLECs to submit trouble reports for its end-users, check the status of a trouble report, view trouble history and perform Mechanized Loop Test (MLT) as described below. TA will support trouble reporting on Resold Plain Old Telephone Service (POTS), POTS like Unbundled Network Elements (UNE) (analog line side port and a 2-wire 8db analog loop) where SWB performs the combination, Resold Special Circuits, Standalone UNE Loops, and Standalone UNE Ports.

TA has the capability of initiating a MLT and receiving test results for Resold POTS and POTS like UNE's when combined by SWB. The MLT test can be performed without initiating a trouble report. The MLT functionality of TA will provide the capability of performing 4 different types of MLT tests: The MLT functionality of TA will provide the capability of performing 4 different types of MLT tests: Full, Central Office, Loop and Quick. The MLT full test, which encompasses the capabilities of the other test types, provides results for Direct Current (DC) and Alternating Current (AC) KOHLM measurement for Tip to Ring, Tip to Ground, and Ring to Ground. It also displays Tip to Ground and Ring to Ground DC voltages and if Ringers are detected on the loop. The test also displays the Central Office line check and dial tone check. The test also provides capacitance test readings and estimated loop length. The MLT test code is returned along with its English Translation, such as "Test OK".

The MLT results will allow the CLEC to determine if trouble exists on the SWB loop and associated Customer Premise wiring and equipment (CPE) to which it is connected. MLT does not provide any method of sectionalizing the trouble report between the SWB network or the CPE.

TA does not support reporting trouble on disconnected services or TN's that have been ported out of SWB.

2.2.4.2 Electronic Bonding Interface (EBI)

The Electronic Bonding Interface (EBI) provides for mechanized/flow-through access to the maintenance and repair functionality based on national standards. EBI enables CLECs to submit trouble reports, and to receive trouble status updates and closure information. When a request to create a trouble report is sent by the CLEC, the trouble report will be opened in SWB's backend system with no manual intervention by SWB.

2.2.5 Billing – Backend Systems

Many backend systems provide for the billing functionality. These systems are not directly accessed by the CLECs. These systems support the same processing for the same functionality provided to the CLECs as used to provide for SWB retail customers. They provide for the production of the wholesale/resale bill to the CLECs. The next sections describe the main systems that provide for the Resale and UNE bills.

2.2.5.1 Customer Record Information System (CRIS)

The Customer Record Information System (CRIS) is a SWB system that provides for end-user billing. CRIS receives feeds from Toll/Usage, Service order and Payment systems on a daily basis in order to render end user bills. The Resale billable elements are:

- Charges:
 - Monthly Charge From/Thru Dates
 - Usage Charges (by Jurisdiction), OC&Cs (by Jurisdiction), Monthly Charges, Surcharges, Taxes (by tax authority), and Total Current Charges
 - Originating (Overall Company Code) (*Mechanized Output Only*)
 - Service/Feature Group ID (i.e., a unique bill for resale)
- Detail of Adjustments:
 - Adjustment Description
 - Adjustment From Date, Adjustment Thru Date
 - Audit (Claim) Number
 - EC Circuit ID/Telephone Number
 - Adjustment Amount (By Jurisdiction)
 - Rate Element Quantity
 - Discount and Zone Information (if applicable)
- Detail of Other Charges and Credits (OC & C):
 - OC&C From Date, OC&C Thru Date
 - Invoice Number, Purchase Order Number
 - Telephone Number
 - OC&C Charge Description/Explanation
 - OC&C Amount (By Jurisdiction)
 - Rate Element
 - Quantity
 - Fractional Amount, One Time Amount, Monthly Amount
 - Discount and Zone Information (if applicable)
- Detail of Usage and associated summary
 - State Usage From Date, Usage Thru Date
 - Jurisdiction
 - Summary By TN; Total by TN
 - Minutes/Messages
 - Rate

-
- Rate Change Date
 - Usage Amount
 - Rate Element: Traffic Type, Initial/Additional, Day of Week, Time of Day, Mileage Quantity/Zones/Bands, and Business/Residential
 - Detail of Surcharges (if applicable) and taxes:
 - State
 - Type of Surcharge and Tax
 - Monthly Access, Other, Usage and associated Tax Amounts

CRIS bills generated to Resale CLECs are processed the same as retail bills except for the discount in the rating process.

2.2.5.2 Customer ACCESS Billing System (CABS)

The Customer ACCESS Billing System (CABS) is a SWB system that provides for the InterExchange (IXC) Customer billing of the local network and UNE. One of the functions of CABS is to accumulate minutes, apply rates and bill usage on the SWB network by the IXCs and CLECs. CABS also bills for flat-rated, monthly receivables and non-recurring charges. The UNE billable elements are:

- Flat Rated (Recurring, Non-Recurring)- including loop, port, X-Connect and vertical service features
 - Loop - The physical path between the network interface on an end user's premise and a point of termination in the SWB end office.
 - Port - The connections to or the entry points into SWB end office switches.
 - X-Connect - The physical conductors and hardware required to connect compatible unbundled elements in the SWB end office.
 - Vertical Service Features - Port features that enable the CLEC to enhance the Basic Port Service with additional capabilities such as call waiting, three way, caller ID, etc.
- Usage Rated (MOU) are:
 - Common Transport - Provides for the transport of calls between SWB end offices or between SWB end offices and SWB tandems.
 - Blended Transport - A combined Common Transport and Tandem Switching rate element.
 - Tandem Switching - Provides call processing and switching services in a SWB tandem
 - Local Switching - Provides call processing and switching in a SWB switch.

- Miscellaneous Charges are:
 - Customized Routing - Allows a CLEC to transport local calls, operator services and directory assistance to their own platform.
 - Signaling - Provides for SS7 signaling in the switch, also known as SS7 Call Setup

2.3 Test Environment Management

2.3.1 The Test Environment Checklist

The following items may need to be checked based on the test methodology being used:

1. Terminal, workstation or PC for testers and Third Party Consultants as required
2. Tools (e.g., test management system, test drivers) and communications expectations available (e.g., including website access, systems access from remote site, etc.)
3. File permissions are correct (e.g., test driver tools, access to website for reports, etc.)
4. Sufficient space is allocated for new test cases (e.g., for capacity testing)
5. Printer access defined and available (e.g., to create the reports)
6. Logins to systems as necessary, security (e.g., firewall expectations, passwords)
7. Access to data as necessary (e.g., system resource use logs, etc.)
8. Communications verification to ensure connections have been established relative SWB and appropriate CLEC production EDI Gateways:
9. Provide test environment details pertaining to the platform, interfaces (primarily EDI (i.e., mechanized) oriented), an environment contact for each system, and the physical links the system uses. This item is necessary to understand the base environment across the testing. Only those systems that are the focus of the tests and will be used by the CLECs will be listed. Other SWB back-end systems such as PREMIS, FACS, TIRKS, WFA, etc. need not be detailed as they are the same whether access is mechanized or manual.

Table 2-1: Test Environment Checklist

System (Platform)	Rel Level	Interfaces	Comm-Links	Physical Loc.	Environ. Contact Name	Environ. Contact Phone
SWB EDI Gateway						
Participant 1 EDI Gateway						

System (Platform)	Rel Level	InterfacesT o	Comm- Links	Physical Loc.	Environ. Contact Name	Environ. Contact Phone
Participant 2 EDI Gateway						
SWB EBI Gateway						
Participant 1 EBI Gateway						
Participant 2 EBI Gateway						
SWB CRIS						
SWB CABS						
Participant 1 Billing Interfaces						
Participant 2 Billing Interfaces						
Verigate						
DataGate						
Participant 1 DataGate						
Participant 2 DataGate	NA					
Participant 1 Pre-Order Interfaces						
Participant 2 Pre-Order Interfaces						
LEX						
LASR						
MOG						
SORD						
EBI						
612 Trouble Admin (TA)						

Note: Normally tool expectations (e.g., test management, problem tracking, metrics, etc.) are also documented, however, each participant will use, manage, support and administer their own tools. Tools will be documented in the Test Participants test plans.

2.3.2 Environmental Change Management

Typically changes and upgrades to the software under test are not expected to occur during the test intervals. In addition, typically the tables, links and other environmental changes, which may impact this testing, are expected not to occur during the test interval.

However, since this testing will be performed in a production environment, release levels are expected to change on a pre-announced schedule, which may be within the Functionality Test execution window. In addition, other environmental changes (e.g., table updates) are expected to occur. Adverse impacts from these changes will become problems to be considered for the test evaluation. Major problems (e.g., a new release causes many tests to fail) may force the release to be backed out or the test to be rescheduled. Conversely, if changes go smoothly, this demonstrates that changes can be managed successfully. If changes to the environment are planned or occur, SWB must describe the changes in the SWB systems that may impact the testing and define their impact as soon as they are known. To allow for the timely execution of the tests, the standard change management process was disbanded to allow rapid implementation of fixes. All TAG members were informed as to this temporary alternative process.

Environment change information must be supplied to the Test Manager in advance of the change. The current know environment changes consist of a 4/4/99 Pre-Order release, 4/1/99 Billing Release, and 5/1/99 LASR release. Test activities have been modified based on some of these changes (e.g., Capacity Test is dependent on 5/1/99 release).

2.3.3 Environment Needs

2.3.3.1 Environment Needs - Functionality Tests

The environment used for the Functionality Test consists of the official CLEC mechanized (i.e., EDI) interfaces, which were built using the documentation provided by SWB (Local Service Ordering Requirements (LSOR), etc.). In addition, to validate SWB's OSS readiness, testing must either include an interoperability/co-operative test with a CLEC Test Participant initiating LSRs through their EDI Gateway or Local Service Request Exchange (LEX) or commercial traffic that can be observed. The Test Participant must have the ability to test and validate the various services and conditions defined in the test scope. To accomplish this the SWB production systems that provide for the mechanized processing interface to the Test Participant will be used.

The Functionality Test will assess the Verigate and DataGate interface for pre-ordering and the EDI Gateway and LEX interface for ordering. The OSSs required to perform the provisioning, maintenance and repair, and billing are used by SWB retail customers and CLECs and primarily consist of SWB legacy systems. Thus, they are included in the Functionality Test but are not defined here. It is also noted that these back-end systems currently support both mechanized and manual effort required to support commercial level volume.

To support the "friendlies"⁵ for the Functionality Test, their accounts must be established correctly in the SWB production database. See Section 4.5.5 for more details.

2.3.3.2 Environment Needs - Capacity Tests

The SWB production systems will be used to conduct the Capacity Test. The Capacity Tests will include both Verigate (primarily from determining the number of simultaneous users capable of being supported) and DataGate, for the pre-ordering process. Systems to be included in the Capacity Test order process are: the EDI Gateway, LEX, LASR, MOG, Folders and SORD. This Capacity Test will be through SORD distribution. Moreover, the backend systems that provide for SORD distribution needs are included.

2.3.4 Environment Cleanup

2.3.4.1 Environment Cleanup - Functionality Test

Once the Functionality Test is complete the environments used for this test (both SWB and the CLECs as appropriate) must be restored back to their original state relative to the events imposed by the testing (i.e., test related items are removed from the systems). This cleanup is expected to occur within 30 days after completion or no later than when the Third Party Consultant's Evaluation Report is issued. In addition, if other systems were used in the test the test data on these must also be removed.

Cleanup items to address consist of:

- Telephone Numbers (TNs)
- Facilities
- Billing
- Directory Listings
- Customer data- total purge relative to the test orders (each participant needs to assure this is the case). The Third Party Consultant will randomly request verification.

2.3.4.2 Environment Cleanup - Capacity Test

Once the Capacity Test is complete the production environment must be restored back to its original state within the same day or at least the next day. The major cleanup is associated with the pending orders. An extended due date will be used for the Capacity Test (e.g., 10/31/99, a Sunday,

⁵ "Friendlies" refers to the people that will provide for the usage test needs as defined in the test call scripts provided by the respective Test Participant(s) as required (e.g., for Resale, UNE-P and ADSL)

and many months away) to prevent the provisioning process, and identify test orders for data extraction and cleanup purposes. SWB will provide for the test cleanup for those CLEC Test Participants that have used a unique AECN to distinguish test orders. For those CLEC Test Participants that have not used a unique AECN and are using their production environment for the test the cleanup methodology will consist of providing cancellations, however, a FOC must be received prior to employing this cleanup methodology, unless the associated performance measures were already missed for the orders with pending FOCs. Otherwise, SWB will provide cleanup by removing the orders associated with the CLEC Test Participants AECN and the extended due date.

3 Administrative Process

This section defines the processes that will help govern the test activities. The terminology section at the end of the document defines the terminology used within this Master Test Plan.

3.1 Timeline

A summary of the key milestones/critical path items for the success of this project is described in this section. This summary represents a high-level overview of the major milestones associated with the tests. Attachment 6 provides the current timeline proposed and is provided to those with a need to know. This timeline will be used primarily to track levels one and two of the work breakdown structures. The Test Participants will have their own internal plans that support this timeline and the detailed activities required to meet the major milestones. The timeline in Attachment 6 will be used as the controlling timeline for the test events. The content of the timeline should be re-visited at a minimum every week and revised if necessary since key elements may vary over time.

The following table, which represents only high-level milestone tracking, includes the current view of the major milestones and their associated dates.

The test procedures will also include a test management jeopardy process (see Section 3.3.6) to manage potentially missed milestones relative to the Master Test Plan (see Table 3-1: Milestones and the Timeline Attachment).

Those listed under **Accountability** must assess the specific needs and create detailed work plans toward completing these milestones. In addition to managing the schedules defined here and in other sources, those listed as accountable are also responsible for issue resolutions with others. If issues need to be brought to the TAG team it is expected a suggestion for a potential solution be recommended.

Since this Master Test Plan has primarily been created from discussions in the TAG meetings, it is expected Test Participants have begun their activities in support of completing the milestones and their associated responsibilities defined in this Master Test Plan.

Table 3-1: Milestones

Milestones ⁶	Accountability	Initial Expected Date,	Status, Actions
Baseline Requirements	The Commission	3/99	
Master Test Plan Complete and Baselined	The Commission	3/99	
Each Participant Test Plan Complete/Baselined	Test Participants	3/99	
Test Specifications Complete	Test Participants	3/99	
Test Preparation Complete	Test Participants	3/99	
Test Readiness Verified (Sanity Test)	Test Participants	4/99	
Pre-Order Capacity Test Complete	Test Participant 1	4/99	Illustrative
Order Capacity Test Complete (Out of hours)	Test Participants	5/99	Illustrative
Order Capacity Test Complete (Normal Hours)	Test Participants	5/99	Illustrative
Test Participants Results Document (Capacity Test)	Test Participants	Daily During Test	
Third Party Consultant Capacity Test Evaluation Report	Consultant	5/99	
Functionality Test Complete	Test Participants	5/99	
Test Participants Results Document	Test Participants	Daily During Test	
Performance Measures Historical Evaluation	Third Party Consultant	4/99	
Performance Measures Computed	SWB	5/99	
Performance Measures Validated	Consultant	5/99	
Third Party Consultant Functionality Test Evaluation Report	Third Party Consultant	5/99	
Third Party Consultant Overall Evaluation Report	Third Party Consultant	5/99	

⁶ This table provides the initial "stake in the ground". It presents the expectations of deliverable dates based on experiences and history of similar testing. The Timeline attachment defines current specific expectations for planning purposes

Milestones ⁶	Accountability	Initial Expected Date,	Status, Actions
The Commission Signoff	The Commission	6/99	

3.2 Roles and Responsibilities for TAG Members

Whereas the Commission and Third Party Consultants can provide valuable and cost-effective advice and solutions, the ultimate accountability for implementation is shared with the Test Participants (SWB and the CLECs) with the support of the Commission and the Third Party Consultant oversight.

This section details the overall roles and responsibilities of the Participants with respect to this testing effort. Additional roles and responsibilities specific to each test will be detailed later in Sections 5.1.2 and 6.1.2. It is expected that Participants will execute their responsibilities in a timely manner, according to the process defined in this document.

3.2.1 Commission

The role of the Commission is to:

- Oversee the development of the Functionality and Capacity Tests
- Oversee the test process
- Help define the scope
- Ensure a collaborative process is implemented/followed
- Provide final approval of "baselined" documents, including this Master Test Plan with input from the TAG and the Third Party Consultant
- Approve and/or specify data retention policy for Participants
- Appoint a Test Manager to manage the test activities. The test manager responsibilities are defined in Section 3.3.1
- Make a final recommendation to the FCC of SWB's readiness for local competition, based upon reported results

3.2.2 TAG Member

TAG membership consists of the Commission, CLECs and SWB. The role of the TAG members is to:

- Provide support for the collaborative process
- Provide technical assistance in test planning and execution
- Support Test Plan needs
- Provide for Test Participant needs as necessary
- Provide input to the entrance criteria for the Planning Phase of each test
- Define high-level test scenarios
- Provide review of results of each as documented in the Test Analysis Phase exit criteria.

3.2.3 SWB

SWB is a direct participant in the tests. The role of SWB is to:

- Provide the SWB OSS environment to be used for the test (i.e., production environment)
- Provide test support and Subject Matter Experts (SMEs) as necessary
- Support as SMEs the test definition, planning, execution and test activities for all phases as described in this Master Test Plan
- Provide for preparation, setup, and access to the SWB production components for the tests as necessary (primarily for monitoring by Third Party Consultant)
- Provide system processing data necessary to understand the resource usage for the test workload.
- Provide physical configurations for the SWB systems used for the tests
- Extract appropriate data and compute the performance measures

3.2.4 CLECs

The role of each CLEC with respect to the tests is either as a direct participant in the test or as a TAG member. A test participant will have an active role in all phases of testing (planning, preparation, execution, and analysis). A TAG member who is not an active participant can have input at the beginning (Test Planning Entrance Criteria) and the end (Test Analysis Exit Criteria) of each test (see Section 3.2.2).

CLEC Test Participants role is to:

- Provide detailed Test Specifications
- Provide Test Execution Plans (including functionality and Capacity Tests)

- Provide for Test Execution
- Provide test support and Subject Matter Experts (SMEs) as necessary to the Third Party Consultant and/or the Commission.
- Provide list of primary, SME and escalation contacts to test management team
- Support other test activities for all phases as described in this Master Test Plan
- Provide Daily Reports (see section 3.3.2) to the test management team
- Provide action item and test management jeopardy (as appropriate) action plans and associated progress reports to test management team
- Designate recipients of each report (e.g., daily, action item status)
- Provide "Test Participants' Results Document" at the completion of their respective tests

3.2.5 Third Party Consultant

The Third Party Consultant's role is to:

- Validate the Functionality Test coverage as defined by the TAG
- Validate the Functionality Test
- Validate the Capacity Test coverage as defined by the TAG
- Validate the Capacity Test
- Validate SWB is following performance measure business rules as defined by the Commission
- Validate scalability of relevant SWB systems and staff (i.e., related to the LSC and LOC)
- Define the overall test planning via this Master Test Plan document
- Monitor test execution, including:
 - Monitor test sites and activities
 - Track test planning schedule and identify missed milestone
 - Track test execution schedule and identify missed milestones
 - Track status of baselined documents
- Provide a "Third Party Consultant's Evaluation Report"

-
- Report validation results to the Commission
 - Validate that CLECs and SWB are using the defined requirements for development of their interfaces. This includes validation that the expected changes to be made to the LSOR as a result of the carrier to carrier 12/19 release testing have been made.
 - Act as a Technical Advisor to the Commission

The validation responsibility for each test includes validating the successful completion of each test phase (planning, preparation, execution, and analysis) during the life of the testing. This validation includes the Entrance and Exit criteria. At the conclusion of each test, the Third Party Consultant will provide a "Third Party Consultant's Evaluation Report" based on observing the test and on the "Test Participants' Results Document."

3.3 Management of Tests

3.3.1 The Test Manager

A Test Manager will be assigned to ensure that testing will be conducted expeditiously and the Test Participants are aware of the test status. The Test Manager must perform the following functions for the Functionality Test, since the planning and execution of this test will take place over many days:

1. Problem Management and Action Item Management
 - Track testing Action Items (e.g., requests for information relative to testing)
 - Distribute a tracking summary of action items to resolve problems identified by the Test Participants
 - Assign accountabilities and track resolutions to issues/problems identified
 - Track test management jeopardies if milestones are missed
2. Test Schedule Management
 - Assign accountabilities and track resolutions as necessary for the test activities, with support from the TAG and the Third Party Consultant
 - Collect daily test status from Test Participants and/or the Commission and Third Party Consultant as appropriate
3. Communications Management
 - Provide overall communications management within the testing interval.
 - Maintain daily contact with designated Test Participant and Third Party Consultant test leads.

- Maintain an electronic contact list (e.g., subject matter experts, escalation) for each Test Participant, the Third Party Consultant and the Commission
- Distribute test management jeopardies reports to appropriate audience
- Distribute daily summary of the compiled test metric information forwarded by the Test Participant the Third Party Consultant the same day it is collected or the day after as necessary.
- Create and distribute weekly high-level summary including test progress, problem identification, action items, issue resolution progress and potential jeopardies status review.

A typical test manager contact list is shown below. The test manager will determine those that will get certain communications. The primary representatives to get most communications is the Commission and the Third Party Consultant. It is expected that each Test Participant will have a primary contact on the contact list.

Table 3-2: Test Manager Contact List

Contact	Responsibility	Telephone Number
	Texas Public Utility Commission	
	SWB	
	Test Participant 1	
	Test Participant 2	
	Test Participant 3	
	Test Manager	
	Test Third Party Consultant	
	Performance contact	
	Others	

The Capacity Test also requires management. The Capacity Test execution will not require the extended timeframe necessary for the Functionality Test and will require a more focused environment (e.g., mechanized SWB systems and CLEC production EDI Gateways). One test manager can manage both the Functionality and the Capacity Tests to limit coordination activities required and ensure a common broad perspective is maintained. The test manager may assign an assistant for the Capacity Test if necessary.

3.3.2 Daily Report

The following information will be reported on a daily basis during test execution. Test Participants will provide the test status information to the Test Manager by 9:00 Central Standard Time. The Test Manager will create the daily report. The Daily Report provides a review of the current progress of testing and gives an indication of potential areas of concern and technical issues. Actual metrics data will be counts of occurrences in the various categories and are further detailed in Section 3.3.3. See Attachment 5 for a proposed format.

1. SWB test activities checklist

- For systems included in the test, provide system availability

- Describe system and communications problems/issues that may effect availability
 - Describe discovered software issues (e.g., problems discovered during testing or production)
 - Describe M&P issues
 - Describe any changes in SWB systems that could effect test results
2. CLEC test activities checklist (for each participating CLEC)
- Status of LSRs
 - For systems included in the test (i.e., the production level systems interfacing to the SWB OSSs), provide system availability
 - Describe system and communications problems/issues that may effect availability
 - Describe discovered software issues (e.g., problems discovered during testing or production)
 - Describe error/reject conditions (unplanned ones), error identification, and proposed root cause
 - Describe any M&P issues
 - Provide "friendlies" (i.e., primarily for Resale, UNE-P, and ADSL efforts) status and schedule, including any delayed or unscheduled activity
 - Describe any "friendlies"-reported problems
3. Test Manager checklist
- Status of test management jeopardies and escalated problems
 - Other problems and action items
 - Schedule review
 - Update of test metrics

3.3.3 Test Metrics

The test metrics to be used will be defined in the Test Participants test plans. The test metrics must include at least the administrative and technical metrics listed below.

3.3.3.1 Administrative and Control Metrics

- Total number of test scripts
- Total number of test scripts executed
- Total number of test scripts completed (from an end-to-end functionality perspective)
- Total number of test scripts with problems reported
- Total number of problems reported
- Test schedule slippage
- Test phase interval: planned versus actual

3.3.3.2 Technical Analysis Metrics

The issues surrounding LSR flow-through and LSR rejects should be managed through metrics collected from data in the Functionality Test. These will help focus some of the analysis activities. For flow-through, the following measures should be computed by SWB and reported to the Test Manager and Third Party Consultant on a daily basis:

1. SWB EDI Gateway flow-through (from CLEC input)
2. LASR flow-through (from EDI input)
3. MOG flow-through (from LASR input)
4. SORD flow-through (from MOG input)

Flow-through is calculated by subtracting the rejects from the total messages and dividing the result by the total messages. Messages are LSRs or supplementals of LSRs for the EDI Gateway, LASR, and MOG. Messages are Service Orders for SORD.

SWB should also supply a complete list of rejects, including the LSR number, the error identification, which system rejected the LSR, and a proposed root cause.

For every reject in the Functionality Test, there is to be a root cause analysis by the Test Participants to explain the reject. Multiple rejects for the same root cause may be grouped together. A running count of rejects by root cause should be reported to the Test Manager on a daily basis.

3.3.3.3 Test Script Tracking Matrix

The Test Manager will maintain, with daily inputs from the Test Participants, a Test Script Tracking matrix for the Functionality Test. This tracking tool is an extension of the material in

Attachments 1 and 2 allowing an individual status to be placed on each Test Script in the test. The Test Script Tracking Matrix allows a comprehensive view of test status.

3.3.4 Problem Reporting Procedures

All problems will be reported to and managed by the Test Manager.

3.3.5 Escalation Process

Escalation will be handled by the Test Manager. Problems which cannot be resolved directly between the Test Participants will be referred to the Commission for mediation and resolution. The Third Party Consultant will assist in the resolution of problems with the intent of obtaining a quick, reasonable resolution that will not affect the test schedule or compromise the test results.

All Test Participants will be notified of escalated issues according to a notification list maintained by the Test Manager.

In the event issues need to be escalated the following contact list should be used. The Test Participants will identify their escalation contacts. *(note: this chart is provided in a generic form for illustrative purposes. Those with a need to know (i.e., Test Participants, TAG) will have this information available to them as necessary).*

Table 3-3: Escalation Contact List

Contact	Responsibility	Telephone Number
	Texas Public Utility Commission	
	SWB Escalation Contacts	
	Test Participant 1 Escalation Contacts	
	Test Participant 2 Escalation Contacts	
	Test Participant 3 Escalation Contacts	
	Test Manager Escalation Contact	
	Test Third Party Consultant Escalation Contacts	
	System Performance Escalation Contacts	
	Other Escalation Contacts	

3.3.6 Test Management Jeopardy Process

Test management jeopardies will be managed by the Test Manager. Test management jeopardies are used to help ensure the project remains on schedule. A test management jeopardy will be created when an event causes an impact on the projects' goals and expectations (usually, the schedule) as defined in the Master Test Plan. The jeopardy can be identified by any team member and requires an action plan be developed to resolve the situation. Test Participants may be assigned accountability by the Test Manager for an action plan to resolve a situation that can cause the project to be in jeopardy. The Third Party Consultant will assist in the resolution of test management jeopardies with the intent of obtaining a quick, reasonable resolution that will affect the test schedule a minimal amount and will not compromise the test results.

Major components of the test management jeopardy report consist of:

- Ownership – Test Participant responsible for championing the jeopardy resolution such that an action plan is determined
- Issue/Problem description – brief summary
- Impact – how the issue/problem will impact the project
- Action Plan – plan to resolve the issue/problem while maintaining the Master Test Plan objectives and goals
- Status – green (on schedule), yellow (cautionary) and red (in danger) relative to achieving the action plan, which supports maintaining the test goals (e.g., schedule, scope, etc.)

Test Participants will be notified of jeopardies according to the contact list maintained by the Test Manager.

3.3.7 Change Control Process

The objectives of change control are to obtain initial agreement on a document and then to assure that any changes caused by developments unknown at the time of issue will be properly reflected into an update to the document. This process employs the baselining concept.

The commission will approve initial issues and updates to baselined documents, with input from TAG members and the Third Party Consultant.

Change control for the test environment is discussed in Section 2.3.2.

All change control information is supplied to the Test Manager and is distributed according to the contact list maintained by the Test Manager.

3.3.8 Risk Management

A risk management/contingency plan process shall be used for this testing. The objective is to develop as complete a list of risks as possible. Risks need not be analyzed at this time, however each risk event should be documented. This process shall include the following:

Identify the impacts, primarily negative results, if a previously identified requirement, task/expectation or assumption is not delivered on time, completed on time, plus the alternative action plan and the responsible person are:

- Work Breakdown structure- task at risk
- Risk Event Identification- review of event
- Impact- impact risk would have if it occurs. Assignment of likelihood can be portrayed in a High, Moderate, or Low fashion rather than quantitative, which may require more analysis. The impact statement provides an assessment (most typically of the delay) caused by the occurrence of the event.

- Impact, Plan/Mitigation Strategies- various mitigation alternatives shall be considered for each identified risk and a primary option shall be selected, i.e., avoidance, retention, control, and deflection
- Risk Prioritization- rank order listing of the identified risk events based on the results of the risk analysis

Following is a sample reporting format for the results of the effort described above:

WBS #	Risk Event	Imp.	Impact, Plan/Mitigation Strategy	Priority
X.X	CLEC not ready/able to perform functionality testing	H	<p>Impact: Major test expectations of the collaborative effort will not be accomplished (e.g., Test Participants interoperability tests will not be done). Thus, the indirect test of the interface documentation will not be performed.</p> <p>Plan: contingency is to validate live production traffic is being passed from CLECs over their EDI interfaces to SWB.</p>	H
X.Y	CLEC not ready/able to perform capacity testing	M	<p>Impact: Capacity testing may be delayed by several weeks.</p> <p>Plan: contingency is to have SWB create input data with the Third Party Consultant oversight based on CLEC specifications. Accepted industry practice for system capacity testing.</p>	H
X.Z	Performance measures not finalized before testing	L	<p>Impact: May need to collect more data than currently planned</p> <p>Plan: The business rules will be continually changing as the telephony business changes, and the performance measures are not finalized. However, it is anticipated that the data gathering needed to calculate the existing performance measures is unlikely to change (i.e., existing data collected will meet the needs of future performance measures).</p>	M
X.A	CLEC Test Participant for ADSL not able to perform execution	H	<p>Impact: No validation of ADSL</p> <p>Plan: Provide for original alternative plan to perform following:</p> <ul style="list-style-type: none"> • Retail ADSL to Resale ADSL – SWB customer converts to CLEC • Resale New ADSL - End User requests new service from CLEC 	H

Legend: H implies high, M implies medium and L implies low relative to the impact and prioritization of the risks defined. Too many high impacts and high priorities would indicate the

project is at risk of not meeting the expectations defined. In addition, many medium impacts with high priority (and vice versa) also provide an indication that the project expectations are at risk.

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4 Requirements and Assumptions

The overall testing (i.e., Functionality and Capacity Test) requirements/objectives to be used to approve readiness of SWB OSSs consist of:

- The Project No. 20000 Final Staff Status Report on Collaborative Process, November 18, 1998 document, as supplemented in Project No. 16251.
- The Commission's "Scope of Work", November 14, 1998
- Performance Measurement Business Rules (for performance measures process definition and application to the Functionality and Capacity Test) provided by the Commission
- Performance Measurements Processes used by SWB (e.g., data extraction procedures, implemented algorithms, details of when and where data is collected, how it is collected, and application to the Functionality and Capacity Test). This will be provided by SWB to the Third Party Consultant.
- CLEC forecasts.

The above documents form the test requirements for the Functionality and Capacity test. This section provides additional requirements necessary for the conducting the tests and documents key assumptions. The organization of this section is as follows:

- Section 4.1: Interface Development Requirements Documentation
- Section 4.2: Functionality Test requirements
- Section 4.4: Capacity Test requirements
- Section 4.5: Test evaluation requirements
- Section 4.6: Assumptions relating to all phases of test activity

4.1 Interface Flow-Through Development Requirements

Common requirements must be used to implement the capability of flow-through among the Test Participants' (CLECs and SWB) systems. The Third Party Consultant will validate that the CLECs and SWB used the same set of requirements in the development of their system interfaces. Many job aides (interface documents, handbooks, etc.) and accessible letters form the basis for understanding the requirements for the interface development.

The complete set of documents and reference material has been provided by SWB to the CLEC Account Representatives and they are available to the CLECs from the SWB web site. Therefore, the information on the web site will form the basis for the validation effort associated with the documentation to be used for interface development requirement. However, since this web site is continuously updated with new information the data as of 3/12 will be used as the baseline documentation associated with this test effort.

An additional aspect of validating the baseline documentation is to validate the LSOR documentation changes defined in the accessible letter have been made.

The following sections define the details of the core of the common set of requirement documents that must be used for interface development.

4.1.1 Pre-Order

The requirement documents used for development of the pre-order functionality consist of:

- 12/19/98 Accessible letter, which is the notice or update document defining updates and changes issued to support the 12/19/98 release (see web site).
- DataGate LSP Access Developer Reference Guide 7.0
- Verigate – Verigate Users Guide 6.3.0

4.1.2 Order

The requirement documents used for development of the ordering functionality consist of:

- The EDI Gateway development rules 8.2 and EDI Version 8.
- LEX User Guide 3.2 - provides details on LEX functionality
- LSOR 3.3 - provides details on LSR field usage requirements (note: this version reflects the 12/19/98 changes)
- CLEC Handbook 3/20/99 version (note this document changes often, therefore, the most recent one within 2 weeks of the testing will form the baseline so as to not miss any pertinent changes)
- Information provided from SWB's CLEC training and by SWB's Account Management Teams
- Universal Service Order Code (USOC) manual - provides decoding of codes and their descriptions used for ordering services and equipment
- Universal Service Order Practice (USOP)
- 12/19/98 Accessible letter

4.1.3 Provisioning

The SWB systems included in the provisioning process which provide for assignments, switch translation requests, installation requests and the like are not directly accessed by the CLECs and are connected to SWB back-end systems. These are back-end systems that are given requests from

systems internal to SWB (i.e., external interfaces to many of these systems are neither provided nor required by the Commission (e.g., LIDB, 911)).

Documentation on the backend systems may need to be provided by SWB to the Third Party Consultant in order to facilitate the analysis of the performance measures.

4.1.4 Maintenance and Repair (M&R)

The requirement documents used for development of the M&R functionality consist of:

- TA User Guide – provides details on TA Functionality
- Joint Implementation Agreement for EBI – provides for the understanding of the EBI. The CLEC and SWB each develop their methods and procedures and the CLECs provide their functional requirements stating the use and implementation of the ANSI standards, which the EBI conforms to (i.e., ANSI standards T1.227 and T1.228).
- Other helpful documents may also be:
 - Line Validation Administration System (LVAS), which provides for the claiming of LIDB records
 - LIRA for white pages

4.1.5 Billing

The requirement documents used for development of the billing functionality and understanding of what is to be included within the billable elements consist of:

- Billing related, Texas "Mega Arbitration" documents
- Bill elements for UNE as taken from the Ordering and Billing Forum (OBF) Issue 1287.
- Bill elements for Resale from the OBF Issue 1215.
- Local loops with co-location from the OBF Issue 1202.
- Line side ports from the OBF Issue 1200.
- CLEC call flows that identify the end-user billing and access record recording and exchange processes.
- SWB billing systems, flows and system definitions.
- SWB CRIS/CABS Network Elements Usage Extract Information

4.2 Staff Scalability Requirement

To support the future workloads, the amount of staff needed to provide for the level of service agreed upon must be appropriately planned. The test efforts will not test (directly or indirectly) to verify the appropriate amount of staff, as it is not feasible to train and hire at this point in time. However, to ensure the staff needs are planned for the staff planning process (e.g., process to determine amount of staff predicted to be needed and process to provide for the staff) will be validated. The staff scalability review will be performed for both the LSC and LOC staff.

4.3 Functionality Test Requirements

The purpose of the Functionality Test is to determine whether a pre-determined set of customer ordering scenarios, representing a comprehensive set of customer ordering capabilities, can be originated based on information accessed from the SWB pre-ordering system(s). In addition, the Functionality Test will determine whether or not the ordering scenarios can flow through the ordering, provisioning and billing systems, such that service requested is provisioned and billed accurately.

The main documents from which requirements are drawn are: CLEC Forecast, performance measures (see Attachment 3) of the Final Staff Status Report, and the "Scope of Work".

- The "CLEC Forecast" projects the distribution and workload of the CLEC orders in the 1Q2000 forecast.
- Attachments A and C of the Final Staff Status Report contain the performance measures that will be applied to the Functionality Test, and include a high-level definition of the expected results. There are two kinds of performance measures that will help evaluate the outcome of the Functionality Test:
 - *Parity measurements*, which are designed to differentiate performance of mechanized systems or manual operations when both the CLECs and SWB offer comparable services
 - *Benchmark measurements*, which will help evaluate similar performance objectives when SWB does not offer comparable service to the CLECs. In certain circumstances the Commission may have developed Benchmark Measurements even when SWB offers comparable service to the CLECs.
- The "Scope of Work" details what should be tested, when it should be tested, the major tasks, and roles.

4.3.1 Test Scenario LSR Coverage Process Review

Functionality Test coverage is important to assure appropriate functionality to reflect the anticipated future business environment. Test coverage is given in Attachment 1 and Attachment 2, which were developed using the process detailed in this section.

The initial proposed set of test case scenarios were reviewed and reduced to 204. This was achieved by ensuring each unique scenario provided value-added processing, thus reducing duplication of common processes. These unique test scenarios were then expanded to provide for

several iterations of similar tests to help gain a reliable statistical sample of processing and performance measures within the test interval. This effort is called the test case loading. The loading is based on the expected CLEC workload mix provided in the 1Q2000 forecast. (As recommended by the Commission staff, the percentage of orders for Resale to UNE-P conversion was reduced to recognize the likelihood that these conversions will occur much less frequently as the amount of Resale declines.)

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A core set of LSRs will be used. These are broken down to the following representative mix of residential and business scenarios:

Table 4-1: Core Set of LSRs

Scenario Type	% of Orders (approximate)
Retail to UNE-P Conversion	40%
Resale to UNE-P Conversion	20%
Retail to Resale Conversion	4%
Resale New	4%
UNE-P New	8%
UNE-Loop New	8%
UNE-Loop w/Number Portability	4%
Change Activity	12%
Totals	100%

The following sections detail the requirements for the types of scenarios to be included in the test, the requirements for each of the processes included in the scenarios and also the typical process flow expected in the Functionality Test.

4.3.2 Scenarios

This section describes the types of orders, the directory listings, and the features that will be included in the test case scenarios. These scenarios will be used as templates to create detailed orders/LSRs. In certain instances, even though the LSRs have been correctly generated by the CLEC, orders may require some form of manual intervention in the SWB systems (e.g., orders that are not Mechanized Order Generator (MOG) –eligible). Attachment 1, the test case scenario test matrix, defines the circumstances which would make orders not MOG eligible (i.e., require some form of human intervention).

The Functionality Test will contain both mechanized and manual service orders. Mechanized orders are LSRs that can flow-through SWB's electronic ordering systems without manual intervention (i.e., MOG eligible). For orders that require manual assistance, the Local Service Center (LSC) is expected to process these manual LSRs as their Present Method of Operations (PMO) dictates.

The scenarios will consist of pre-ordering, ordering, provisioning, and billing. Some will also contain maintenance and repair processing. The following provides a high-level focus of the test scenarios based on the processes to be tested:

1. *Pre-Ordering* (see also Section 4.3.5.1)
 - CLEC service representative tasks including the obtaining of necessary pre-ordering information

-
- Must include the information the customer service representatives obtain from the pre-order systems (i.e., address validation, TN reservation, etc.)
2. *Ordering* (see also Section 4.3.5.2)
- Order activities:
 - New (e.g., relative to UNE-L, UNE-P, Resale, ADSL (as per the form defined by SWB))
 - Conversions as specified (single and multi-line, UNE Loop with NP)
 - Change Orders
 - Suspends and Restores
 - Outside Moves
 - Disconnects
 - Request types are:
 - Original
 - Supplement
 - Cancellation
 - Order types:
 - Resale
 - UNE-P
 - ADSL (as per the Form defined by SWB, see Section (4.3.5))
 - UNE-L
 - UNE-L with Number Portability
 - Number Portability
 - LIDB record claiming where appropriate (see Section 4.3.6)
 - FOC
3. *Provisioning*
- SOC
 - Jeopardy
4. *Maintenance and Repair*
- Planned
 - Unplanned (i.e., those M&R situations that may occur as processing proceeds)
5. *Billing*
- Daily usage feed verification
 - Wholesale bill (mechanized)
-

4.3.3 Types of Orders

Order types are defined by Resale and UNE (Port and Loop, Loop with Number Portability and Number Portability). The order types defined below will be included in the Functionality Test. A select sample of the Functionality Test orders will be included in the Capacity Test. In addition, certain order types do not apply to the Capacity Test, these are identified accordingly. Generally speaking, only MOG eligible LSRs will be included in the Capacity Testing. To the extent the Capacity Test takes place during regular business hours, production level commercially-passed non-MOG eligible LSRs will also be processed.

Unless otherwise specified, the cases below include single and multi-line orders, business and residence orders, and supplementals.

4.3.3.1 Resale

Resale is a service that allows a CLEC to purchase SWB retail services in order to resell these services to their own end user. The test scenarios to be included in this test for Resale orders are:

- Retail to Resale Conversion - SWB Customer converts to CLEC
- Suspend and Restore - CLEC initiates a request to suspend a customer service and may later initiate a request to restore the service. (Suspend and Restore orders are not MOG eligible and thus do not pertain to the Capacity Test.)

4.3.3.2 Unbundled Network Elements (UNE)

Unbundled Network Elements (UNE) are those services or components marketed separately between SWB and a CLEC. These include but are not limited to Loop with Port Service. The test scenarios to be included in this test for UNE-P and UNE-L orders are (note: during the Functionality Test the end-user references below will most typically be simulated by the Test Participant executing the test (i.e., "friendlies" that represent the end-user will primarily be providing for the usage related needs of the test)):

- Retail to UNE-P Conversion - SWB Customer converts to CLEC
- Resale to UNE-P Conversion - CLEC converts its own customer form Resale to UNE-P
- UNE-P New - End-user establishes new service (UNE-P) with CLEC
- Retail to UNE Loop - SWB customer converts to CLEC, where unbundled loop is leased from SWB by CLEC
- Retail to UNE-L with Number Portability (This is included in the Capacity Test only if it is run post the 5/1/99 LASR release, which makes it MOG eligible) - SWB customer converts to CLEC, where unbundled loop with Number Portability is leased from SWB by CLEC
- UNE L New - End-user establishes new service (i.e., UNE-L) with CLEC

- UNE-L with Number Portability Conversion – End-user establishes new service (i.e., UNE-L) with CLEC and ports existing number. (Note: This is included in the Capacity Test only if it is run post the 5/1/99 LASR release, which makes it MOG eligible)
- Retail to Number Portability – SWB customer converts to a CLEC keeping the same TN but using only CLEC facilities
- UNE-P Suspend and Restore – Service is suspended and restored at a later date (Note: this is not applicable for the Capacity Test)
- UNE-P Outside Move – End-user moves to different location/address
- UNE-L Outside Move - End-user moves to different location
- UNE-P Change – Request to change a feature
- UNE-L Change – Request to increase bandwidth
- UNE-P Disconnect – Service is disconnected from the end-user
- UNE-L Disconnect - Service is disconnected from the end-user

4.3.3.3 Other

The following order activities are included in the Functionality Testing:

- Change Activity - This includes disconnects, change features, move, add
- Miscellaneous Activity - Suspend and Restore
- ADSL - this is a manual process currently in the design phase (i.e., forms for ordering have not been standardized by OBF). In addition, as of April 1, 1999 there are no performance measures and business rules, therefore parity can not be measured (note: benchmarks may be established). The test focus will primarily be to validate the ordering, loop qualification and billing functionality.

SWB has agreed to provide a proposal for a form to be used for testing the following:

- New ADSL, including Loop Qualification and the processes defined for the Functionality Test (dependencies include a collocation cage and Customer Premise Equipment (CPE)).
- Potentially Retail conversion to CLEC ADSL.

4.3.4 Features, Feature Compatibility's and Directory Listings

Included within the order scenarios will be options for directory listings and features. The following options exist for directory listings and will be tested within the test scenarios (Note: CLEC Test Participants will be sending Directory Assistance calls to their operator, however, no directory assistance for UNE-Loops will be performed per the CLEC Test Participant):

- Straight-line main
- Non-published
- Additional
- Dual name
- Non-listed
- Caption listings.

Attachments 1 and 2 define the list of feature types and combinations of features to be included in this test.

4.3.5 Processes

Several business processes typically comprise a scenario within the Functionality Test. The processes are:

- Pre-ordering
- Ordering
- Provisioning
- Billing
- Maintenance and Repair

4.3.5.1 Pre-Ordering

Pre-ordering is the process that allows CLECs the ability to query SWB databases to verify certain information required to issue a valid LSR. In order for the LSR to flow through the SWB OSSs without any manual intervention, it is important that the LSR contains accurate information of the service that is being requested. The performance measures specified in Attachments A and C established by the Commission will be applied to the measurements generated by the functional and Capacity Tests for pre-ordering.

The pre-order process of the Functional Test will include the following:

- Address validation - allows the CLEC to verify service address information as registered in SWB service areas
- Customer Service Record (CSR) inquiry- allows the CLEC to view current service records as billed by SWB. This proprietary information is provided after the CLEC has indicated that end user authorization has been received. Along with providing the end user authorization, the CLEC may also provide the name of the end user with whom the account was discussed. The current PIC status, Circuit ID (ECCKT), Directory Listings and Feature Availability are provided within the CSR.

- Service and feature availability- allows the CLEC to retrieve a list of services and features that are provided from a particular serving office. This information is determined from an existing telephone number or reserve TN request.
- Telephone Number (TN) reservation - allows the CLEC to reserve one (1) or more telephone numbers for new connections at a verified address. Telephone numbers may be reserved in the database for a period of thirty (30) days.
- Telephone Number Return – allows a CLEC to return a TN to the pool of available TNs
- Due Date availability - allows the CLEC to view available dates and appointment times for dispatch of work crews serving the area of the verified address.
- PIC List - allows the CLEC to retrieve a list of possible long distance providers for the address requested.
- CLLI Codes – allows the CLEC to identify the switch that provides service to the TN requested.
- Dispatch - allows the CLEC to view whether dispatch is required for connection of a new line of service at a verified residential address. This transaction also provides Facilities, Spare and Defective information for residential customers at the verified address.
- Channel Connecting Facility Assignment (CFA) verification - allows the CLEC to view the status of DS1 and DS3 facilities leased from SWBT
- Loop Qualification (not currently available electronically) – allows the CLEC to determine if a particular service can be provided on the loop in question

4.3.5.2 Ordering

Ordering consists of the process by which the CLEC order/LSR requesting services and features is submitted to SWB for processing.

4.3.5.2.1 Ordering Activities

During ordering, the ability of SWB's OSSs to provide for the processing of the CLECs order is being tested relative to the following ordering activities:

- Receipt and acknowledgment of LSRs,
- Reject processing (i.e., mechanized edits and manual rejects),
- Manual or mechanized creation of the applicable service orders,
- Receipt of a FOC, which is a response from the service order processor that represents the acknowledgement of receipt of an order from a CLEC. For purposes of this test the SOC is included in the provisioning process description area, as it represents the response from the service order processor of acknowledgement of service order completion (i.e., assignment).
- Processing through SORD distribution (for purposes of this test)
- Supplemental

- Cancellations

During this time CLEC activity pertaining to LSRs for inbound and outbound transactions received and sent by SWB systems will be observed for single and multi-line residential and business services.

4.3.5.2.2 Order Activities

The Functionality Test will cover the ability of the SWB OSSs to receive the following order activities as *inbound* transactions:

- New – establish a new account
- Conversion – for the purposes of this test conversion refers to conversion from retail to Resale or retail to UNE-P or UNE-L. Migration refers to “conversion as is” or “conversion as specified.”
- Change – disconnect feature, change feature, add feature
- Suspend/Restore - suspend a customers’ service, restore the customers’ service
- Disconnect – disconnect service for an account
- Outside Move – change customer address

The Functionality Test will cover the ability of the SWB OSSs to send the following *outbound* transactions:

- Mechanized order rejection/error notification
- Order acknowledgement
- Firm Order Confirmation (FOC)

4.3.5.2.3 Ordering Flow-through

Ordering flow-through is computed through some of the performance measurements, but these measurements do not provide enough detail for full analysis and metrics for the Functionality Test. A separate flow-through metric must be computed, for purposes of these tests, for the EDI Gateway, LASR, MOG, and SORD as described in Section 3.3.3.2.

4.3.5.3 Provisioning

Provisioning is the ability of a system to provision features and services in the switch (and, where relevant, in the outside plant services), as requested in the LSRs. This step will test the ability of the SWB back-end systems to provide the CLECs with the services and features being requested. The return of the service order completion notification to the CLEC indicates that provisioning is complete. Provisioning will be considered complete once a Service Order Completion (SOC) is received by the CLEC.

- The manual jeopardy process is included in the Functionality Test. This process will be validated through observation of the jeopardy process (including test and normal production) and tests (i.e., inducement of a condition to cause a jeopardy). A jeopardy is currently defined to be a condition

that occurs on or before the due date, indicating that the due date is less likely to be met. Some examples of what can cause a jeopardy are:

- No cable pair or bad cable (held order)
- Various central office conditions

In addition, validation of the process for dealing with conditions such as "TN unavailable" and "wrong address", will also be included in the Functionality Test (i.e., these conditions will be induced and the process will be validated through observation).

4.3.5.4 Billing

Billing is the ability of SWB to provide the CLECs with an accurate wholesale/resale bill and usage data, and billing records for the services, features, network items (e.g., loop, port) and functions that were ordered and provisioned. In addition, verification of the rate center specific charging must occur for recurring, non-recurring and usage sensitive charges and miscellaneous charges (e.g., OSS charges). The primary OSS focus is to validate the ability of the billing systems to receive the input in a timely manner and process the bill accurately.

The billing test inputs for the Functionality Test consist of the test Service Orders and Customer Service Records (CSR). The test output consists of the usage feeds and paper and mechanized bills. The inputs will be compared with the outputs relative to the elements of each order to verify the account has been established and billed correctly and with the same level of quality that SWB provides to its end user customers. In addition, the usage will be validated relative to correctness and accuracy. This process will be done based on the SWB printed invoice. Inputs to the CLECs will be provided via paper, feeds and/or CD ROM dependent upon the appropriate medium for the amount of data.

The Functionality Test will test the ability of SWB to provide wholesale/resale bills:

- That are in compliance with detail and format as indicated by the Commission in its Final Staff Status Report, which generally follows Industry Guidelines such as the Ordering and Billing Forum (OBF) guidelines.
- Capabilities of validation:
 - Identify and quote specific charges and adjustments
 - Identify features subscribed to by customer
 - Validate it is accurate and complete
 - Validate Timeliness (the printed invoice, the usage transmission, and the mechanized bill)
 - Validate daily and monthly usage feeds for Resale records, and access records (originating and terminating records)

The focus of the billing testing consists of:

- Ensure the bill complies with detail and format as indicated by Industry Guidelines such as the Ordering and Billing Forum (OBF) guidelines. A summary of the Resale (1215) and UNE (1287) billable elements guidelines are included in Section 4.3.5.4.1 and Section 4.3.5.4.2 respectively.
- Ensure what is ordered is what is billed
- Ensure wholesale bill provides for non-recurring, recurring and usage sensitive charges
- Ensure rates are applied correctly for each product, service or element.
- Ensure taxes and surcharges have been applied appropriately for the jurisdictions.
- Ensure usage charges are billed within the timing limitations or criteria established by local or state jurisdictions.
- Ensure products that are billed in advance, as well as, recurring and non-recurring charges are billed accurately.
- Ensure discounts, adjustments and calculations are performed appropriately
- Ensure bills are legible
- Ensure the timeliness of the bills (i.e., are they sent/received within the amount of hours/days required)
- Validate the bill data, which will be provided via various media (e.g. paper (bills), feeds (usage), CD ROM (usage), etc.), for accuracy and legibility
- Check rounding rules are applied accurately.
- Ensure prorated amounts are charged accurately according to the disconnect date.
- Ensure disconnects are processed and appear accurately on the bill.

4.3.5.4.1 Resale Billing Elements

Requirements for the Resale bill are:

- The bill is clearly identified as pertaining to Local Resale Service
- Usage is summarized at the TN level
- Jurisdiction is provided for chargeable elements.

Minimum Billable elements for the Resale Bill consists of:

- Face Page

- Detail of adjustments
- Detail of other charges and credits (OC & C)
- Detail of usage
- Detail of surcharges (if applicable)
- Detail of taxes

4.3.5.4.2 UNE Billable Elements

Minimum billable elements for the UNE bill based on OBF consists of.

- Face Page
- Detail of adjustments
- Detail of other charges and credits (OC & C)
- Detail of surcharges (if applicable)
- Detail of taxes

4.3.5.5 Maintenance and Repair

Maintenance and Repair (M&R) is the ability for the CLECs to report trouble to SWB and check the status of the reported trouble. Any trouble that is related to the test scenarios and occurs within the test interval will be considered part of the test. These unplanned troubles will require analysis and be reported by the Test Participants on their daily report. Therefore, the M&R testing will include planned and unplanned tests. A select set of the Functionality Test scenarios will contain planned M&R tests. The planned tests will be developed considering the highest volume types of troubles. The focus of this testing would be the evaluation of the trouble request process, status, and repair (i.e., ability to receive and process a mechanized trouble report) and the ability to perform a Mechanized Loop Test (MLT) where appropriate. These tests will not include an evaluation on the staff to be able to perform their duties as that is already verified. An evaluation of the current SWB CLEC reported trouble volumes reflect Resale and some UNE activity, and indicate the ability of the technicians to perform the work. These troubles can be reviewed in greater detail to evaluate SWB's readiness to be able to handle the CLEC generated troubles. The focus of a limited set of maintenance and repair requests will be on validating the electronic process of inquiries, status, and requests.

The M&R test scope for Resale and UNE-P consists of:

- No dial tone (NDT)
- Static/Noise on the line
- Cannot call out (CCO)
- Cannot Be Called (CBC)
- Cannot Be Called (CBC intra-switch)
- Cannot call Long Distance
- Features not working

- Features not provisioned
- Cannot call 411
- Cannot accept collect calls
- Cannot call 555-1212

The M&R test scope for UNE-L (i.e., with and without Number Portability) consist of:

- No Dial Tone (NDT)
- Ring No Answer (RNA)

The M&R test scope for UNE-L with Number Portability and Number Portability:

- Cannot Receive Calls (inter-switch – SWB to CLEC)

The methodology to be used for performing the M&R test scenario execution will consist of having a superficial (i.e., no real condition is induced or occurs) or induced (i.e., a pre-determined condition is created) condition, validating the induced conditions and then providing an M&R request. In addition, the existing M&R process activities will be observed during the test interval. For the Resale and UNE-P testing the induced condition will be verified through the use of MLT (i.e., not through the use of "friendlies") where appropriate. For the UNE-L testing the induced condition will be validated through the customers. Conditions will be induced at the central office and a person will be defined as the central point of contact to arrange for the condition to be induced without alerting the repair staff (there will be monitoring activities to validate various expectations and conditions of the test execution). Table 4-2 defines potential trouble conditions and potential ways to induce the maintenance and repair test scenarios are (most inducements are expected to occur in the Central Office (CO)):

Table 4-2: Trouble Conditions and Associated Inducements

Trouble Condition	Associated Inducements
No Dial Tone	Remove coil in CO
Features not working	Change translations
Features not provisioned	Change translations
Cannot accept collect calls	Change translations
Static/noise on line	Install defective coil in CO
Cannot call 411	Change translations
No dial tone	Remove coil in CO
Cannot call out	Remove coil in CO
Cannot call 555-1212	Change translations

Trouble Condition	Associated Inducements
Cannot call Long Distance	Change translations
Cannot be called (intra-switch)	Translate incorrectly
Cannot be called	Remove coil in CO

4.3.6 Requirements Not Included in Functionality Tests

As directed by the Commission the following activities are not in the requirements for the Functionality Tests:

- Manual entry of LSRs, except for Resale LSRs through LEX. (Note that manual activities to resolve problems with LSRs are within scope for the Functionality Test but out of scope for the Capacity Test.)
- The Mutual Compensation Carrier Bills . (i.e., including reciprocal compensation and the summary (9299) records) and the Ancillary Services Billing System (ASBS) Carrier Bills since they do not directly affect the ability of SWB to bill the CLEC
- Unbillable usage
- Detailed LIDB testing. Only the LIDB processing required to support normal test execution of the scenarios is included. Testing will include:
 - Class of service
 - Calling card
 - No collect
 - No collect at customer request.
- Interim Number Portability
- ISDN (as agreed on 3/10/99)
- PBX
- Centrex
- Validating all feature combinations possible, however, the TAG has agreed to the reasonable business/residence combinations while assuring all features are contained within the test coverage
- Feature incompatibilities as agreed to by the TAG
- Error checking (may be on a very limited scale)
- Sub-loop unbundling (manual and requires coordination with ordering CLEC)
- Validation of customer bill (only wholesale/resale bill validation is in scope, since SWB does not provide "customer" bills to the CLECs customer)
- Complex orders (those requiring coordination, more than 5 lines)
- Design services (Note: for purposed of this test UNE and UNE combinations are not considered design services)

- CLEC hopping (i.e., Resale to Resale Conversion - CLEC Customer converts to another CLEC)
- Directory assistance on UNE-Loops
- Loss notifications
- As agreed in the 3/31/99 TAG meeting, as a result of scenario mapping issues, the outside move functionality will be verified through the business scenarios (i.e., not including the residential scenario) since the process is the same. Therefore, there is no need to find two "friendlies" within the same switch.
- As agreed in the 3/31/99 TAG meeting, as a result of scenario mapping issues, the circular hunting feature will be verified through the business scenarios (i.e., not including the residential scenario) since the process is the same.

4.4 Capacity Testing Requirements

The Capacity Test (CT) is the realization of an agreed-upon process for evaluating whether the relevant SWB systems have sufficient capacity to handle the additional workload introduced by the CLEC.

A Capacity Test is very different from a Functionality Test, since it is constructed of a repeatable, controlled, usually simulated test load. For the purposes of this Capacity Test, the new mechanized interfaces providing for local competition will be tested. Therefore, a restricted subset of end-to-end functionality will be used as the input workload to drive the systems. This workload will mimic the 1Q2000 forecast. It is recognized that balance between simplicity of testing and statistical soundness of the analysis must be reached in determining the appropriate test conditions.

The Capacity Test will include tests for evaluating pre-ordering and ordering capacity. For each of these tests and for each OSS in the pre-order and order processes, the CT will help evaluate the following:

1. Selected Performance Measures (PMs) for which a parity definition or benchmark is established
2. Standard computer metrics (such as processor utilization)
3. OSS scalability, which explains both procedures for capacity expansion and provides estimates of the largest volume that the OSS configuration accepts under normal conditions

For the ordering Capacity Test, clean LSRs (i.e., correct and MOG eligible) will be used. The intent is to validate the capacity of the systems and not the resources to perform the work as a result of manual activity⁷. Test conditions that provide for the mechanized error and rejections will

⁷ The vast majority of the forecasted volume is MOG eligible. Moreover, to the extent the Capacity Test takes place during regular business hours, SWB's current staff will be handling their regular load.

be included. As stated in the "Scope of Work," Capacity Testing will also be performed in the production environment. See Section 2.3.3.2 for Capacity Test Environment needs.

Since these tests will be run in a production environment, special care is necessary to ensure there will be minimal impact on normal company business. Test participants are expected to assure there will be no impact on their own customers.

An inherent part of Capacity Test is the determination of the scalability of the new SWB systems. For each SWB system in the test, SWB should demonstrate their approach to scalability so that future volume growth can be properly planned for before existing resources exhaust. Also, using measurement data, the Third Party Consultant will estimate the processing limit of each OSS as configured during the capacity tests.

Special conditions (e.g., future due dates on LSRs) may be placed on the test data so that production processing is not affected. This also prevents the provisioning process from occurring, which is a requirement of the Capacity Test. Using an extended due date (e.g., 10/31/99, a Sunday, and many months away) will also provide an alternative way to identify test orders for data extraction and cleanup purposes.

SWB may provide CT results based on their own simulated orders or pre-orders. However, unless stated differently below, these tests are optional.

4.4.1 Capacity Test for Pre-Ordering

The pre-order process of the Capacity Test will include the same activity list as the Functionality Test. See Section 4.3.5.1. For the DataGate OSS evaluation, AT&T has committed to provide CT pre-ordering volume sufficient to cover the CLEC workload for the 1Q2000 forecast at an hourly rate, which will be defined by the Third Party Consultant. For the Verigate OSS, a review of the number of simultaneous users the Verigate server is capable of supporting will be performed.

4.4.2 Capacity Test for Ordering

All CLEC activity pertaining to LSRs for inbound and outbound transactions received by SWB systems will be observed. The Capacity Test, which will generally consist of clean MOG eligible LSRs (i.e., in order to present the maximum workload), will cover the ability of the SWB OSSs to receive residence and business, single and multiple line and supplements and cancellations for the order types as *inbound* and *outbound* transactions as explained in Section 4.3.5.2.2. Mechanized error rejects will also be included to test the systems ability to process these in a mechanized fashion within the volume defined. The suspend/restore order type is not included provisioning is not included in the scope. For the EDI, LASR, MOG and SORD OSSs, the CLEC Test Participant's will provide for the order volume, mix and arrival rate defined. Each CLEC Test Participant will transmit their simulated LSRs in separate intervals (e.g., morning, afternoon), therefore, the combined workload will not be higher than the 1Q2000 CLEC forecast

4.4.3 Capacity Test Volume

This section describes the workload volume that will be simulated and entered directly to the SWB systems that support CLEC business activity. Test cases are selected from the same basic group of test cases that are defined for the Functionality Test. However, these test cases are limited to the processes for pre-order and ordering.

The volumes for both the order and pre-order capacity tests will meet the equivalent of 8,000 LSRs per day, which reflects the 1Q2000 forecast volume of expected CLEC LSRs. The volume units in the order portion of the CT is LSRs while the units for pre-orders is (service) queries, which can be estimated from the volume of LSRs.

4.4.3.1 Order Volume

The simulated workload volume for the order Capacity Test will consist of 8,000 LSRs in a day. The busiest hour of the day usually starts at 2 P.M. (note: 3 P.M. is the cutoff time from the due date). Although SWB will also be processing normal-business orders, the intent of the order CT is to examine the newer systems (e.g., EDI Gateway, LASR, MOG), which currently receive light if any traffic. The volume arrival rate (and its associated boundaries, such as peak expectations) will be determined using this data along with other data (e.g., historical data, market data as suggested by the Commission). The specific hour by hour volume will be determined by the Third Party Consultant and shared with the CLEC Test Participants responsible for providing the volume.

4.4.3.2 Pre-Order Volume

The simulated workload volume for the pre-order Capacity Test during 1Q2000 can be estimated using the data from the order test (see section 4.4.3.1) in addition to the data describing the distribution of the pre-order queries (see Section 4.4.4, which provides the distribution in aggregate form) for the test case scenarios. For every 5.12 pre-order queries, SWB receives one LSR. Therefore, 40,960 queries (8,000 LSRs times 5.12 queries per LSR) are expected during a day in 1Q2000. The hour by hour volume for pre-order testing will follow the same pattern as the order testing.

4.4.4 Capacity Test Mix

The test cases for the CT directly define the quantities of service types (e.g., loop) and classes (e.g., UNE-P) that comprise the simulated order and pre-order transactions. These test cases are selected from the same basic group of test cases that are defined for the Functionality Test. However, these test cases are limited to the processes for pre-order and ordering.

The mix of LSRs will be nearly identical to the mix chosen for the Functionality Test. The CT input mix will have these additional properties:

1. It must create error conditions caused by purposeful mistakes in selected inputs which fail edit checks in the SWB computer systems. Although a failed transaction requires no manual work in this test, the natural occurrence of error/reject messages will be integrated into the test process.

2. During testing, the workload mix will not touch downstream processing or systems downstream from SORD (i.e., any facilities or provisioning).
3. To attain a satisfactory volume of transactions, the mix may contain replications of transactions. Replications are inputs which are essentially the same but which contain different data so that they are unique for the purposes of the CT.

The distribution of the pre-order queries for the pre-order volume test will be determined by the Third Party Consultant. The queries to be considered consist of: Add, TN, Service, PIC, Due Date, Dispatch, CLLI, Circuit and CSR. It is important to include each of these queries since each type of query produces a different level of processor capacity and yields a different response time (which is evaluated by at least one performance measurement.). For example, the expected response time of the Dispatch query is about three times that of the other queries but may comprise a small percent of the query mix.

The error mix for the Capacity Test has been determined and will be shared with the CLEC Test Participants. The error mix was determined based on the major types of errors and accounting for a margin of error associated with the review. This information is included in the private attachments Appendices.

4.4.5 The Scalability Test

The scalability test will evaluate for each OSS in the pre-order and order process the largest number of pre-order queries and LSRs (or other appropriate order unit) that each OSS can process under normal operating conditions. To estimate these limits, the evaluation will apply standard analytical methods to measurements collected during the CT. The measurements will be collected periodically throughout the CT interval.

These analytical methods require at least two measurements of processor capacity (such as processor utilization) and more measurements for greater accuracy in the determination of OSS limits. For the pre-order and order Capacity Tests, the 1Q2000 workload levels will each provide one of these measurements for their respective evaluations. The workload volumes will be varied during specified hours of the day to provide the additional required measurements in the analyses.

For the pre-order CT, AT&T will simulate varying workloads each hour in addition to the one 1Q2000 workload level. For the order CT, AT&T and MCI will simulate the 1Q2000 workload levels. It is also expected either or both the CLEC Test Participants will also simulate one or more workloads (during specified hours on the test day) that are less than the 1Q2000-workload levels in order to acquire the necessary second data measurement.

4.4.6 Requirements Not Included in Capacity Tests

The following requirements are not included in the Capacity Test:

- Manual intervention activity or fallout activities. The Capacity Test inputs may be designed to generate errors, but manual activities to resolve errors are beyond the scope of the Capacity Test.
- Stand-alone directory service request orders— the directory listings process does not exercise the EDI Gateway and LEX ordering OSS interfaces and therefore, these types of orders will

be excluded. The directory requests will be triggered and validated from the Functionality Test as appropriate.

- Capacity situations relative to major mass moves of customers on a particular day due to limited time offering promotions or the similar situations are beyond the scope of the Capacity Test, as these situations are usually viewed as a stress test. However, implicit in the evaluation of the Capacity Test results will be the ability to demonstrate support for a 10% increase in workload and to demonstrate system scalability (i.e., from a perspective of additional capacity on the existing system and the ability to add capacity).

4.5 Test Evaluation Requirements

The requirements in this section clarify issues having to do with the test itself and how it will be conducted. Effects on the production performance measures are also discussed.

4.5.1 Test Documentation Requirements

There are several different kinds of documentation that will be produced to characterize the overall testing effort. This section provides the name and intent for each of these key documents.

4.5.1.1 Master Test Plan

This document is the Master Test Plan (MTP). It comprehensively describes the necessary test activities for completing the Functionality Test and the Capacity Test. Since this document sets an overall framework for the testing activity, it must be baselined.

The MTP intends to help achieve a high level of joint planning, cooperation and partnering with participants in all phases of the project in order to minimize overall test time and maximize test coverage.

4.5.1.2 Participant Test Plan

Each Test Participant must document their test activities in a test plan. This plan is expected to follow a similar structure as the MTP however, specific details on the respective test approach for various activities will be provided. This document comprehensively describes the work of that Test Participant. The combination of the Participant Test Plans and the Master Test Plan together define the test specifics, therefore, the Participant Test Plans should also be baselined.

Test Plans are usually "living" documents to be updated as new agreements are made. It provides an understanding of responsibilities and expectations of the work efforts required among everyone.

The structure of each Test Participant's Test Plan will generally follow that of the Master Test Plan:

- Introduction is optional based on Test Participant needs
- Environment must specify the physical test environment in complete detail, most importantly the systems interfacing to the SWB OSSs must be detailed

- Administrative Process should not be necessary as this is already part of the Master Test Plan and it is expected Test Participants will support these processes
- Requirements and Assumptions should include complete descriptions of the physical realizations of Section 4.5, especially data collection, test accounts, and Test Centers.
- Test Program should include descriptions of the items listed under Functionality Test Program or Capacity Test Program depending on the type of test in the test plan.

4.5.1.3 Test Specification

Each Test Participant will specify the activities involved and the results expected in each planned test case within their Test Specification documents. The Third Party Consultant will review these documents. These documents form the basis for the Test Scripts. The content of these documents should be agreed upon by the Test Participants; disagreements will be resolved through escalation.

The Test Specification defines the sequence of the scenario testing and determines the contents and objectives of each scenario. It will be organized by scenario types and will be formatted according to the guidelines defined in Attachment 4. Clear and concise step-by-step activities will be contained within the test specifications such that another person can execute and analyze the tests.

4.5.1.4 Test Scripts

Each Test Participant will produce Test Scripts detailing the execution of each test case. The Functionality Test scripts will provide for the LSRs. The "friendlies" will be used to provide for the call activities (e.g., use of the features) associated with particular LSRs (e.g., scenarios) relative to the Functionality Test. The mechanized test inputs are the Test Scripts for the Capacity Test.

4.5.1.5 Test Participants' Results Document

The Participants will analyze the tests and produce a Test Participants' Results Document. The content of this document should be agreed upon by the Test Participants; disagreements will be resolved through escalation.

The Test Participants' Results should be planned so that data and calculations can be ready as soon as possible during and after the testing. The Daily Report should be an aid in early reporting. The intent of early data reporting is that Test Participants as well as the third Party Consultant can make use of it in parallel.

The structure of the Test Participants Results document should be:

- Introduction is up to the Test Participants
- Environment must specify any issues or results associated with the physical test environment.
- Administrative Process Section 3.3 should be used as a guide for reporting metrics calculations and Daily Report information.

- The test analysis should be structured as in Section 4.2 for any issues associated with test requirements. For issues associated with test evaluation, use the structure of Section 4.5 as a guide.
- Summary and Conclusion is up to the Test Participants

The Test Participant may choose to write a single document or any Test Participant may choose to write a separate document. In any case, the Test Participants' Reports will be presented to the Commission as a single report in a collaborative manner.

4.5.1.6 Third Party Consultant's Evaluation Report

The Third Party Consultant will observe/monitor the test, evaluate the test results, and evaluate the Participants' Final Test Report. The findings will be documented in the Third Party Consultant's Evaluation Report. The content of the Third Party Consultant's Evaluation Report will be available to the TAG Members for comment. The Commission will provide for the management and mediation of the comments.

4.5.2 Success Criteria

4.5.2.1 Functionality Test Success Criteria

The Functionality Test success criteria consists of:

- All relevant performance measure (i.e., those adopted by the Commission in Project No. 16251) results show "parity" or "within benchmark" results compared to production SWB data during the test periods. Although all performance measures will be reviewed for statistical validity and a sample of them will also be evaluated for correctness of the calculations some may not be included in the test if the following conditions occur:
 - The measure sample size would be insufficient
 - Another adequate justification exists (e.g., measure not yet fully defined)
- Functionality Test processing is stable (i.e., no major service interrupting or semi-major service impacting and few minor problems). Test results could include a (very small) number of SWB software or methods problems. Based on the analysis of any such problem, the failure may be sufficiently serious to abort the test. The test would be restarted when the problem has been fixed. If the scope of the failure is small, and the problem is not serious, the test may continue with the problem or SWB may elect to provide a fix. SWB must identify any failures it discovers and must provide a complete explanation to the Test Manager for distribution to the contact list. The decision on whether the test can continue will be made by the Third Party Consultant, with approval by the Commission.

4.5.2.2 Capacity Test Success Criteria

The Capacity Test success criteria consists of:

- The (few) relevant performance measures using the test data show "within benchmark"

- All tested SWB OSSs handled (i.e., engineered capacity sufficient to support busy hour) the offered load
- All tested SWB OSSs could handle at least an additional 10% workload to account for bursts of activity. This demonstration should be done using a capacity projection calculation based on the test data. This capacity calculation will also demonstrate SWB can manage future scalability. (The Third Party Consultant will validate the capacity computation method.)
- The Capacity Test execution will not cause application or system failures.

4.5.2.3 Performance Measures Success Criteria

Attachment 3 details the performance measures appropriate for Functionality and Capacity Test. Most performance measures are associated with the Functionality Test. The parity and benchmark expectations for these measures are as defined in the collaborative process.

4.5.2.3.1 Functionality Test Performance Measures

The Functionality Test related Performance Measures related are defined in Attachment 3. A review of the complete set of PMs has resulted in the selection of 30 Tier 1 metrics as applicable for further evaluation. The evaluation will determine whether SWB demonstrates parity performance or compliance with benchmarks for these measures.

Of the 105 PMs at this time, the selected 30 for evaluation in the Functionality Test satisfied these criteria:

- Sufficient test cases will be generated during the testing process to allow evaluation of the PM.
- The PM has an associated benchmark or has a parity designation.
- SWB will have prepared reports for the PM by the test dates and the measurements are collectible.

Several PMs (i.e., 15) are applicable to the Functionality Test but lack a designation of parity or benchmark. For these PMs, data will be collected but will not be evaluated. The following table shows the PMs to be audited or evaluated. PMs not shown in the table are not being evaluated in the functionality test.

Process	Perf. Meas. No.	Performance Measurement	Functionality Test	
			Audit	Eval.
Resale POTS, Resale Specials & UNEs - Pre-ordering and ordering	1	Average Response Time for OSS Pre-Order Interface	Yes	No
	2	Percent Response received within x seconds - OSS interfaces	No	Yes
	3	EASE average response time	Not Reported	
	4	OSS Interface Availability	No	Yes
	5	Firm Order Confirmations received within 5 hours	No	Yes
	6	Average time to return FOC	Yes	No
	7	Percent Mechanized completions returned within 1 hour	No	Yes
	8	Average time to return mechanized completions	Yes	No
	9	Percent rejects	Yes	No
	10	Percent mechanized rejects returned within 1 hour of EDI/LASR	No	Yes
	11	Mean time to return mechanized rejects	Yes	No
	12	Provisioning Accuracy	No	Yes
	13	Order Process Percent flow through	Yes	No
Resale POTS, Resale Specials & UNEs - Billing	14	Billing Accuracy	Yes	No
	15	Percent of accurate and complete formatted mechanized bills	No	Yes
	16	Percent of billing records transmitted correctly	No	Yes
	17	Billing completeness	No	Yes
	18	Billing timeliness	No	Yes
	19	Daily usage feed timeliness		
	20	Unbillable usage	NA	
Resale POTS, Resale Specials & UNEs - Miscellaneous Administration	21	LSC average speed of answer	No	Yes
	22	LSC grade of service	Not Reported	
	23	Percent busy in the LSC	No	Yes
	24	LOC Average speed of answer	No	Yes
	25	LOC grade of service	Not Reported	
	26	Percent busy in the LOC	No	Yes
Resale POTS & UNE Loop & Port - Provisioning	27	Mean installation time	No	Yes
	28	Percent install complete in X days	No	Yes

4.5.6 Test Centers

4.5.6.1 Test Center Physical Description

The Test Centers provide the physical location of the activities especially in the Functionality Test, but also in the Capacity Test. There are more Test Centers expected to support the Functionality Test since it is more complex and broader than the Capacity Test. Both the CLECs (e.g., Test Entry/Input center) and SWB (e.g., LSC, LOC and system support centers) have Test Centers that support various activities required to be monitored.

Generally speaking, the CLEC Test Centers will initiate test activities and be the end user of test outputs. Depending on the CLEC approach, these Test Centers may also be a production operation or they may be mostly simulated (i.e., non-production) with the only production part being the system interfacing to the SWB OSSs (i.e., the systems sending data for processing).

SWB Test Centers consist of the production operational environments, which will also process test data. This includes SWB Test Centers, which are responsible for producing the performance measurements. In addition, SWB will have a Test Center concerned with processing the test data.

Part of each Test Participant's Test Plan is a complete description of each physical location where test activities are taking place and of what test activities are happening within the Test Centers.

4.5.6.2 Test Monitoring and Validation Plan

Besides supporting the tests, these Test Centers must also be observed/monitored by the Third Party Consultant. Part of test planning is to develop a monitoring plan which is both effective (i.e., proper observations are included) and efficient (i.e., something useful is observed most of the time). For a long-duration test with multiple Test Centers (e.g., like the Functionality Test), the plan will depend on effective data gathering for the Daily Report and selective physical visits to the various facilities.

4.5.6.2.1 Test Monitoring and Validation Plan Audience

The Test Monitoring and Validation Plan audience will primarily consist of the Third Party Consultant staff, the Commission and other regulatory or legal entities requiring a need to know. The Commission may also review and provide comments to the Monitoring and Validation plan and may participate in the monitoring and validation activities. The plan will not be shared with the Test Participants to prevent the opportunity for inappropriate preparation activities to take place (e.g., key staff normally not part of the production processing environment available at the Test Center site unknowingly). The following sections provide a high-level view of the monitoring and validation activities so as to set the stage on expectations and focus.

4.5.6.2.2 Test Monitoring Plan Needs

The following steps are necessary for the Third Party Consultant to develop a monitoring plan for the Test Centers:

1. Obtain complete descriptions of each Test Center from the Test Participants
2. The Third Party Consultant will determine the key Test Centers to be monitored
3. The Third Party Consultant will prepare a monitoring plan consisting of data gathering on a daily basis and of physical visits. The physical visits will be scheduled during testing activities. Most visits will be unscheduled (i.e., unannounced) so as to help maintain a level of "blindness."

4.5.6.2.3 Test Monitoring and Validation Plan Structure

The Monitoring and Validation Plan will define expectations, processes, guidelines/approach and techniques of the Third Party Consultant required to meet the Master Test Plan responsibilities (i.e., primarily validate the test activities, most especially the results, and provide a final report). A key sections of the plan consists of:

- Monitoring and Validation Team Structure (e.g., Test Center teams, data analysis team, etc.)
- Monitoring and Validation Team Roles and Responsibilities (e.g., monitoring visit activities, analysis focus, reporting to other team members, etc.)
- Administrative Processes (e.g., reporting processes, documenting activities, etc.)
- Test Center Monitoring and Validation Guidelines/Approach (e.g., generic guidelines, approach taken, specific activities to monitor and validation, etc.). These will be structured based on the type of Test activity being monitored/validated (i.e., Functionality, Capacity or Other)
- Monitoring and Validating Concluding activities (e.g., creation of final report cleanup, closing down)
- Other details associated with Feedback Session, Final Report and Assumptions

4.5.6.2.4 Test Monitoring and Validation Plan Approach

The purpose of monitoring is to assure that testing operations are being properly carried out. For Test Centers which are managing "friendlies" or with manual activities, the monitor should be able to observe actual testing activities. In addition, the monitor should be able to view the test data collection manual processes and to talk with the test personnel to assess understanding of their assignments.

For Test Centers which are manually processing both test data and production data (e.g., the SWB LSC), monitoring should assure that test and production work is handled the same way. For Test Centers which are production OSS sites, there should be no difference between processing test activities and processing production activities. The differentiation between test and production will take place in the Test Center charged with developing the test data. Therefore, this Test Center (i.e., the Test Execution or Entry Center) will be a central focus of test monitoring. The SWB LSC will be visited prior to the execution of the test in order for the Third Party Consultant to gain an understanding of specific monitoring needs based on the structure, activities within, processes and support focus of the LSC.

There is also a Test Center charged with producing production (and test) performance measures. This Test Center will be visited prior to the Functionality Test in order for the Third Party Consultant to follow the generation of performance measures from data gathering through final computation. The Test Center(s) providing test data will be monitored during the test.

The Third Party Consultant expects to assign monitors familiar with the normal operations of a Test Center as a monitor for that center. The exact numbers of monitors will be determined as part of the monitoring and validation test planning.

4.5.6.3 Test Center Responsibilities Toward Monitors

The Test Participants responsible for managing the Test Center must arrange for the Test Center needs of the Test Participant. All Test Centers must be prepared for monitor visits at any given point in time during the test execution and analysis phases. There should be physical facilities for monitors to review data, observe activities and/or talk to staff (note: only the staff associated with test activities will require interaction). There should be a contact for the monitor to work with to expedite data gathering; this contact could either work at the Test Center or be an individual from the Test Participant assigned to travel with the monitor.

The Test Center test data records should be organized and available to the monitor, either for an overall inspection or for following details of a particular activity through the center (e.g., as part of a selective sampling).

4.6 Assumptions

4.6.1 General

The general assumptions that govern the testing consist of:

1. A collaborative approach is employed
2. Wherever possible activities will be streamlined and conducted in parallel
3. The Test Participants will ensure the testing does not disrupt existing customer services (e.g., E911 and other major services)
4. CLECs and SWB do not participate in the monitoring of the tests (this is the Third Party Consultant's responsibility) except as defined and/or requested by the Commission and detailed in the Test Plan
5. The participation of the current CLECs is sufficient to provide for testing proposed (e.g., test conditions and support efforts provide for the scope coverage)
6. Access to all necessary documentation, systems (potentially including logins) and facilities (e.g., LSC, data center where system data is collected, etc.) is provided
7. Capacity and Functionality Tests will be performed independent of each other

8. Most usage data from the "friendlies" will occur out of hours due to the fact that employees are providing for the usage related call script execution
9. Participation of additional CLECs should not impact the existing schedules
10. Access to sites, data and other necessary information (e.g., documentation, systems) is provided to the Third Party Consultant within the timeframe defined
11. Facilities for test Third Party Consultants will be provided as necessary (e.g., desk, phone, system access, printer for reports)
12. All legal and regulatory approvals have been obtained
13. All test data will be collected and retained for a pre-determined amount of time
14. All participants will remove all paper and other data from their areas that pertain to any proprietary data, such as "friendlies" information. The proprietary data will be retained by an agreed upon representative appointed by the Commission
15. Current business initiatives for each of the Test Participants test environment or otherwise will not impact test objectives
16. CLECs will provide test specifications for scenarios within their area of responsibility for the Functionality Test along with their associated test plan. In addition, these CLECs will provide their Test Plan (see CLEC Test Participants Roles and Responsibilities) for their areas of responsibility.
17. Test Participants will provide the Capacity Test plan (including definition of the requirements, approach, execution, dependencies, analysis among other items) and test specifications
18. This Master Test Plan will not include any year 2000 analyses, assessment, remediation, testing or other services or deliverables related to the year 2000 computer problem
19. The geographical distribution of the "friendlies" may be disproportionate among the areas, but it is expected this will match what it would be in the 1Q2000 forecast.
20. The CLEC forecasts, which form the basis for much of the test parameters (i.e., workload, mix, types) are reliable.
21. CLEC test input is easily identifiable in order to support the data extraction and test cleanup needs. The CLEC Test Participant responsible for Resale and UNE-P tests agreed to identify orders by a unique AECN. The CLEC Test Participant responsible for UNE-L will identify orders by the PON, which will have to be manually tracked for each scenario.
22. The test (e.g., false start issues that should have been caught in test script debugging) do not adversely impact performance measures
23. To preserve "blindness" of testing the following will not be shared with SWB:
 - % of mix of errors

- Details associated with the Test Specification (i.e., test scenarios)
- Details associated with test interval specifics
- Details associated with test arrival rate
- Details associated with Capacity Test specifics (e.g., specific dates of the test, arrival rate)

In addition, various monitoring techniques will be employed to validate "blindness" expectations and consistency.

24. A day refers to a business day consisting of a 10 hour workday of 8:00 A.M. to 6:00 P.M.
25. Test data (e.g., Name, TN) will not be associated with "real" customers or existing test customers (i.e., those in the Test Participants environment) so as to prevent clashes of data.
26. Quality of functionality issues (e.g., the number of TNs returned for choosing a TN is the same for SWB as it is for the CLECs) are not addressed since CLEC concerns of this nature were addressed in Project No. 16251.

4.6.2 Environment

The assumptions associated with the environment are:

1. Testing will take place in SWB's production environment with input being driven from the CLECs production EDI Gateway wherever possible so as to get the most realistic results
2. All CLEC systems with a direct interface to the SWB production environment will be production systems (e.g., the EDI Gateway).
3. Each partner will manage and support their own environments and define the environment being used to the Third Party Consultant (e.g., release levels, configurations, etc.)
4. Environment changes will not occur without notification to the TAG and details of impacts are provided to the Third Party Consultant
5. All CLEC test activity within the scope of the test can be easily identifiable and the Third Party Consultant will be notified of the identifiable mechanisms being used (e.g., use a unique PON, Telephone Number and/or Company Code). This pertains to any activity affecting the performance measures and extracting usage data.
6. Preparation of the environment needs for "friendlies" will not require significant infrastructure changes
7. All test facilities for the Functionality Test will be disconnected/removed upon approval of test analysis exit criteria

8. All testing will occur within a defined test environment (e.g., same release, communications, etc.) unless negotiated otherwise. The releases used will be the normal business releases. Release changes will be presented relative to impacts to the CLECs and other processing that may impact the testing (e.g., proposing a new release of LASR that provides for performance enhancements will impact the tests and thus testing needs to be scheduled appropriately)
9. Test execution and "friendly" management center are in the same location.
10. Test activity will not affect the calculation of production performance measures.
11. Capacity Test activity will not affect the calculation of Functionality Test performance measures.

4.6.3 Staffing

The assumptions associated with staffing are:

1. Staff performing the activities have the appropriate skillset and experience to expeditiously perform the activities and analyze the results (i.e., staff is trained and ready). Therefore, test designers and executors (i.e., those creating the LSRs) are experienced in the ordering process.
2. SME personnel (CLEC and SWB) will be available to provide assistance throughout the test design and execution period, including out-of-hours test intervals. SWB needs to provide SMEs relative to the systems information, parity process, and other detailed areas defined.
3. At least 200 LSRs will be processed on a daily basis for the Functionality Test (busy hour processes more than 25 LSRs) of the UNE-P/Resale orders. The expectations relative to the UNE-L orders must be determined.
4. Each Test Participant will have a primary contact on the contact list.

4.6.4 Functionality Testing

4.6.4.1 Functionality Test - General

The assumptions associated with the Functionality Test are:

1. Unique test case scenarios currently consist of about 525 for UNE-P and Resale and about 77 for UNE-L
2. SWB will provide the process for ordering ADSL service
3. Pre-order performance measurements are not established yet, however, the benchmark level is only expected to change (i.e., the measures and business rules remain the same), thus only effecting the analysis calculations
4. "Friendlies" requirements are provided for by whoever is responsible for managing them (e.g., additional lines, calling cards, long distance charges, coordination of activities)

5. The "friendlies" database will be managed by the CLEC Test Participant responsible for the Resale and UNE-P test scenarios
6. Computation of performance measures is not dependent on the length of the Functionality Test but is dependent on obtaining a sufficient sample size
7. The testing process will follow the typical processing order (e.g., pre-order, order, provisioning, and billing). Maintenance and repair can be done anytime after provisioning and posting have occurred. The "friendlies" will provide the usage activities for the test scripts (e.g., Resale, UNE-P and ADSL)
8. The EDI Gateways offered by the Test Participants do not support Resale, therefore, Resale testing will be done by the CLEC Test Participant by using LEX.
9. A separate report will be generated for each performance measurement.
10. Any non-standard (i.e., non-production) processes used to execute the Functionality Tests will be described and approved as part of the test planning phase. Production processes will be used for almost all testing.
11. No manual intervention will occur in the billing process
12. The standard call centers are used for the test
13. Usage will come from the Test Participant responsible for the UNE-P and Resale scenarios.
14. M&R tests require validating the service orders are posted to completion in the CRIS and CABS billing systems prior to execution, since only posted service orders are downloaded to the back office OSSs.
15. Accounts are set up for each of the bill periods (i.e., BAN for CABS and CBA for CRIS)
16. Test cases identified with 0 iterations have been deemed to have their functionality covered in other scenarios.

4.6.4.2 Functionality Test - Execution and Analysis

The assumptions associated with the Functionality Test execution and analysis are:

1. Test analysis will be done in parallel to execution where possible
2. Test data from Test Participants delivered as soon as it is available and within the intervals define
3. A defined bill period contains most test scenario execution (i.e., the scenarios occur within the bounds of the defined bill period)
4. Usage related tests complete within a 1-2 week timeframe and reside within (i.e., span) the specific defined bill period (i.e., usage related activities will not fall over to another bill

period). The timeline depicts this concept. It is expected the usage tests will reside in test Interval 1-1 or Interval 2-1.

5. Worst case scenarios (i.e., those requiring the longest interval relative to provisioning or potential error conditions) are scheduled to be done first and within the first bill period at the start of test.
6. The FT Execution information provided illustrates the approach, intervals and dependencies for tasks (i.e., start dates to be determined for the UNE-P and Resale tests)
7. Accounts are set up for each of the bill periods (i.e., BAN for CABS and CBA for CRIS)
8. Each test Interval is scheduled based on a bill period it will reside within (i.e., Interval 1-1 may target the 4/15 period and Interval 1-2 is the continuation relative to this bill cycle).
9. There are 3 bill periods (relative to the wholesale bill) within a month (i.e., the 5th, 15th and 25th usually), only 2 will be targeted for full completion of test scenarios
10. Two bill cycles are planned a third is available for error situations and additional test needs as negotiated
11. A bill cycle is 30 days.
12. Ordering primarily deals with sending the LSRs, supplementals and changes as a result of scenarios will occur within the defined interval
13. The provisioning interval intends to illustrate worst case scenario of 5 days to provision initial orders
14. For test purposes a Retail to Resale/UNE-P conversion order is expected to be the same day if it is in by 3:00 p.m. and next day if it is in after 3:00 p.m. New connects for Resale and UNE-P orders will follow the same timeframe as the due date board for the respective central office. For test scheduling the Retail to UNE-L orders will follow standard intervals (e.g., can be up to 3-5 days).
15. M&R tests require validating the service orders are posted to completion in the CRIS and CABS billing systems prior to execution, since only posted service orders are downloaded to the back office OSSs.
16. All bill periods follow UNE-P schedule provided by SWB (?? Validate this)
17. The Test Participants can run their functional tests independently
18. There is a reserve of "friendlies" to support potential contingency needs or existing "friendlies" are left in various stages of an orders lifecycle such that additional testing can be done using these

4.6.5 Capacity Testing

4.6.5.1 Capacity Test - General

The assumptions associated with the capacity testing are:

1. Capacity testing will be able to be performed within an environment that will provide the ability to get repeatable results (e.g., known workload to be reviewed)
2. Capacity testing needs to be successful once in an isolated environment. The Capacity Test may also be performed along with production activity.
3. Clean LSRs (i.e., MOG eligible) are used unless deemed otherwise based on test conditions (i.e., LSRs are accurate and the only error conditions incorporated will be those intentionally provided as part of the test)
4. UNE-L with Number Portability will be MOG eligible in the 5/1/99 release
5. An extended "fictitious" due date (i.e., a Sunday and many months away due date (e.g., 10/31/99)) used on the order will prevent going past SORD distribution (i.e., firm order confirmation process occurs, but the provisioning process is prevented). This is a requirement of the capacity testing
6. Relative to the off-hours test it is expected minimal system activity unrelated to testing will be occurring during the testing interval
7. A volume of 8,000 LSRs per day will be presented from the CLEC Test Participants through their EDI Gateways
8. The volume mix and arrival rate will be designed based on forecasted expectations
9. Additional data collection will not be necessary once the testing has completed. Even if business rules change or the definitions of performance measures change, the data collected and archived during the testing can be used to compute the new performance measures.

4.6.5.2 Capacity Test – Execution and Analysis

The assumptions associated with the Capacity Test execution and analysis are:

1. Pre-ordering and ordering Capacity Tests can be executed independent of each other
2. TNs associated with the Functionality Test will not be used for the Capacity Test
3. A subset of the Functionality Test orders will be used for the Capacity test such that these will be cloned to provide the volume and mix required. PON, TN, Due Date, Name and address fields will be "parameterized" (i.e., the value of the parameter will change for an instance of the test) so as to achieve the needs of the test.

4. AT&T will perform all the Pre-Ordering CT using DataGate (per 3/10/99 agreements) such that the volume will support the CLEC 1Q2000 forecast
5. The Pre-Ordering Capacity Test will be done based on the 4/4/99 release since it contains major performance enhancements
6. The Ordering Capacity Test will be done after the LASR release, 5/1/99
7. Analysis requires test execution to be completed

5 Functionality Test (FT) Program

During the Functionality Test, the pre-ordering, ordering, provisioning, maintenance and repair, and billing FTs are executed. The pre-order process includes the following functions that should be tested across the scenarios: address validation, customer service inquiry, service and feature availability, telephone number assignment, due date availability (for Resale and UNE-P), dispatch requirements (for Resale and UNE-P), Primary InterExchange Carrier (PIC) availability, channel facility assignment verification (for UNEs), and network channel/interface verification (for UNEs). The ordering process involves the actual transmittal of the local service request (LSR) from the CLEC to SWB with the necessary information for issuance of a service order. Ordering/provisioning capabilities include order receipt, the return of acknowledgments, editing for valid information, the return of error information, order confirmation and the return of service order completion status. The provisioning process provides for the assignment of facilities and associated activity with providing the service. The billing process includes processing the wholesale/resale bill and providing usage information. The maintenance and repair process provides for the ability to electronically request and receive status information on requests for maintenance and repair. It is not required that the maintenance and repair tests be run concurrently, but this can be done if it is convenient for the FT participants.

For more detail, see Sections 4.2 and 4.6.

5.1 Organization Of Functionality Test Section

The Functionality Test Program (FT) is a guideline to aid in evaluating the flow-through capability of SWB to process CLEC LSRs.

A set of "friendlies" (i.e., volunteer employees of the Test Participants) will be used to participate in the UNE-P, Resale and ADSL tests. In many instances additional telephone line(s) will be installed at the "friendlies" premises. This secondary test line will be used solely to conduct the test. A set of company locations (e.g., 3) will be used to provide for the UNE-L tests.

The organization of Section 5.1 shows how the process will work:

- Section 5.1.1: lists the goals of the Functionality Test
- Section 5.1.2: lists the roles and responsibilities of Participants involved in the FT
- Section 5.1.3: lists the major steps to be accomplished in the overall FT process.

5.1.1 Goals of the Functionality Test

The Functionality Test will validate the capability of SWB's systems from a mechanized and manual operations perspective based upon the 1Q2000 forecast. The goals are detailed below:

1. Demonstrate the ability for the CLECs to obtain pre-ordering information within the performance measures defined
2. Demonstrate the flow through capability for CLEC LSRs (i.e., the ordering and provisioning process)
3. Demonstrate SWB is providing appropriate notifications (i.e., FOCs, SOC, manual jeopardies and error notices)

4. Demonstrate SWB is providing appropriate records and wholesale/resale billing to CLECs to allow for timely and accurate billing and bill payment procedures
5. Demonstrate SWB's OSSs correctly handle maintenance and repair requests initiated by the CLECs
6. Demonstrate the interoperability of the SWB and CLECs OSSs and EDI and EBI Gateways (Note: success indirectly validates that the SWB requirements documentation and technical support can be used by CLECs)
7. Demonstrate "within parity" or "within benchmark" through computation of applicable performance measures using test data.

It is recognized that the statistical soundness of the analysis must be considered in determining the appropriate test conditions.

5.1.2 Roles and Responsibilities

This section defines the responsibilities of participants in the Functionality Test program. There are three major roles:

5.1.2.1 CLEC FT Participants

CLEC FT Participants are those TAG members who have an active role in execution of the FT. Participants will be part of all phases of the FT in order to support this role. A CLEC FT participant has these responsibilities in addition to the roles and responsibilities defined in section 3.2.4:

1. Refine the workload mix and define scheduling of transactions.
2. Provide configurations of all CLEC systems used for test input (such as the logical and physical system data and data flows).
3. Execute the testing in the SWB production and CLEC Test Participant environment (production level interfacing software to be used) according to the Master Test Plan and associated CLEC Test Participants Test Plans.
4. Supply "friendlies" or locations (i.e., test companies for UNE-L) as appropriate
5. Coordinate "friendlies" activity logs and manage "friendlies".
6. Provide the "friendlies" call scripts and results to the Third Party Consultant
7. Provide paper copies of the test CSRs, LSRs and Service Orders to the Third Party Consultant.

5.1.2.2 SWB FT Participant

SWB must be an FT participant as the provider of the OSSs under testing and has the following additional responsibilities in addition to those defined in section 3.2.3:

1. Define the log data to use for tracking usage required performance measures.
2. Define performance measurements process for validation.
3. Provide SME availability throughout the testing process.

5.1.2.3 Third Party Consultant

The **Third Party Consultant** evaluates the details of the FT. The Third Party Consultant's responsibilities in addition to those defined in section 3.2.5 include:

1. Monitor the testing (i.e., provide feedback to the Test Manager) during the Functionality Test based on monitoring the tests and analyzing the daily test progress reports produced by the FT Participants.
2. Validate the workload mix of transactions based on the 1Q2000 forecast and the Test Scenario Coverage in Attachments 1 and 2.
3. Validate the feature matrix and combinations to be used in the tests.
4. Validate the number of scenarios necessary to have a statistically sound test.

5.1.3 Functionality Test Overall Process

There are four phases to the Functionality Test Program: planning, preparation, execution, and analysis. Each phase has three parts. Entrance criteria describe the necessary conditions to start a phase. Activities describe the work to be done during the phase. Exit criteria state the necessary conditions to complete a phase.

The six major steps to be scheduled for the Functionality Test Program are:

1. Entrance Criteria to FT Planning Phase. These criteria are explained in Section 5.2. This section is broken out separately from the rest of the FT Planning Phase since there are more participants involved and since these high-level decisions are especially critical to the overall FT effort. All TAG members have input to this step.
2. FT Planning Phase. Test participants are responsible for this step. See Section 5.3 for more detail.
3. FT Preparation Phase. Test participants are responsible for this step. See Section 5.4 for more detail.
4. FT Execution Phase. Test participants are responsible for this step. See Section 5.5 for more detail.
5. FT Analysis Phase. Test participants are responsible for this step. See Section 5.6 for more detail.
6. Exit Criteria from the FT Analysis Phase. These criteria are explained in Section 5.7. This section is broken out separately from the rest of the FT Analysis Phase since there are more Participants involved. All TAG members have input to this step.

The following diagram describes the Functionality Test program conceptual process flow. Since there will not be a requirement that each phase completes before the next one starts, it is to be understood that activities from a subsequent phase can start once sufficient supporting work has been completed from previous phases. The Test Manager will manage the milestones, their dependencies, and the schedule. Therefore, the Test Manager will be able to identify when activities can start.

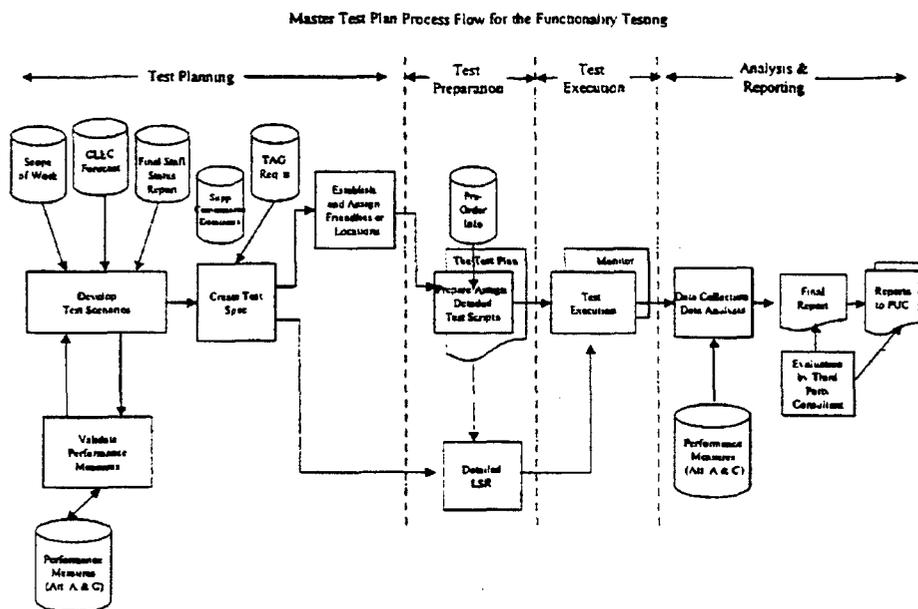


Figure 2: Functionality Test Program Process Flow

5.2 Entrance Criteria to Functionality Test Planning Phase

The following are decisions which need to be made as part of the entrance criteria to the FT Planning Phase, as there must be a firm understanding of the technical basis and objectives of the FT before the rest of the planning can be done. These high-level entrance criteria have been developed by the TAG members using a Collaborative Process, which is headed by the Commission staff.

1. Test Scenario Coverage (Attachment 1) and Feature Matrix and Combination Groups (Attachment 2)
2. FT volumes such as the exact number of "friendlies" and the total number of activities initiated by (or on behalf of) the "friendlies" within the testing timeframe
3. FT test execution interval (total number of days) to take into account multiple billing periods and other constraints such as installation intervals
4. FT participants and the role of each participant.
5. If there is any information which must be kept from some participants (e.g., SWB or CLEC proprietary data or CLEC test scripts), determine how this will be managed.
6. Additional success criteria for the FT test beyond those in Section 4.5.2. The result will be a final set of approved success criteria.
7. Changes to the mapping of performance measures for the FT (See Attachment 3)
8. It is anticipated the FT inputs could occur at any time that SWB is open for business.

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9. Identity of the "friendlies" (e.g., the Commission, SWB, AT&T, MCIW, etc.).
"Friendlies" activities defined.
10. Define the overall test environment.

The TAG may specify additional entrance requirements. The assumptions in Section 4.6 should also be reviewed to understand additional expectations and to assure necessary up-front decisions have been made to support detailed test planning.

5.3 Functionality Test Planning Phase

5.3.1 FT Planning Entrance Criteria

FT entrance criteria are described in Section 5.2.

5.3.2 FT Planning Activities

It is expected that this step will require one or more face to face meetings at which the Third Party Consultant can validate the appropriateness and accuracy of the proposed plan against the testing requirements and assumptions. The Third Party Consultant will provide advice on necessary additions or changes to the test plans. The FT major planning phase activity is a complete test plan by each Test Participant. Other planning outputs include, at a minimum:

1. CLEC test specifications – this is the controlling document for construction of the test scripts. It is driven by each CLEC test plan.
2. Any additional inputs for each FT test phase (i.e., the entrance criteria)
3. Any additional outputs for each FT test phase (i.e., the exit criteria).

5.3.2.1 CLEC FT Test Plans

Each CLEC Test Participant must prepare a CLEC test plan, which defines the testing approach and strategy, timeline, entrance and exit criteria for each phase. The test plan is the major output from the planning phase for each CLEC. Items to be considered in the test plan are:

1. Determine the complete test environment. Each CLEC environment must be specified, with emphasis on any differences from CLEC FMO (Future Method of Operation) such as a future mechanized input process, which is being done manually for the FT or is being simulated for the FT.
2. Determine that the FT fits within the overall schedule and identify detailed timeline.
3. Incorporate the workload volume and mix of transactions. The Third Party Consultant anticipates that FT arrival rates will be designed to reflect the projected typical daytime distribution of inputs.
4. For any information not intended to be shared with all participants, determine specifics of how the data is to be handled.
5. Determine the method for storing and reporting measurements and outcomes. This includes specifying all reports to be used in the FT analysis.
6. FT participants should disclose the intent to gather any data not gathered by SWB. The use for the data and its archiving should be specified. CLEC data which can be used for

validating SWB data and which are accessible to the Third Party Consultant are to be emphasized.

7. Specify the geographical distribution of the "friendlies."
8. Determine the various service centers to participate.
9. Proposal of plan relative to when, where, and how the FT should be monitored at CLEC facilities. This includes the physical locations and facilities for each monitor.
10. Include as an attachment to the Test Plan a list of the type of errors experienced to date (e.g., duplicate usage).

SWB must prepare a FT test plan, which defines the support strategy for the FT. The test plan is the major output from the planning phase for SWB. Items to be considered in the test plan are:

1. Determine test execution details if there is any difference from SWB production PMO.
2. For any information not intended to be shared with all participants, determine specifics of how the data is to be handled.
3. Identify SWB systems that generate data used in any of the performance measures, together with the actual data source and how the data source will be archived.
4. Determine the method for storing and reporting measurements and outcomes. This includes specifying the reports to be used in the FT analysis.
5. Determine the various service centers to participate.
6. Proposal of plan relative to when, where, and how the FT should be monitored. This includes the physical locations and facilities for each monitor
7. Confirm the test data can be isolated from total production data, as explained in Section 4.5.3. Specify how to isolate the test data from the total production data, including any CLEC responsibilities to support data isolation.

5.3.2.2 Complete FT Test Plan Execution Schedule

Since the FT is an activity taking place over many days and since the preparations for test execution may complete for some of the test scenarios before others, a detailed execution schedule can optimize the timeline by allowing some execution to start before some other scenarios are not ready yet. The Test Participants will use this methodology and timeline interval to develop their detailed test execution schedule. The way test cycles are used may vary across Test Participants, however, the start and end of the test execution phase will be maintained. In addition, the execution includes sanity checks to assure readiness of the test platforms, associated tools and test scenarios. The sanity test suite (i.e., set of test scenarios) typically consists of a subset of the full test suite and provides coverage for the major functionality required for the full test suite. The sanity test (typically referred to in the industry as an acceptance test) helps determine whether the test scenarios and environment are at a state to allow for continued testing. This effort help prevent "false starts"(e.g., all tests are executed immediately at the start of testing only to determine that a basic underlying functional need is missing, thus all tests fail, when a smaller subset of tests could have uncovered this situation).

For the ordering and preordering part of the FT, it should be possible to break test execution scheduling up by order type or by geography. The additional tracking and management complications of this approach need to be addressed in the Test Plans.

For each separately-scheduled part of the FT, the planning and preparation phases may overlap. Also, the execution and analysis phases may overlap. However, no separately-scheduled

execution may start until the planning and preparation phase for that separately-scheduled execution are complete and approved.

Two (2) bill cycles will be spanned for the Functionality Test. A billing cycle is 30 days. The first cycle will consist of the activities required for the tests. These activities must be completed by the required completion date for the particular bill period (e.g., 4/12/99 for the 4/15 bill period) so they are posted by the required post date and the billing can be validated within 4 days of the bill period. The second will focus on potential errors and additional tests as deemed necessary. This will also support late usage situations (e.g., late cycle disconnects). Thus, by the next bill period associated with the same bill cycle another bill cycle can be validated. Figure 3 defines the process and activities for the billing tests. A third billing cycle may be required if errors occur on the bill and to support the timeline dependencies proposed by the CLEC Test Participant responsible for the UNE-L tests.

Figure 3 Typical Billing Test Activity

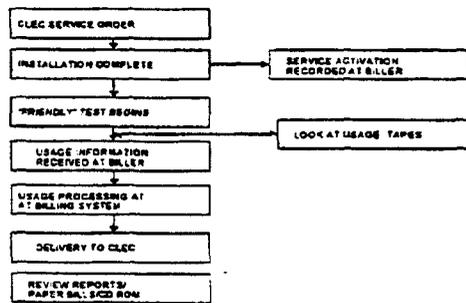


Figure 4 depicts a typical generic scenario associated with provisioning POTS. This figure shows the progression of the test scenarios executed relative to activity initiated in Cycle 1. Similar processing will occur for subsequent cycles where the test scenarios originate as shown in the Cycle 1.2 provisioning interval in the second and third weeks, which may be associated with the change order process validation. This intends to also depict that it is not necessary to complete the entire ordering process (i.e., order, provisioning, disconnect) for all scenarios, this only need be done for those with this requirement. This is done to ensure the maximum amount of value added testing is performed and the ability to have test scenarios in different states in the event that additional testing is required. For example, if the intent (value) of the test were to validate the provisioning capability of a feature compatibility grouping once this processing is validated the test can be considered passed. Each scenario may end at a different point in the process. The test cleanups defined on the timeline will provide for the disconnect of all services and any other associated cleanup relative to the test activity. The test plans of the Test Participants need to provide for an efficient test execution schedule. Testing is expected to proceed in a continuous fashion such that a failure of a test scenario does not stop testing unless a test "blockage" condition occurs. Test "blockage" refers to the situation where a condition causes a number of

tests to be blocked from being executed since if they were executed they would experience the same failure as a result of the condition. Test "blockage" situations will be handled with immediate urgency.

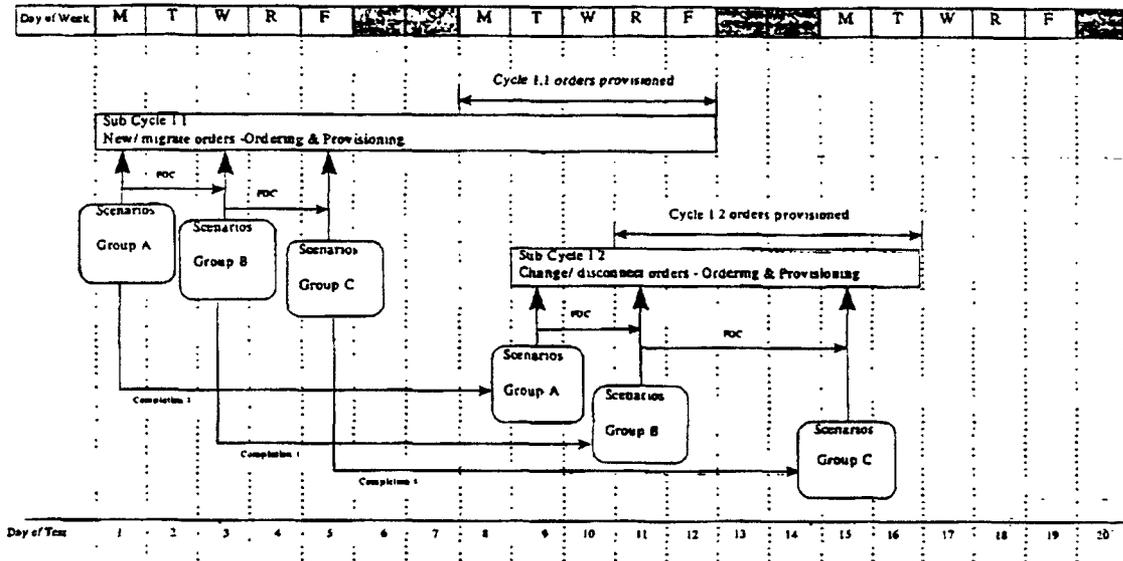


Figure 4: Generic Scenario Execution Schedule

5.3.3 FT Planning Exit Criteria

The exit criteria for the FT Planning phase is that the work in the subsequent phases is understood by the FT participants and the Third Party Consultant. In order to validate that the planning phase is complete, the FT participants will supply the written planning outputs to the Third Party Consultant and will, in addition, describe these outputs to the Third Party Consultant in a scheduled review session. One or more review sessions, to be attended by the FT participants and the Third Party Consultant, must also be scheduled as part of the exit criteria for each phase. To expedite progress, review sessions can be combined.

The exit criteria for the test planning phase consists of:

- Baselined test plan for each FT Test Participant
- Test specifications from each CLEC FT Test Participant
- The complete schedule, including critical path items and dependencies, defined

5.4 Functionality Test (FT) Preparation Phase

The major activities in the preparation phase are preparing the environment (physical assignments and Test Scripts) for the "friendlies" or locations and ensuring the system environments required are available.

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5.4.1 FT Preparation Entrance Criteria

This phase requires:

1. A draft test plan.
2. Draft test specifications (e.g., test cases and expected results developed)
3. Availability of "friendlies"

5.4.2 FT Preparation Activities

The CLEC FT participants must complete these activities:

1. Prepare detailed test scripts for each test scenario outlining the input and the definition of expected observations.
2. Assign test scripts to "friendlies"/locations and capture in documentation.
3. Support and train the "friendlies" for UNE-P, Resale and ADSL.

The SWB FT participant has these responsibilities:

1. Support CLEC participants in data gathering or preparing for generating the test scripts as necessary.
2. Prepare additional SWB M&P needed to completely support the FT activities (e.g., ADSL, including loop qualification for ADSL)
3. Prepare the physical assignments to friendlies (e.g., new lines, etc.) to support test conditions without affecting customer service.

Preparation of the LSRs for the test requires pre-ordering information be obtained in advance. Therefore, use of pre-ordering in the preparation phase is considered to be an aspect of the execution phase. Problems found during this test activity can be included in the Daily Report information provided by the CLEC FT Participant.

The Third Party Consultant will select and review a sample of the completed test scripts. The Third Party Consultant will call a sample of "friendlies" or contacts at locations for UNE-L tests and verify understanding of the role and receipt of the test script.

5.4.3 FT Preparation Exit Criteria

At this time, activities in the Test Plans necessary for start of test execution must be complete. See also Section 5.5.1. This phase requires test script review by the Third Party Consultant. A review session is required to complete this phase.

5.5 Functionality Test Execution Phase

During the execution phase, the pre-ordering, ordering, provisioning, maintenance and repair, and billing FTs are executed.

5.5.1 FT Execution Entrance Criteria

The testing requires:

1. Baselined FT Participant Test Plan for each Participant
2. Test Scripts for the testing
3. "Friendlies" preparation completed
4. Interfaces and systems (both SWB and CLECs) required for the testing are operationally ready and available
5. All system/data access agreements are executed. This should include assignment of required sign-on and passwords to the operating systems in addition to any other requirements as detailed in the Access Agreements
6. Appropriate SME and test execution staff ready and available

5.5.2 FT Execution Activities

The FT execution activities will consist of executing the test scenarios as defined in the test specifications. Execution includes sanity checks to assure readiness of the test platforms, associated tools and test scenarios (see Section 5.3.2.2).

The CLEC FT participant will:

1. Record all relevant data as defined in the Test Plan, including all data to be used in the Test Participants' Results. This includes "friendlies" reports as well as CLEC systems and M&P reports.
2. Prepare daily report (see section 3.3.2).

SWB FT participant will:

1. Induce maintenance troubles to initiate repair scenarios as agreed to during test planning.
2. Capture relevant data as defined in the Test Plan. This includes SWB systems and M&P reports.
3. Prepare daily test activity report (e.g., including system resource usage data).

The Third Party Consultant will:

1. Monitor the testing.
2. Provide feedback from monitoring and daily test activity report.

5.5.3 FT Execution Exit Criteria

A review session is required to complete this phase. The Execution Phase is complete when the Third Party Consultant concurs that the following conditions are met:

1. All test specifications are executed 100% and classified as completed according to their plan
2. No outstanding major problems. (A major problem is one with substantial impact on the FT. The Third Party Consultant will determine if a problem is major, with any disagreement to be mediated by the Commission.)
3. 1 or 2 Billing Cycles verified such that various processing will be supported and a sufficient number of disconnects are verified. A third billing cycle may become necessary.

5.6 Functionality Test Analysis Phase

In this phase, the data from the tests are analyzed. Since the FT test period is long, it is important to design analysis which can start immediately after execution completes and the data is gathered rather than waiting for the end of the period. See also Section 5.3.2.2.

5.6.1 FT Analysis Entrance Criteria

This phase requires the outcomes recorded in the test scripts (i.e., a successful test execution).

5.6.2 FT Analysis Activities

The CLEC FT participant will produce FT Test Participant's Results including at least:

1. Test results, using criteria for success as described in the Test Plan.
2. Documentation of test inputs and outputs.
3. Documentation of the test environment

SWB will produce Test Participant's Results documenting at least the test environment, the performance measures, environmental issues, outstanding issues, and problem resolutions.

The FT CLEC Test Participants are expected to read and comment on each others reports in order to learn from experiences and share results. If there are discrepancies between reports for like items they are to be brought to the attention of the Test Manager and the Third Party Consultant.

The Third Party Consultant's Evaluation Report will convey findings based on:

1. Monitoring all phases of the Functionality Test
2. Validating the Functionality Test data and results
3. Evaluating the FT Test Participants' Results.

In addition, the Third Party Consultant will:

1. Through sampling, verify the accuracy of each FT participant activity. This includes validating that the test scripts are completed in the prescribed manner and that the performance measures are computed accurately.
2. Verify the pricing in the wholesale/resale bill is accurate
3. Verify the usage extract information is accurate
4. Verify the maintenance activities and measures.

5.6.3 FT Analysis Exit Criteria

A review session is required to complete this phase. Required documents at this review session are the FT Participants' Results. These Results will be combined into a single report document and presented to the Commission as described in Section 5.7.

The FT Test Participants may elect to update their Results documents based on comments at the review session.

5.7 Exit Criteria from Functionality Test Analysis Phase

The completion of the FT is documented in two reports to the Commission, one from the FT participants and a second by the Third Party Consultant.

It is anticipated that the Commission will make both reports available to TAG members for review and comment.

6 Capacity Testing (CT) Program

6.1 Organization Of Capacity Test Section

The Capacity Test (CT) is the realization of an agreed-upon process for demonstrating that the relevant SWB systems have sufficient capacity to handle the additional workload introduced by the CLECs according to the 1Q2000 forecast. In addition, the CT will demonstrate that SWB has a process providing scalability of their systems so that increased future volumes will not affect system service levels. These increased system volumes will be based on the CLEC forecasts and thus, it is assumed that for the test and future efforts these forecasts contain reliable data.

A Capacity Test is very different from a Functionality Test, since it is constructed of a repeatable, controlled, simulated test workload. In this case, the Capacity Test is also different from the Functionality Test in that it is composed of only a very restricted subset of overall end-to-end functionality (i.e., provisioning and beyond is not included in the capacity tests). It is recognized that simplicity of testing and statistical soundness of the analysis must be considered in determining the appropriate test conditions. See Section 4.5.3 for more information.

The organization of Section 6.1 shows how the process will work:

- Section 6.1.1: lists the goals to be determined.
- Section 6.1.2: lists the roles and responsibilities of Participants involved in the CT.
- Section 6.1.3: lists the major steps to be accomplished in the overall CT process.

6.1.1 Goals of the Capacity Test

The Capacity Test will validate the capability of the SWB computer systems to handle large volumes of pre-orders and orders, based on the 1Q2000 forecast. These forecasts will also be used to design the volume mix and arrival rate expectations for the CT Test. The target of the CT is a selected set of SWB's OSSs that are new and do not have the production activity history to provide for an assessment of scalability or stability. The validation process will consider two objectives:

1. Establishing the stability of these systems under the forecast workload.
2. Determining the ability to scale the existing platform for larger workloads.

6.1.2 Roles and Responsibilities

This section defines the responsibilities of participants in the Capacity Test program. There are three major roles.

6.1.2.1 CLEC CT Participants

CLEC CT Participants are those TAG members who have an active role in execution of the CT. CLEC CT Participants will be part of all phases of the CT in order to support this role. A CT participant has these responsibilities in addition to those of Section 3.2.4:

1. Refine the workload mix and scheduling of transactions. An initial specification for transaction mix and volume is given in Section 4.4.4.

2. Provide configurations of all CLEC systems used for test input and/or test output (such as the logical and physical system data and data flows).
3. Execute the testing using at least the CLEC EDI Gateway for ordering and a simulator for pre-ordering according to the workload staging during the test window.

6.1.2.2 SWB CT Participant

SWB must be a CT participant as the provider of the OSSs under testing and has the following additional responsibilities as well as those in Section 3.2.3:

1. Specify how SWB OSS will work with the test drivers (i.e., the CLEC test drivers)
2. Provide reports on current system use (e.g., transaction volume and CPU usage) and overall report of results
3. Define the log data to use for tracking required system performance analysis measurements.

6.1.2.3 Third Party Consultant

The **Third Party Consultant** is the company validating the CT; Third Party Consultant responsibilities beyond those in Section 3.2.5 include:

1. Monitor and validate the pre-order and order Capacity Test activities.
2. Provide timely feedback throughout the process.
3. Validate the workload (i.e., transactions) mix of transactions based on the CLEC forecast workload.

6.1.3 Capacity Test Overall Process

There are four phases to the Capacity Test Program: planning, preparation, execution, and analysis. Each phase has three parts. Entrance criteria describe the necessary conditions to start a phase. Activities describe the work to be done during the phase. Exit criteria state the necessary products to complete a phase.

The six major steps to be scheduled for the Capacity Test Program are:

1. Entrance Criteria to CT Planning Phase. These criteria are explained in Section 6.2. This section is broken out separately from the rest of the CT Planning Phase since there are more Participants involved and since these high-level decisions are especially critical to the overall CT effort. All TAG members have input to this step.
2. CT Planning Phase. Test Participants are responsible for this step. See Section 6.3 for more detail.
3. CT Preparation Phase. Test Participants are responsible for this step. See Section 6.4 for more detail.

4. CT Execution Phase. Test Participants are responsible for this step. See Section 6.5 for more detail.
5. CT Analysis Phase. Test Participants are responsible for this step. See Section 6.6 for more detail.
6. Exit Criteria from the CT Analysis Phase. These criteria are explained in Section 6.7. This section is broken out separately from the rest of the CT Analysis Phase since there are more Participants involved. All TAG members have input to this step.

The following figure describes the major phases of the Capacity Testing Program:

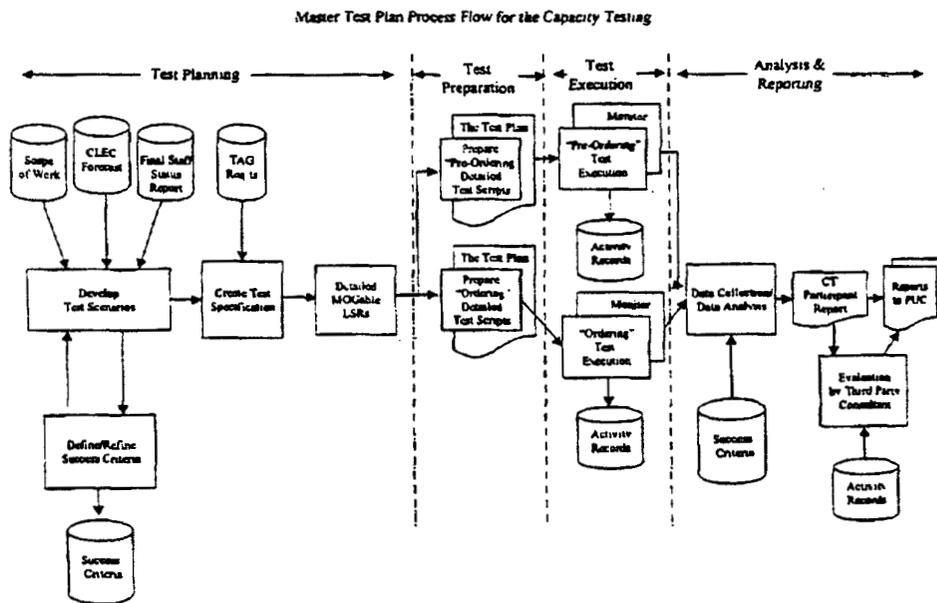


Figure 1: Capacity Test Program Process Flow

6.2 Entrance Criteria to Capacity Test Planning Phase

The following are some of the decisions which need to be made as part of the entrance criteria to the CT Planning Phase, as there must be a firm understanding of the technical basis and objectives of the CT before the rest of the planning can be done. These entrance criteria require participation of the Participants in the Collaborative Process, headed by the Commission staff.

1. Make any final adjustments to the workload mix.
2. Make any final adjustments to the test volumes.
3. Determine computer systems involved in pre-order CT. It is anticipated that *DataGate* will be the primary pre-order system that will be driven by a workload representative of

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the IQ2000 workload to be presented to *DataGate* (i.e., from the app-to-app interface and the *Verigate* Server). The *Verigate* CT will consist of a review of the number of simultaneous users the server is capable of supporting.

4. Determine computer systems involved in ordering CT. It is anticipated that these systems are *LEX*, the *SWB EDI Gateway*, *LASR*, *MOG* and *SORD*. The SWB entry point in the order test is the SWB EDI Gateway. The CLEC order test inputs come through the CLEC EDI Gateway.
5. Determine list of CT participants.
6. Refine success criteria for the pre-order test beyond those in Section 4.5.2
7. Refine success criteria for the order test beyond those in Section 4.5.2.
8. Determine time of day for the testing. It is anticipated that a test will be run during nights or weekend (e.g., Sunday when the least amount of system activity occurs) in order to provide a baseline test that was run with the environment attribute of controllability (i.e., known input level, known level of system activity). The test will also be run during normal business hours.

The TAG may specify additional entrance requirements. The assumptions in Section 4.6 should also be reviewed to assure that the necessary up-front decisions have been made to support detailed test planning.

6.3 Capacity Test Planning Phase

6.3.1 CT Planning Entrance Criteria

CT entrance criteria are described in Section 6.2.

6.3.2 CT Planning Activities

6.3.2.1 CT Test Planning

The CT participants will provide to the Third Party Consultant the separate test plans for the pre-order and order testing. It is expected that this step will require one or more meetings at which the Third Party Consultant can validate the appropriateness and accuracy of the proposed plan against the requirements and assumptions in Sections 4.4 and 4.6. The Third Party Consultant will provide advice for necessary additions or changes to the test plans. At a minimum, the test plans and test specifications will address:

1. The complete test environment.
2. Entrance criteria for each phase.
3. Exit criteria for each phase.
4. The CT fits within the overall schedule.
5. The test execution schedule and how it integrates into the overall timeline.
6. The performance measures that are applicable to the CT.

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7. The mechanism for generating the LSRs, which will simulate the arrival of live transactions.
8. The method for storing and displaying measurements and outcomes.
9. The methods and criteria for evaluating both the stability of the individual computer systems and estimating their throughput limits.

The pre-ordering and ordering Capacity Tests can be run independent of each other. They involve separate processing (i.e., the systems used for each are distinct). The additional tracking and management complications of this approach need to be addressed in the Test Plans.

For each separately-scheduled part of the CT, the planning and preparation phases may overlap. However, no separately-scheduled execution may start until the planning and preparation phase for that separately-scheduled execution are complete and approved.

6.3.3 CT Planning Exit Criteria

The exit criteria for the CT Planning phase are that the work in the subsequent phases is understood by CT participants and the Third Party Consultant. In order to validate that the planning phase is complete, the CT participants will supply the written planning outputs to the Third Party Consultant and will, in addition, describe these outputs to the Third Party Consultant in a scheduled review session. Review sessions, to be attended by CT participants and the Third Party Consultant, must also be scheduled as part of the exit criteria for each phase.

The exit criteria for the test planning phase consists of:

- Baseline test plan for each CT Test Participant
- Test specifications from each CT Test Participant
- The complete schedule, including critical path items, defined

6.4 Capacity Test Preparation Phase

This phase turns the test plan into an executable test script.

6.4.1 CT Preparation Entrance Criteria

This phase requires:

1. A valid test plan.
2. A "live" (i.e., production) test environment.
3. A scheduled date for the tests.

6.4.2 CT Preparation Activities

CT participants have these responsibilities:

1. Prepare a test script outlining the input and the definition of expected observations for the pre-ordering CT

2. Prepare a test script outlining the input and the definition of expected observations for the ordering CT
3. Debug the test scripts until they run as designed (including mechanized errors rejects).

The Third Party Consultant will have the option to complete and verify a hands-on trial of selected tests in the test script. That is, the Third Party Consultant can participate in a practice trial with the cooperation of CT participant.

6.4.3 CT Preparation Exit Criteria

This phase requires a test script validated by the Third Party Consultant. A review session is required to complete this phase. This phase requires a complete set of verified Test Scripts for the pre-order and order tests.

6.5 Capacity Test Execution Phase

During the execution phase, the preordering and the ordering CTs are executed. It is not required that these tests be run at the same time, but this can be done if it is convenient for the CT participants.

6.5.1 CT Execution Entrance Criteria

The testing requires:

1. Test Scripts for the pre-order tests
2. Test Scripts for the order tests
3. Mechanisms to verify test results and to maintain a permanent record

6.5.2 CT Execution Activities

The CT participants will

1. Conduct the pre-order CT.
2. Conduct the ordering CT.
3. Record all relevant data.

The Third Party Consultant will:

1. Observe /monitor the testing. If the Third Party Consultant believes any test is flawed, it will be repeated. The reasons for any flawed test will be noted.
2. Validate that the test scripts are completed in the prescribed manner.
3. Validate scalability and performance measurement calculations.

6.5.3 CT Execution Exit Criteria

A review session is required to complete this phase. The Execution Phase is complete when the Third Party Consultant concurs that the following conditions are met:

1. All test specifications are executed 100% and classified as completed according to their plan
2. No outstanding major problems. (A major problem is one with substantial impact on the FT. The Third Party Consultant will determine if a problem is major, with any disagreement to be mediated by the Commission.)
3. No unresolved escalated issues.

6.6 Capacity Test Analysis Phase

In this phase, the data from the tests are analyzed.

6.6.1 CT Analysis Entrance Criteria

This phase requires the outcomes recorded in the test scripts (i.e., a successful test execution).

6.6.2 CT Analysis Activities

Each CT participant will produce CT Participant's Results including at least:

1. Test results, using criteria for success as described in the Test Plan.
2. Documentation of test inputs and outputs.
3. Documentation of the test environment

SWB will produce CT Participant's Results documenting in addition the test environment, the performance measures, environmental issues, outstanding issues, and problem resolutions.

All CT Test Participants are expected to read and comment on all CT Participants' Results. Any discrepancies between the reports are to be brought to the attention of the Test Manager and the Third Party Consultant.

The Third Party Consultant's Evaluation Report will convey findings based on:

1. Monitoring the phases of the Capacity Test
2. Validating the Capacity Test data and results
3. Evaluating the CT Test Participants' Results.

6.6.3 CT Analysis Exit Criteria

A review session is required to complete this phase. Required documents at this review session are the CT Participants' Results. These Results will be combined into a single report document and presented to the Commission as described in Section 6.7.

The CT Test Participants may elect to update their CT Participants' Results based on comments at the review session.

6.7 Exit Criteria from Capacity Test Analysis Phase

Completion of the CT is documented in two reports to the Commission, one from the CT participants and a second, called the Third Party Consultant's Evaluation Report. The Third Party Consultant's Evaluation Report will include the validation analysis of the CT Participants reports.

It is anticipated that the Commission will make both reports available to TAG members for review and comment.

7 Conclusion and Summary

This Master Test Plan defines the testing approach and strategy and the entrance and exit criteria for each testing phase to support the Readiness testing of SWB's OSS that enable CLEC to provide for local services. This document defines the expectations of the Test Participants and fosters a collaborative approach to the OSS Readiness testing.

As a result of the execution of this Master Test Plan, within the collaborative approach established by the Commission, the operational readiness, performance and capacity of SWB to provide pre-ordering, ordering, provisioning, repair & maintenance and billing OSS functionality to the CLECs will be demonstrated. This demonstration will provide the appropriate data for the Commission, FCC and DOJ to determine SWB's OSS readiness.

References

The Project No. 16251 Final Staff Status Report on Collaborative Process, November 18, 1998

Accessible Letters

Business Rules (for performance measures process definition)

The Commission scope of work

Liz Ham's testimony for system functionality

Dysart testimony for performance measure definition

LSOR – Local Service Ordering Requirements

Carl Thorsen's Testimony for Volume and Capacity

LEX User Guide

CLEC Handbook (3/20/99)

USOC – Universal Service Order Manual

USOP – Universal Service Order Practice

LERG – Local Exchange Routing Guide

Folders Methods (12/23/98)

ECCKT Job Aid

General Exchange Tariffs

CLEC forecasts (Private Appendix)

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Terminology and Glossary

This attachment lists the terminology and acronyms used in this document. Also, it is advised that when referring to various activities use adjectives in describing common terms across SWB, CLECs and the Commission. Ask for clarification (i.e., "peel the onion") of terminology or focus of discussions as it has been seen the types of testing are framed differently and confusion is caused when one type (e.g., capacity) is discussed and another is actually being reviewed (e.g., functionality). This will help alleviate misunderstandings, limit assumptions, false starts and rework and streamline activities/discussions.

Acronym	Term	Definition
ADSL	Asymmetric Digital Subscriber Line	A general name for an evolving high speed transmission technology which uses existing copper wire from the telephone company central office to the subscriber's premise and has electronic equipment at the central office and at the subscriber's premises, and transmits and receives high speed digital signals
AECN	Alternate Exchange Carrier Number	SWB term synonymous with OCN (Originating Company Number), which provides a mechanism to identify individual companies.
ANSI	American National Standards Institute	A standards setting non-government organization which develops and publishes standards for "voluntary" use in the United States.
	Arrival Rate	incoming number of transactions over a defined time period (typically an hour)
	Baseline	To identify a "base" from which subsequent work can proceed. Approved by the Commission
CT	Capacity Test	Test ability of new mechanized systems to support 1Q2000 workload. A pre-ordering and ordering test will be performed for purposes of this test.
	Change Control	Process that provides an organized and formal method for managing change requests to baselined items.
CFA	Connecting Facility Assignment	The connection of two points within a central office to an assigned wiring specification for the purpose of establishing a complete circuit.
CLEC	Competitive Local Exchange Carrier	A communications company which sells/re-sells communications services in direct competition with the incumbent Local Exchange Carrier (ILEC)
CLLI	Common Language Location Identifier	An 11 digit alpha-numeric code used as a method of identifying physical locations and equipment i.e., central offices relay racks etc.
CPU	Central Processor Unit	The computing part of a computer that manipulates data and processes instructions coming from software or a human operator.

Acronym	Term	Definition
CSR	Customer Service Record	A record of customer specific information such as name, address, telephone number, telecommunication services subscribed to and certain other data relating to the services provided.
DOJ	Department of Justice	The governance body for approval recommendations to the FCC
EASE	Easy Access Sales Environment	EASE is an on-line SWB system that was developed as a service order negotiation tool that has been made available to CLECs pre-ordering and ordering functions.
EDI	Electronic Document Interchange	Interface protocol that provides for mechanized order processing. Both the CLECs and SWB will have systems (EDI Gateway) to support the EDI functionality
	End-to-End Testing	For the purposes of this testing, end-to-end is defined as testing to demonstrate the flow-through capability of providing local service requests to the CLECs in parity to existing retail.
FACS	Facilities Assignment Control System	SWB data system used to assign and maintain facilities records, i.e., cables and cable pair assignments.
	Fatal Errors	Errors that have been returned to LEX or EDI from SWB's OSSs. They can either be corrected (fatal) with a supplemental request or with a new request (super fatal).
	Non Fatal Errors	Errors that LASR sends to MOG/AOG error report in Folders for LSC review and processing.
FCC	Federal Communications Commission	The governance body for approval of readiness. United States (U.S.) government board of 5 Presidential appointees with authority to regulate non-federal government interstate Telecommunication including radio, and television broadcasting as well as international communications that originate or terminate in the U.S.
FOC	Firm Order Confirmation	Response from the service order processor that acknowledges successful receipt of a CLEC order (i.e., provides notification SORD edits have passed).
	Flow-through	L.S.R and service orders get processed through the OSSs without manual intervention. Flow-through consists of the capabilities of the processes of pre-ordering, ordering, provisioning, maintenance and repair and billing. These processes along with features provide for the various services.
PMO	Future Method of Operation	Method of Operations that are proposed to be future, as PMO describes present method of operation
	Friendlies	Volunteers required as test participants to complete functional testing of feature requirements (primarily from the usage perspective)
FT	Functionality Test	A documented set of instructions designed to test and/or validate specific functions of a process or system.
FTA	Federal Telecommunications Act	Referring to the Telecommunications Act of 1996
GUI	Graphical User Interface	A simplified method of accessing programs within a computer by using a mouse to point to icons, which in turn cause the programs to perform a specific function.

Acronym	Term	Definition
ISDN	Integrated Services Digital Network	Digital services designed for use with desktop applications, telephone switches, computer telephony and voice processing systems
IXC	Intr-exchange Carrier	Long-haul, long distance inter-LATA carriers for voice, video and data traffic.
	Jeopardy (relative to Master Test Plan process)	A notice that is issued whenever a key project milestone and/or commitment is at risk according to the Master Test Plan.
LASR	Local Access Service Request	SWB data system which receives Local Service Requests
LD	Long Distance	Long distance call services, currently provided by non-SWB company
LEX	Local Service Request Exchange	Provides for manual processing of LSR
LIDB	Line Information Data Base	Database used primarily for residential customers.
LSC	Local Service Center	Local service center that provides for the service order operational needs.
LSOR	Local Service Ordering Requirements	Document that defines the service order detailed requirements that aid the CLEC in requesting Resale and UNE services from SWB. This document is based on the OBF Local Service Ordering Guidelines and SWB usage definitions and rules of application.
LSP	Local Service Provider	Term used synonymously with other common carriers, service providers, operators, etc. It can also be used to refer to an Incumbent Local Exchange Carrier (ILEC). It is proposed that this term be used in place of the others.
LSR	Local Service Request	A form prepared by the CLEC to request SWB to provide the services as specified in the specific tariffs/contracts agreements. All the information required for administration, billing and contact details is provided for in the various fields within the LSR.
LVAS	Line Validation Administration System	System that provide for line validation administration.

Acronym	Term	Definition
	Loop	The physical path between the network interface on an end-user's premise and a point of termination in the SWB end office.
M&P	Methods and Procedures	Current methods and procedures (e.g., tasks) defined to support operations required. These tasks are thoroughly planned out, explained and typically are outlined in detailed steps.
M&R	Maintenance and Repair	Ability to provide for requests, status and resolution of potential troubles
MLT	Mechanized Loop Test	A mechanized test used to determine loop situations
MOU	Minutes of Use	Measure used for usage data tracking
MTP	Master Test Plan	Document that defines the testing approach and strategy and the entrance and exit criteria for each testing phase. A "living" document. Helps achieve a high level of joint planning, cooperation and partnering with participants in all phases of testing in order to minimize overall testing time and maximize testing coverage.
	Migration	Refers to "conversion as is" or "conversion as specified."
MOG eligible	Mechanized Order Generator eligible	LSRs that are identified by LASR as having the potential for mechanized service order generation
	Mechanized orders	LSRs that can flow-through SWB's electronic ordering system without manual intervention
OBF/TCIF	Ordering and Billing Forum/Telecommunications Interface Forum	Industry Standards Organizations dedicated to resolving critical issues such as billing format issues between competing local exchange carriers, etc.
OSS	Operations Support Systems	For purposes of this test OSS refers to systems that provide for the mechanized flow-through processing

Acronym	Term	Definition
	Parity	Functional equivalence (to SWB for the purposes of this test)
PBX	Private Branch Exchange	Service to handle telecommunications needs, which is typically deployed by a large business
PC	Personal Computer	Computer system usually currently in the less than 400Mhz processing range
	Phase	A period within the life cycle of the project where all activities have a common goal and includes many related activities. Occurs over a specified time frame (start and end date). Examples: Planning, Preparation and Execution. The phases may overlap each other in order to streamline the process as much as possible.
PIC	Primary Inter-exchange Carrier	A field designated on an LSR for, which allows the end-user to select their primary InterExchange carrier.
PMO	Present Method of Operation	Current methods and procedures used, which are typically manual and mechanized operations currently deployed and implemented that take into account present processes and functions.
POTS	Plain Old Telephone Service	A 4 wire (T, R, T1, R1) basic telephone analog service with a frequency spectrum of 19.2 KBPS.
PUC	Public Utilities Commission	The governance body that provides recommendations to the DOJ and FCC.
	Resale	Service that allows a CLEC to purchase SWB retail services in order to resell these services to their own end-user. The CLEC may or may not be billed a discounted rate.
	Risk	To expose project to
	Risk Management	Balancing costs of risk avoidance and the consequences of the risk
SME	Subject Matter Expert	Expert in defined area

Acronym	Term	Definition
SOC	Service Order Completion	Response from the service order processor that acknowledges the provisioning systems provided a successful completion of the request (LSR) (i.e., provides notification the service has been provisioned).
SORD	Service Order Retrieval and Distribution	SWB system used to create, store and distribute service orders to various work groups to establish service.
SWB	Southwestern Bell Telephone	The incumbent local exchange carrier
	Test	A set of one or more test cases to demonstrate functions across products and identify results, including successes and failures. Concentrates on flow through verification within the production environment.
TAG	Technical Advisory Group	Created to provide for the collaborative process for OSS readiness testing
TN	Telephone Number	A number associated with a telephone service, typically 7 digits in length; the first 3 digits are associated with the prefix and the last 4 with a specific range
TIRKS	Trunk Integrated Record Keeping System	A system that provides for trunk record keeping.
	Port	The connections to or the entry points into SWB end office switches.
	Resale	Resale allows a CLEC to purchase SWB retail services in order to resell these services to their own end user.
	Test Case Scenario	An event when software is exercised with a defined set of inputs to produce a set of monitored outputs. Consists of a unique identifier, description, actions (steps), data, expected output(s), evaluation (pass/fail) criteria, and exercised requirement(s).

Acronym	Term	Definition
	Testing	Process of exercising or evaluating a system or system component by manual or mechanized means to verify it satisfies specified requirements or to identify differences between expected and actual results.
	Test Specification	Document defining test case scenarios, purpose, method, expected results required for various test phases
UNE	Unbundled Network Elements	Services or components marketed separately between SBC and a CLEC. These include but are not limited to Port Service, Loop Service or Loop with Number Portability
	Validation	Process of evaluating software at the end of the software development process to ensure compliance with the requirements.
	Verification	Process of determining whether or not the products of a given phase fulfill the requirements established during the previous phase.
	Vertical Service Features	Port features that enable the CLEC to enhance the Basic Port Service with additional capabilities such as call waiting, three way, caller ID, etc
WFA	Work Force Administration	An operations system designed to manage the work force deployment associated with the work order flow
	X-Connect	The physical conductors and hardware required to connect compatible unbundled elements in the SWB end office

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Notice of Disclaimer

Telcordia™ Technologies (Telcordia) has prepared this draft Master Test Plan for consideration and use by the Texas Public Utility Commission (Commission). The draft Master Test Plan describes tests of interconnection, interworking and order processing by the operation support systems (OSSs) and order processing systems of Competitive Local Exchange Carriers (CLECs) and Incumbent Local Exchange Carriers (ILECs), and it reflects the results of discussions in a collaborative process conducted under the auspices of the Commission, with participation by Commission staff, Telcordia, CLECs, and ILECs. It is expected that the Commission will review this draft, make any modifications it deems appropriate, and release a final Master Test Plan document to Telcordia, and to the CLECs and ILECs participating in Commission proceedings that are assessing interconnection of CLEC and ILEC OSSs and order processing, to specify the tests of such interconnection that will be conducted.

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and with the same functionality, that it records, stores, processes, recognizes, calculates, and displays calendar dates falling on or before December 31, 1999.

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Attachment 1 – Test Scenario Coverage Matrix

As Attached

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Attachment 2 – Feature Matrix and Combination Groups

Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16
RESALE RES/UNE	RESALE RES/UNE	RESALE BUS/UNE	RESALE RES/UNE	RESALE RES/UNE	RESALE RES/UNE	RESALE RES/UNE	RESALE RES/UNE	RESALE BUS/UNE	RESALE BUS/UNE	RESALE BUS/UNE	RESALE BUS/UNE				
3-Way Calling	3-Way Calling	Anonymous Call Rejection	Anonymous Call Rejection	3-Way Calling											
Call Return	Call Return	Call Blocker	Call Blocker	Call Return											
Auto Redial	Auto Redial	Call Forwarding	Call Forwarding	Auto Redial											
Call Blocker	Call Blocker	Call Forwarding- BU/DA	Call Forwarding- BU/DA	Call Blocker											
Call Forwarding	Call Forwarding	Call Return	Call Return	Call Forwarding											
Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting	Call Waiting				
Caller ID	Caller ID	Caller ID	Caller ID	Remote Access to Call Forwarding	Remote Access to Call Forwarding	Call Waiting ID	Call Waiting ID	Caller ID	Caller ID	Caller ID	Caller ID	Caller ID	Caller ID	Caller ID	Caller ID

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Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9	Group 10	Group 11	Group 12	Group 13	Group 14	Group 15	Group 16
Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Selective Call Forward	Selective Call Forward	Call Waiting ID Options	Call Waiting ID Options	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Remote Access to Call Forwarding			
Selective Call Forward	Selective Call Forward	Selective Call Forward	Selective Call Forward	Speed Calling - 8	Speed Calling - 8	Caller ID	Caller ID	Selective Call Forward	Selective Call Forward	Selective Call Forward	Speed Calling - 8				
Speed Calling - 8	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Caller ID per line Blocking	Caller ID per line Blocking	Speed Calling - 8	Speed Calling - 8	Speed Calling - 8	Speed Calling - 8							
Call Trace	Anonymous Call Rejection	Personalized Ring	Anonymous Call Rejection	Call Trace	Speed Calling - 30	Customer Alert Enablement	Customer Alert Enablement	Toll Restrict	Toll Restrict	900/976 Block	900/976 Block	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	900/976 Block
	Call Forwarding - Busy					1010XXXX Blocking	900/978 Blocking	Call Forwarding - Don't Answer	1010XXXX Block	Call Forwarding - BL/DA	1010XXXX Block	Toll Restrict	Toll Restrict	900/976 Block	1010XXXX Block

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Texas PUC SWB OSS Evaluation Master Test Plan
References

Group 17	Group 18	Group 19	Group 20	Group 21	Group 22	Group 23	Group 24	Group 25	Group 26	Group 27	Group 28	Group 29	Group 30	Group 31	Group 32
RESALE BUS/UNE	RESALE BUS/UNE	RESALE BUS/UNE	RESALE BUS/UNE	RESALE RES/BUS	RESALE RES/BUS/UNE	RESALE RES/BUS/UNE	RESALE RES/BUS/UNE	RESALE RES/BUS/UNE	RESALE RES/BUS/UNE						
3-Way Calling	3-Way Calling	3-Way Calling	3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	RCU 3-Way Calling	Usage Sensitive 3-Way Calling	Usage Sensitive 3-Way Calling	Usage Sensitive 3-Way Calling	Toll Restrict
Call Return	Call Return	Call Return	Call Return	RCU Auto Redial	Usage Sensitive Auto Redial	Usage Sensitive Auto Redial	Usage Sensitive Auto Redial	1010XXXX Block							
Auto Redial	Auto Redial	Auto Redial	Auto Redial	RCU Call Return	Usage Sensitive Call Return	Usage Sensitive Call Return	Usage Sensitive Call Return	Usage Sensitive 3-Way Calling							
Call Blocker	Call Blocker	Call Blocker	Call Blocker	Call Forwarding	Toll Restrict	900/976 Block	900/976 Block	Usage Sensitive Auto Redial							
Call Forwarding	Call Forwarding	Call Forwarding	Call Forwarding	Call Waiting	1010XXXX Block	1010XXXX Block	1010XXXX Block	Usage Sensitive Call Return							
Call Waiting	Call Waiting	Call Waiting	Call Waiting	Caller ID	Call Waiting	Speed Dial - 8	Call Waiting	Usage Sensitive Call Trace							
Caller ID	Caller ID	Caller ID	Caller ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Waiting ID	Call Blocker	Call Forwarding - BLUDA	Call Forwarding - BLUDA	Call Waiting

Group 17	Group 18	Group 19	Group 20	Group 21	Group 22	Group 23	Group 24	Group 25	Group 26	Group 27	Group 28	Group 29	Group 30	Group 31	Group 32
Remote Access to Call Forwarding	Speed Calling - 8	Call Waiting ID Options	Call Waiting ID Options	Call Waiting ID Options											
Selective Call Forward	Selective Call Forward	Selective Call Forward	Selective Call Forward	Call Waiting ID		Toll Restriction	Toll Restriction								
Speed Calling - 8	Call Waiting ID Options			900/876 Block											
Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	Priority Call/Distinctive Ring	900/876 Block	Call Forwarding - Busy											
Toll Restrict	Toll Restrict	900/876 Block	1010XXXX Block	Call Forwarding - Don't Answer											

Attachment 3 – Performance Measures to Test Mapping

This attachment shows the Performance Measurements (PMs) that will be evaluated for the Functionality and the Capacity Test. Additional tests that are not related to the PMs will be determined during the Planning Phase of the Capacity Test. This table serves as a PM checklist for which data will be collected during the Functionality or the Capacity Test. That is, data will be collected for the table entries with a *yes* entry, whether qualified or not with a superscript. The subscripts qualify the application of the PM for evaluation.

Table 1 distinguishes the PM applications to the Functionality Test as either OSS Performance or End-to-End Performance. This distinction is meant to clarify the role of the PM during the test evaluation. However, a *yes* in either of these two columns means that that data will be collected for the PM.

Of the PMs known at this time, the selected ones for evaluation in the Functionality Test satisfied the following criteria. All appear with an unqualified *yes* in Table 1. For each PM, data will be collected and evaluated for the Functionality or the Capacity Test:

- Test cases have been developed to test the Process, shown in column 1 of Table 1.
- The PM has an associated benchmark or has a parity designation.
- SWB will have prepared reports for the PM by the test dates and the measurements are collectible.

Several PMs are applicable to the Functionality or the Capacity Test but lack a designation of parity or benchmark. For these PMs, data will be collected but will not be evaluated for the Functionality or the Capacity Test. These entries are denoted in Table 1 by *yes*¹, where the superscript one refers to this group of PMs.

The data collection process cannot support the collection of measurements for several applicable PMs. These PMs are denoted in Table 1 as *no*², where the superscript refers to these PMs which will be neither processed nor evaluated.

The references to Not Applicable (NA) in Table 1 means that no test case will be written for this PM. These PMs which will be neither processed nor evaluated for the Functionality or the Capacity Test. In addition to the criteria for the Functionality Test, the PMs selected for the Capacity Test will consider only the pre-order or ordering processes.

Table A-1: Performance Measures and Test Mapping

Process	Perf. Meas. No.	Performance Measurement ⁸	Functionality Test		Capac Test
			OSS Perf.	End-to-end Perf.	
Resale POTS, Resale Specials & UNEs – Pre-ordering and ordering	1	Average Response Time for OSS Pre-Order Interface	Yes ¹	No	Yes ¹
	2	Percent Response received within x seconds - OSS interfaces	Yes	No	Yes
	3	EASE average response time	No ²	No	No
	4	OSS Interface Availability	Yes	No	No
	5	Firm Order Confirmations received within 5 hours	Yes	No	Yes
	6	Average time to return FOC	Yes ¹	No	Yes ¹
	7	Percent Mechanized completions returned within 1 hour	Yes	No	No
	8	Average time to return mechanized completions	Yes ¹	No	No
	9	Percent rejects	Yes ¹	No	Yes ¹
	10	Percent mechanized rejects returned within 1 hour of EDI/LASR	Yes	No	Yes
	11	Mean time to return mechanized rejects	Yes ¹	No	Yes ¹
	12	Provisioning Accuracy	No	Yes	No

⁸ All the PMs (including those not associated with the tests) will be evaluated for statistical validity and a sample of them will also be evaluated for correctness of the calculations.

Process	Perf. Meas. No.	Performance Measurement ¹	Functionality Test		Capac Test
			OSS Perf.	End-to-end Perf.	
	13	Order Process Percent flow through	Yes ¹	No	Yes ¹
Resale POTS, Resale Specials & UNEs - Billing	14	Billing Accuracy	No	Yes	No
	15	Percent of accurate and complete formatted mechanized bills	No	Yes	No
	16	Percent of billing records transmitted correctly	No	Yes	No
	17	Billing completeness	No	Yes	No
	18	Billing timeliness	No	Yes	No
	19	Daily usage feed timeliness	Yes	No	No
	20	Unbillable usage	No	No	No
Resale POTS, Resale Specials & UNEs - Miscellaneous Administration	21	LSC average speed of answer	No	Yes	No
	22	LSC grade of service	No	No ²	No
	23	Percent busy in the LSC	No	Yes	No
	24	LOC Average speed of answer	No	Yes	No
	25	LOC grade of service	No	No ²	No
	26	Percent busy in the LOC	No	Yes	No
Resale POTS & UNE Loop & Port - Provisioning	27	Mean installation time	No	Yes	No
	28	Percent install complete in X days	No	Yes	No
	29	Percent SWB caused missed due dates	No	Yes	No
	30	Average delay days for SWB caused missed due dates	No	Yes	No

Process	Perf. Meas. No.	Performance Measurement ^d	Functionality Test		Capac Test
			OSS Perf.	End-to-end Perf.	
	31	Percent SWB caused missed due dates > 30 days	No	Yes	No
	32	Percent SWB missed due dates due to lack of facilities	No	Yes	No
	33	Average delay days due to lack of facilities	No	Yes	No
	34	Count of orders cancelled after due date	No	Yes ¹	No
	35	Percent trouble report within 10 days of install	No	Yes	No
	36	Percent trouble report within 10 days of install	No	Yes	No
Resale POTS & UNE Loop & Port - Maintenance	37	Trouble report rate	No	Yes	No
	38	Percent missed repair commitment	No	Yes	No
	39	Receipt to clear duration	No	Yes	No
	40	Percent out of service < 24 hours	No	Yes	No
	41	Percent repeat reports	No	Yes	No
	42	Percent of trouble reports w/ no access	No	Yes	No
Resale Specials & UNE Loop & Port	43 - 54		NA	NA	NA
Unbundled Network Elements - Provisioning	55	Average installation interval	No	No ²	No
	56	Percent installations in x days	No	No ²	No
	57	Percent SWB caused missed due dates	No	Yes	No
	58	Average delay days for SWB caused missed due dates	No	Yes	No

Process	Perf. Meas. No.	Performance Measurement ¹	Functionality Test		Capac Test
			OSS Perf.	End-to-end Perf.	
	59	Percent SWB caused missed due dates > 30 days	No	Yes	No
	60	Percent SWB missed due dates due to lack of facilities	No	Yes	No
	61	Average delay days due to lack of facilities	No	Yes	No
	62	Count of orders cancelled after due date	No	Yes ¹	No
	63	Percent trouble report within 30 days of install	No	Yes	No
Unbundled Network Elements - Maintenance	64	Trouble report rate	No	Yes	No
	65	Percent missed repair commitment	No	Yes	No
	66	Mean time to restore	No	Yes	No
	67	Percent out of service < 24 hours	No	Yes	No
	68	Percent repeat reports	No	Yes	No
Interconnection Trunks	69 to 77		NA	NA	NA
Directory Assistance	78 to 85		NA	NA	NA
Interim Number Portability	86 to 89		NA	NA	NA
911 Service	90 to 91		NA	NA	NA
Poles, Conduit and Rights of way	92 to 93		NA	NA	NA
Collocation	94 to 96		NA	NA	NA

Process	Perf. Meas. No.	Performance Measurement ¹	Functionality Test		Capac
			OSS Perf.	End-to-end Perf.	Test
Directory Assistance	97 to 99		NA	NA	NA
Coordinated Conversions	100 to 102		NA	NA	NA
NXX	103 to 105		NA	NA	NA

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Attachment 4 – Test Case Specification Template and Example

Test Specification Template

The Test Specification Template below identifies the key components and guidelines for developing and documenting the Test Specification. The test scenario to be validated is specified and test cases and tests to support this validation are detailed.

Table A-2: Test Specification Template

TEST SPECIFICATION TEMPLATE				
<Test Id>, <Author> (maps to the high level Test Scenarios)				
Test identifier is to be a unique identifier usually consisting of the requirement identifier and an agreed up suffix/prefix along with identifier of major process tested (e.g., Retail to UNE-P Conversion, etc.)				
Introduction – Provide definition of the high level test scenario				
1a. Test Case #1 – Pre-ordering (requirements tested)				
1. Purpose- details what the test case is trying to prove.				
2. Dependencies:				
<ul style="list-style-type: none"> • Environment needs (e.g., generic overview of process consisting of front-end systems (e.g., LEX, EDI Gateway)and associated releases involved for functionality tests) • Setup activities (e.g., how handle “friendlies”) 				
3. Entrance Criteria				
4. Method- Detail the actual steps to be taken to implement the purpose statement. Include:				
⇒ For example, create a table to help track steps, expected results, etc.				
Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
1b. Test Case #2 – Ordering (requirements tested)				

TEST SPECIFICATION TEMPLATE

- Repeat steps 1 through 5 of test Case #1

1c. Test Case #3 – Billing (requirements tested)

- Repeat steps 1 through 5 of test Case #1

1d. Test Case #4 – Maintenance (Requirements tested)

- Repeat steps 1 through 5 of Test Case #1

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Test Specification Example

Test specification example: Retail to UNE-P Conversion (Residence and Business).

Introduction

The purpose of testing scenarios in this category is to test the ability to convert a SWB Retail Account to a CLEC UNE-P Account. Scenarios in this category will include Residential single and multi-lines, Business single and multi-lines, Hunting, EAS, accounts without features, accounts with single features, accounts with multiple features, and the different types of Directory Listings.

Pre-Ordering

Purpose – The purpose of Pre-Order activity is to validate the account's service address, check an available due date, check service availability, pull the CSR, verify the PIC and retrieve the switch CLLI code.

Dependencies –The only system required to do the Pre-Order activity is Verigate. Verigate is a SWB system used to confirm information on an LSR before submittal. Access to Verigate is real-time. Volunteer participants will be identified by Participants associated with the test. Once the testing begins, a list of these volunteers will be provided in order to perform the Pre-Order functions in Verigate.

Entrance Criteria – The entrance criteria for pre-ordering is access to Verigate and Volunteer Participants. SWB can provide access to Verigate and assign needed ID's. The Volunteer Participants will need to have a SWB retail line(s) installed with associated features and directory listing information before the conversion can take place.

Table A-3: Pre-Ordering Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Pull CSR	Obtain CSR		Obtain CSR	
Check Service Availability	Obtain Service Availability List		Obtain Service Availability List	
Check Due Date	Obtain Due Date		Obtain Due Date	
Pull CLLI code	Obtain CLLI Code		Obtain CLLI Code	

Ordering

Purpose – The purpose of the ordering function is to actually write the LSR to convert a customer from a SWB retail account to a CLEC UNE-P account

Dependencies – In order to process an order, the LSR must be generated and processed through the CLEC EDI Gateway. Once an order has been sent from a CLEC EDI Gateway it will be received into the SWB EDI Gateway. The order will then process through LASR for certain edits, then process through MOG to enter SORD and SWB backend systems for processing. If an order is not capable of passing through MOG, it will fall out to the SWB Local Service Center for manual processing into SORD. In order to set up the ordering process, connectivity must be provided to the SWB EDI Gateway Interface. Also, volunteer participants must be identified with a SWB Retail line.

Entrance Criteria – AT&T EDI Gateway Interface is available in order to process orders to SWB.

Table A-4: Ordering Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Generate LSR from CSR pulled in Pre-Order	Send 850 to SWB			
Send clean 850 through the EDI Gateway	Receive 997 Confirmation and 855 notifying CLEC of clean order		Receive 997 Confirmation and 855 notifying CLEC of clean order	
Send 850 with non-fatal errors through the EDI Gateway	Receive 997 Confirmation and 855 notifying CLEC that 850 had non-fatal errors		Receive 997 and 855	CLEC will now be required to send an 860 to correct non-fatal errors
Send 860 to correct non-fatal errors	Receive 997 and 865 notifying CLEC of clean order		Receive 997 and 865	
Send 850 with fatal errors through the EDI Gateway	Receive 997 and 855 notifying CLEC of fatal errors		Receive 997 and 855	CLEC will now be required to send a new 850 to correct the fatal errors
Send clean 850 to correct previous 850 with fatal errors	Receive 997 and 855 notifying CLEC of clean order		Receive 997 and 855	

Billing

Purpose – To test the ability of SWB to render a complete and accurate wholesale/resale bill for orders converting a SWB retail account to a CLEC UNE-P account.

Dependencies – Copies of Wholesale/Resale invoice, Customer Service Records, service orders, usage feeds and SWB post billing ad-hoc reports and SWB post billing systems.

Entrance Criteria – Access to SWB backend billing systems and SWB OSSs.

Method-

Maintenance

Purpose – The purpose of testing maintenance is to test the ability of SWB to respond and reconcile maintenance issues and verify MLT functionality for UNE-P.

Dependencies – Access to SWB’s Trouble Administration within the Toolbar Application. Also, escalation for maintenance issues is handled through SWB’s Local Operating Center. Need to ensure Toolbar access and ID’s for Trouble Administration. Ensure the service orders are posted to completion in the CRIS and CABS billing systems prior to execution, since only posted service ordered are downloaded to the back office OSSs.

Entrance Criteria – Access to Trouble Administration within the Toolbar Application.

Table A-5: Maintenance Method

Step	Expected Results	Actual Results	Pass/Fail Criteria	Comments
Access Trouble History	Pull Trouble History		Pull Trouble History	
Administer MLT Test	Obtain MLT Test		Obtain MLT Test	
Submit Trouble Report	Receive Trouble Ticket Number & expected time for repair		Trouble is resolved	

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An Order Test Scenario Example (Validation Perspective)

A high level perspective of the testing functionality consists of:

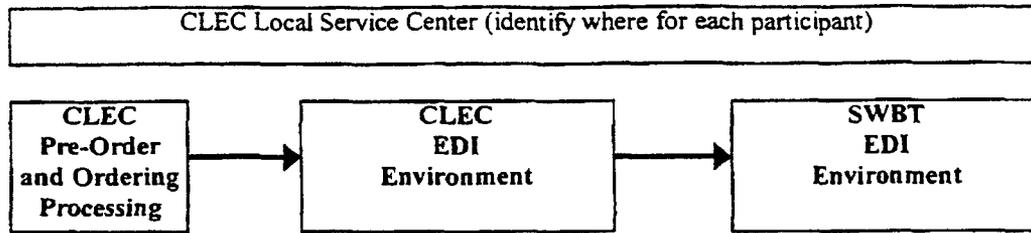


Figure A-5: Example POTS Ordering Test Flow/Environment

From a high level perspective the following shows a typical scenario to be used in the ordering portion of the validation testing. Within each scenario a variety of data will be used to exercise various situations that can occur. Scenario testing focuses on the flow-through processing which represents typical common processing. It does not intend to validate each and every feature and all the combinations of features since lower levels of testing provide for these types of tests. It would be cost-prohibitive and uncommon to test all features and combinations of features for the various services in a flow-through manner. Rather the TAG team has determined the scope of each of the various types of tests to be executed.

Example of basic scenario execution activities may consist of:

CLEC A requests to bring existing SWB retail service over to CLEC A as "conversion as specified" to UNE-P:

- Execute Process for Data Gathering - use DataGate and Verigate for pre-ordering process
- Execute Process for Placing Order
- Execute Process for Status, Order Completion and follow-up
- Execute Process for Billing Request
- Provide Bill Verification.

Customer reports no dial tone:

- Execute Process for Diagnostic Questioning
- Provided Identification of customer as CLEC Local
- Execute creation of trouble Ticket, validate Local info
- Execution of Trouble Referral to appropriate supplier

Customer questions charges on Bill:

- Execute Process for Bill Inquiry.

An example of scenario testing validation activities is:

- Pre-ordering

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- CLEC can verify TN
- CLEC can verify customer account information upon authorization request.
- Ordering
 - Order Reflects Sales Request
 - Output reflects order content
 - Billing Order reflects Order.
- Maintenance
 - CLEC can identify customer as local
 - CLEC can isolate trouble to local or LD and refer as appropriate
 - CLEC can identify features subscribed to by customer.
- Billing
 - CLEC can identify and quote specific charges
 - CLEC can create various adjustments (*Inside Wire, credits, etc.*)
 - CLEC can identify features subscribed to by customer
 - Bill reflects Sales Request.

Attachment 5: Proposed Daily Report- Test Status and Assessment Form

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Daily Report- Proposed Test Status and Assessment Form

TEST STATUS AND ASSESSMENT FORM

Product:	Date:
Assessment (green, yellow, or red):	

	Milestone	Initial Plan	Current Plan
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

Problems

SEVERITY	OPEN (UI)	CLOSED	TOTAL
Critical (1)			
Serious (2)			
Minor (3)			
<i>Total</i>			

Test Cases and Other Test Parameters

PLANNED	EXECUTED	PASSED	FAILED	TIME IN TESTING	TIME REMAINING

Issues

General Notes

Purpose:

Instructions for Completing

The Test Status and Assessment template provides an arena for documenting the status of the tests as they move through flow-through testing.

To easily document the outcome simply use this worksheet as a guide for each scenario. The spaces provided will make it easy to identify what is being tested, as well as when it is being tested, and the assessments of the designated milestones. These assessments will be assigned a color of either green, yellow, or red based on the overall status of being on schedule relative to completing final validation and functionality.

For each milestone in the template, enter the dates and commentary as they apply to the initial plan and the current plan.

The next aspect to this template is a designated section labeled, problems. The chart addresses the severity of the problems, if any. The severity is separated into three distinctions, Critical, which is identified by a (1), Serious, which is identified by a (2), and Moderate, which is identified by a (3). Each of these severity's will be applied to the following categories in regard to the scenario, Open (UI), and Closed. There is also a Total column as well as a Total row to tally up the different severalties as they occur.

The final aspect to this template is a designated section labeled, Test Cases and Other Test Parameters. This chart consists of five rows, those being, planned, executed, passing, failing and time in testing. These should be filled out about the product being tested as the information becomes available.

Attachment 6 – Project Schedule/Timeline

The following test timeline provides a description of the test planning and preparation activities as reviewed by the TAG. The test execution and analysis activities provide an illustrative view of the dependencies and test intervals expected to provide for the execution. Please refer to the assumption section (Section 4.6), which define the assumptions that govern the test activities. Most particularly the Functionality Test (see Section 4.6.4.2) and Capacity Test (see Section 4.6.5.2) execution and analysis sections. This timeline provides the framework for the Test Participants detailed test plans, most especially the test execution interval expectations. The CLEC Test Participants test cycle needs may vary. However, it is expected the interval of test execution defined in this Master Test Plan will be followed.

As attached

0.0.0.

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res	Res	Bus	Bus	Htg.	EAS	No	Single	Mult	Directory Listings				DL Explanation	Mog. comment	Maintenance Issue		
				SL	ML	SL	ML		Feat	Feat	Feat	Feat	Feat	Feat	Feat	Feat				Feat	Feat
Retail to UNE-P Conversion (residence)																					
1.R.S.1-1-18	Retail to UNE-P	V/M	Convert 1 Res line, no features, straight line main listing	x						x									Main line listed - straight line listing	Y-1	No Dialtone (2)
1.R.S.2-1-18	Retail to UNE-P	V/M	Convert 1 Res line, no features, Non-pub listing	x						x										Y-1	
1.R.S.3-1-18	Retail to UNE-P	V/M	Convert 1 Res line, single feature, dual name listing	x							x									Y-1	
1.R.S.4-1-18	Retail to UNE-P	V/M	Convert 1 Res line, single feature, additional listing	x							x									Y-1	
1.R.S.5-1-18	Retail to UNE-P	V/M	Convert 1 Res line, multiple features, non-listed	x								x								Y-1	
1.R.S.6-1-18	Retail to UNE-P	V/M	Convert 1 Res line, multiple features, caption listing	x									x							N*	
1.R.S.7-1-18	Retail to UNE-P	V/M	Convert 1 Res line, multiple features, straight line main listing and additional listing	x																Y-1	
1.R.M.8.1	Retail to UNE-P	V/M	Convert 2 Res lines, no features, non-pub listing							x										Y-2	
1.R.M.9.1	Retail to UNE-P	V/M	Convert 2 Res lines, no features, additional listing																	Y-2	

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res. SL	Res. ML	Bus. SL	Bus. ML	Htg.	EAS	No. Feat	Single Feat	Multi Feat	Directory Listings				DL Explanation	Mog. Maintenance Issue
													Straight Line	Non Pub	Dual Name	Additional Listing		
1.R.M.10.1	Retail to UNE-P	V/M	Convert 2 Res lines, 2-Way EAS, no features, non-listed		X				X	X							Main line non-listed for both lines	Y-3
1.R.M.11.1	Retail to UNE-P	V/M	Convert 2 Res lines, single feature, non-listed		X						X						Main line non-listed for both lines	Y-2
1.R.M.12.1	Retail to UNE-P	V/M	Convert 2 Res lines, single feature, caption listing		X												Main line caption indent for both lines	Y-2
1.R.M.13.1	Retail to UNE-P	V/M	Convert 2 Res lines, single feature, 2-Way EAS with circular hunt & non listed		X			X	X		X						Main line of hunt group non-listed	Y-3
1.R.M.14.1	Retail to UNE-P	V/M	Convert 2 Res lines, multiple features, straight line main listing		X						X						Main line listed straight line listing for both lines	Y-2
1.R.M.15.1	Retail to UNE-P	V/M	Convert 2 Res lines, single feature, non-pub listing		X							X					Main line non-pub for both lines	Y-2
1.R.M.16.1	Retail to UNE-P	V/M	Convert 2 Res lines, multiple features, 2-Way EAS with straight line main listing		X				X		X						Main line listed - straight line listing for both lines	Y-3
1.R.M.17.1	Retail to UNE-P	V/M	Convert 2 Res lines, multiple features, 2-Way EAS with circular hunt & non listed		X			X	X			X					Main lead line of hunt group - non-listed	Y-3
Retail to UNE-P Conversion (business)																		
1.B.S.1.1-4	Retail to UNE-P	V/M	Convert 1 Bus line, no features, straight line main listing			X				X							Main line listed - straight line listing	Y
1.B.S.2.1-4	Retail to UNE-P	V/M	Convert 1 Bus line, single feature, additional listing				X						X				Main line listed - straight line listing and additional listing	Y

TEST CASE SCENARIOS

Scenario #	Order Type	Acl Type/Req Type	Scenario	Res		Bus		Htg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mog. comm. in	Mainten. Issue	
				SL	ML	SL	ML						Straight Line	Non Pub	Dual Name	Additio. Listing				Non- Listed
1.B.S.3.1-4	Retail to UNE-P	V/M	Convert 1 Bus line, multiple features, caption listing			X						X						Y	Main line listed - caption	
1.B.S.4.1-4	Retail to UNE-P	V/M	Convert 1 Bus line, multiple features, straight line main listing and additional listing		X							X				X		Y	Main line listed - straight line listing and additional listing	
1.B.M.5.1-4	Retail to UNE-P	V/M	Convert 2 Bus lines, no features, additional listing			X				X						X		Y-5	Main line listed - straight line listing and additional listing for both listings	
1.B.M.6.1-4	Retail to UNE-P	V/M	Convert 2 Bus lines, single feature caption listing			X					X							Y-5	Main line listed - caption listings for both lines	
1.B.M.7.1-4	Retail to UNE-P	V/M	Convert 2 Bus lines, multiple features, straight line main listing			X						X						Y-5	Main line listed - straight line listing for both lines	
1.B.M.8.1-4	Retail to UNE-P	V/M	Convert 2 Bus lines, multiple features, 2-Way EAS with straight line main listing			X			X			X						Y-6	Main line listed - straight line listing for both lines	
1.B.M.9.1-4	Retail to UNE-P	V/M	Convert 3 Bus lines, multiple features, 2-Way EAS, circular hunting with straight line main listing			X			X			X						Y-4	Main line listed - straight line listing	
1.B.M.10.1-4	Retail to UNE-P	V/M	Convert 2 Bus lines, multiple features, non-pub and non-listed			X						X			X			Y-5	1 main line - non-listed and 1 main line - non-pub	
Resale to UNE-P Conversion (residence)																				
2.R.S.1.1-8	Resale to UNE-P	V/M	Convert 1 Res line, no features, straight line main listing																Y-1	Main line listed - straight line listing

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res.		Bus.		Hqd.	EAS	No. Feat.	Single Feat.		Multi Feat.		Directory Listings				DL Explanation	Mog. comment	Maintenance Issue	
				SL	ML	SL	ML				Feat.	Feat.	Feat.	Feat.	Straight Line	Non Pub	Dual Name	Additio nal Listing				Non-listed
2.R.S.2.1-8	Resale to UNE-P	V/M	Convert 1 Res line, no features, Non-pub listing	X						X						X				Main line non-pub	Y-1	
2.R.S.3.1-8	Resale to UNE-P	V/M	Convert 1 Res line, single feature, dual name listing	X							X						X			Main line listed - straight line listing dual name	Y-1	
2.R.S.4.1-8	Resale to UNE-P	V/M	Convert 1 Res line, single feature, additional listing	X							X						X			Main line listed - straight line listing and additional listing	Y-1	
2.R.S.5.1-8	Resale to UNE-P	V/M	Convert 1 Res line, multiple features, non-listed	X								X						X		Main line - non-listed	Y-1	
2.R.S.6.1-8	Resale to UNE-P	V/M	Convert 1 Res line, multiple features, caption listing	X									X							Main line listed and additional main line listing - caption indent	N*	
2.R.S.7.1-8	Resale to UNE-P	V/M	Convert 1 Res line, multiple features, straight line main listing and additional listing	X									X					X		Main line listed - straight line listing and additional listing	Y-1	
2.R.M.8.1	Resale to UNE-P	V/M	Convert 2 Res lines, no features, non-pub listing							X								X		Main line non-pub for both lines	Y-2	
2.R.M.9.1	Resale to UNE-P	V/M	Convert 2 Res lines, no features, additional listing								X								X	Main line listed - straight line listing and additional listing for both lines	Y-2	
2.R.M.10.1	Resale to UNE-P	V/M	Convert 2 Res lines, 2-Way EAS, no features, non-listed									X								Main line non-listed for both lines	Y-3	

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res. SL	Res. ML	Bus. SL	Bus. ML	Hq. EAS	No. Feat	Single Feat	Multi Feat	Directory Listings				DL Explanation	Mod. comment	Maintenance Issue
												Straight Line	Non Pub	Dual Name	Additio nal Listing			
2.R.M.11.1	Resale to UNE-P	V/M	Convert 2 Res lines, single feature, non-listed		X					X							Y-2	Main line non-listed for both lines
2.R.M.12.1	Resale to UNE-P	V/M	Convert 2 Res lines, single feature, caption listing		X					X							Y-2	Main line listed - caption for both lines
2.R.M.13.1	Resale to UNE-P	V/M	Convert 2 Res lines, single feature, 2-Way EAS with circular hunt & non listed		X			X		X							Y-4	Main line non-listed
2.R.M.14.1	Resale to UNE-P	V/M	Convert 2 Res lines, multiple features, straight line main listing		X						X						Y-2	Main line listed - straight line listing for both lines
2.R.M.15.1	Resale to UNE-P	V/M	Convert 2 Res lines, multiple feature, non-pub listing		X						X						Y-2	Main line non-pub for both lines
2.R.M.16.1	Resale to UNE-P	V/M	Convert 2 Res lines, multiple features, 2-Way EAS with straight line main listing		X			X			X						Y-3	Main line listed - straight line listings for both lines
2.R.M.17.1	Resale to UNE-P	V/M	Convert 2 Res lines, multiple features, 2-Way EAS with circular hunt & non listed		X			X			X						Y-4	Main line non-listed
Resale to UNE-P Conversion (business)																		
2.B.S.1.1-2	Resale to UNE-P	V/M	Convert 1 Bus line, no features, straight line main listing						X								Y	Main line listed - straight line listing

TEST CASE SCENARIOS

Scenario #	Order Type	Acl Type/Reg. Type	Scenario	Res		Bus		Bus ML	Htg.	EAS	No. Feat.	Single Feat.		Multi Feat.		DL Explanation	Mog. Maintenance Issue
				SL	ML	SL	ML					Feat.	Feat.	Feat.	Feat.		
2.B.S.2.1-2	Resale to UNE-P	V/M	Convert 1 Bus line, single feature, additional listing			X						X				Main line listed - straight line listing and additional listing	Y
2.B.S.3.1-2	Resale to UNE-P	V/M	Convert 1 Bus line, multiple features, caption listing			X								X		Main line listed - caption	Y
2.B.S.4.1-2	Resale to UNE-P	V/M	Convert 1 Bus line, multiple features, straight line main listing and additional listing			X						X		X		Main line listed - straight line listing and additional listing	Y
2.B.M.5.1-2	Resale to UNE-P	V/M	Convert 2 Bus lines, no features, additional listing					X			X			X		Main line listed - straight line listing and additional listing	Y-5
2.B.M.6.1-2	Resale to UNE-P	V/M	Convert 2 Bus lines, single feature, caption listing					X				X				Main line listed - caption	Y-5
2.B.M.7.1-2	Resale to UNE-P	V/M	Convert 2 Bus lines, multiple features, straight line main listing					X				X		X		Main line listed - straight line listing	Y-5
2.B.M.8.1-2	Resale to UNE-P	V/M	Convert 2 Bus lines, multiple features, 2-Way EAS with straight line main listing					X			X			X		Main line listed - straight line listing for both lines	Y-6
2.B.M.9.1-2	Resale to UNE-P	V/M	Convert 3 Bus lines, multiple features, 2-Way EAS, circular hunting with straight line main listing					X			X			X		Main line listed - straight line listing	Y-4

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res		Bus		Htg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mog. Maint. Comment Issue
				SL	ML	SL	ML						Straght Line	Non Pub	Dual Name	Additio nal Listing		
2.B.M.10.1-2	Resale to UNE-P	V/M	Convert 2 Bus lines with multiple features, non-pub and non-listed				X					X					1 main line listing - non-listed and 1 main line listing non-pub	Y-5
Retail to Resale Conversion (residence) NOTE: Conv as is Act Type W/Req Type E; with Changes Act Type V/Req Type E																		
3.R.S.1.1	Retail to Resale		Convert 1 Res line, no features, straight line main listing	X						X							Main line listed - straight line listing	Y-1
3.R.S.2.1	Retail to Resale		Convert 1 Res line, no features, Non-pub listing	X						X							Main line non-pub	Y-1
3.R.S.3.1	Retail to Resale		Convert 1 Res line, single feature, dual name listing	X							X						Main line listed - straight line listing dual name	Y-1
3.R.S.4.1	Retail to Resale		Convert 1 Res line, single feature, additional listing	X									X				Main line listed - straight line listing and additional listing	Y-1
3.R.S.5.2	Retail to Resale		Convert 1 Res line, multiple features, non-listed	X							X						Main line - non-listed	Y-1
3.R.S.6.2	Retail to Resale		Convert 1 Res line, multiple features, caption listing	X								X					Main line - caption listing	Y-1
3.R.S.7.2	Retail to Resale		Convert 1 Res line, multiple features, straight line main listing and additional listing	X							X						Main line listed - straight line listing and additional listing	Y-1
3.R.M.8.1	Retail to Resale		Convert 2 Res lines, no features, non-pub listing							X							Main line - non-pub	Y-2

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res		Res Bus		Bus		Htg.	EAS		No. Feat		Single Feat		Mult Feat		Directory Listings				DL Explanation	Moq. comm. int	Mainten. Issue																								
				SL	ML	SL	ML	SL	ML		SL	ML	SL	ML	SL	ML	SL	ML	SL	ML	SL	ML				Strait Line	Non Pub	Dual Name	Additio. Listing	Non-listed	Capit. Ion																		
3.R.M.9.1	Retail to Resale		Convert 2 Res lines, no features, additional listing		X								X												Main line listed and additional listing for both lines	Y-2																							
3.R.M.10.1	Retail to Resale		Convert 2 Res lines, 2-Way EAS, no features, non-listed		X							X											X			Main line non-listed for both lines	Y-3																						
3.R.M.11.1	Retail to Resale		Convert 2 Res lines, single feature, non-listed		X																		X			Main line non-listed for both lines	Y-2																						
3.R.M.12.1	Retail to Resale		Convert 2 Res lines, single feature, caption listing		X																					Main line non-listed for both lines	Y-2																						
3.R.M.13.1	Retail to Resale		Convert 2 Res lines, 2-Way EAS with circular hunt & non listed		X							X														Main line listed - caption for both lines	Y-2																						
3.R.M.14.1	Retail to Resale		Convert 2 Res lines, multiple features, straight line main listing		X																					Main line non-listed for both lines	Y-4																						
3.R.M.15.1	Retail to Resale		Convert 2 Res lines, single feature, non-pub listing		X																			X		Main line listed - straight line listing for both lines	Y-2																						
3.R.M.16.1	Retail to Resale		Convert 2 Res lines, multiple features, 2-Way EAS with straight line main listing		X																			X		Main line non-pub for both lines	Y-2																						
3.R.M.17.1	Retail to Resale		Convert 2 Res lines, multiple features, 2-Way EAS with circular hunt & non listed		X																					Main line listed - straight line listing for both lines	Y-2																						
3.R.M.17.1	Retail to Resale		Convert 2 Res lines, multiple features, 2-Way EAS with circular hunt & non listed		X																					Main line non-listed for both lines	Y-3	Inability to dial 411 (1)																					
Retail to Resale Conversion (business)																																																	

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res SL	Res ML	Bus SL	Bus ML	Bus ML	Htg.	EAS	No. Feat	Single Feat	Multi Feat	Directory Listings				DL Explanation	Mog. comment	Maintenance Issue			
				SL	ML	SL	ML	ML			Feat	Feat	Feat	Straght Line	Non Pub	Dual Name	Additonal Listing	Non-listed	Caption				
3.B.S.1.1	Retail to Resale		Convert 1 Bus line, no features, straight line main listing		X						X			X						Main line listed - straight line listing	Y		
3.B.S.2.1	Retail to Resale		Convert 1 Bus line, single feature, additional listing		X							X					X			Main line listed - straight line listing and additional listing	Y	Can't Call In (3)	
3.B.S.3.1	Retail to Resale		Convert 1 Bus line, multiple features, caption listing		X								X							Main line listed - caption listing	Y		
3.B.S.4.1	Retail to Resale		Convert 1 Bus line, multiple features, straight line main listing and additional listing		X								X				X			Main line listed - straight line listing and additional listing	Y		
3.B.M.5.1	Retail to Resale		Convert 2 Bus lines, no features, additional listing					X												Main line listed - straight line listing and additional listing	Y-5		
3.B.M.6.1	Retail to Resale		Convert 2 Bus lines, single feature, caption listing					X				X								Main line listed - caption listing	Y-5		
3.B.M.7.1	Retail to Resale		Convert 2 Bus lines, multiple features, straight line main listing					X					X							Main line listed - straight line listing	Y-5		
3.B.M.8.1	Retail to Resale		Convert 2 Bus lines, multiple features, 2-Way EAS with straight line main listing					X		X			X							Main line listed - straight line listing	N-6		
3.B.M.9.1	Retail to Resale		Convert 3 Bus lines, multiple features, 2-Way EAS, circular hunting with straight line main listing					X	X	X			X							Main line listed - straight line listing	Y-4		
3.B.M.10.1	Retail to Resale		Convert 2 Bus lines, multiple features, non-pub and non-listed					X					X						X	1 main line non-listed and 1 main line non-pub	N-5		
Resale New (residence)																							

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res		Bus		Hlg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mog. comm. int.	Mainten. Issue
				SL	ML	SL	ML						Strai. Line	Non Pub	Dual Name	Addio. Listing			
4.R.S.1.1	Resale New	N/E	Install 1 Res line, no features, straight line main listing	X						X			X					Y	Main line listed - straight line listing
4.R.S.2.1	Resale New	N/E	Install 1 Res line, no features, non-pub listing	X						X								Y	Main line non-pub Main line listed - caption
4.R.S.3.1	Resale New	N/E	Install 1 Res line, single feature, caption listing	X							X							Y	Main line listed - straight line listing dual name
4.R.S.4.1	Resale New	N/E	Install 1 Res line, multiple features, dual name listing	X								X						Y	Main line listed - straight line listing and additional listing
4.R.S.5.1	Resale New	N/E	Install 1 Res line, multiple features, additional listing	X								X						Y	Main line listed - straight line listing and additional listing
4.R.S.6.1	Resale New	N/E	Install 1 Res line, multiple features, straight line main listing with additional listing	X								X						Y	Main line listed - straight line listing and additional listing
4.R.S.7.1	Resale New	N/E	Install 1 Res line, multiple features with 2-Way EAS and straight line main listing	X					X			X						Y	Main line listed - straight line listing for both lines
4.R.M.8.1	Resale New	N/E	Install 2 Res lines with no features, non-pub listing							X								N-7	Main line listed - straight line listing and additional listing
4.R.M.9.1	Resale New	N/E	Install 2 Res lines with no features, additional listing															N-7	Main line non-pub for both lines
4.R.M.10.1	Resale New	N/E	Install 2 Res lines with no features, 2-Way EAS and non-pub listing						X									N-7	Main line non-pub for both lines
4.R.M.11.1	Resale New	N/E	Install 2 Res lines with single feature, non-listed															N-7	Main line non-listed for both lines

TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Reg. Type	Scenario	Res		Bus		Htg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mainten. Issue	
				SL	ML	SL	ML						Straght Line	Non Pub	Dual Name	Additio nal Listing			Non- Capt ion listed
4.R.M.12.1	Resale New	N/E	Install 2 Res lines with single feature, caption listing		X						X							N-7	Main line listed - caption for both lines and additional main line listing
4.R.M.13.1	Resale New	N/E	Install 2 Res lines with single feature, circular hunting, and non-listed		X			X			X					X		Y	Main line non-listed for both lines
4.R.M.14.1	Resale New	N/E	Install 2 Res lines with multiple features, straight line main listing		X							X						N-7	Main line listed - straight line listing and additional main line listing for both lines
4.R.M.15.1	Resale New	N/E	Install 2 Res lines with multiple features, non-pub listing		X							X						N-7	Main line non-pub for both lines
4.R.M.16.1	Resale New	N/E	Install 2 Res lines with multiple features, 2-Way EAS, circular hunting, non-pub listing		X				X									Y	Main line non-pub for both lines
4.R.M.17.1	Resale New	N/E	Install 2 Res lines with multiple features, 2-Way EAS and straight line main listing		X				X			X						N-7	Main line listed - straight line listing for both lines
Rosale New (business)																			
4.B.S.1.1	Resale New	N/E	Install 1 Bus line, no features, straight line main listing				X											Y	Main line listed - straight line listing
4.B.S.2.1	Resale New	N/E	Install 1 Bus line, no features with 2-Way EAS and straight line main listing				X											Y	Main line listed - straight line listing and additional listing

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res SL	Res ML	Bus SL	Bus ML	Htg.	EAS	No Feat	Single Feat	Mult Feat	Directory Listings	DL Explanation	Moq comment	Mainline Issue			
				SL	ML	SL	ML			Feat	Feat	Feat	Straght Line	Non Pub	Dual Name	Adddio nal Listing	Non-listed	Ception	
4.B.S.3.1	Resale New	N/E	Install 1 Bus line, single feature, additional listing			X					X		X	Main line listed - straight line listing	Y	Static/N			
4.B.S.4.1	Resale New	N/E	Install 1 Bus line, multiple features, caption listing			X						X		Main line listed - caption	Y				
4.B.S.5.1	Resale New	N/E	Install 1 Bus line, multiple features, straight line main listing with additional listing			X						X	X	Main line listed - straight line listing and additional listing	Y				
4.B.S.6.1	Resale New	N/E	Install 1 Bus line, multiple features with 2-Way EAS and straight line main listing			X			X			X		Main line listed - straight line listing	Y				
4.B.M.7.1	Resale New	N/E	Install 2 Bus lines with no features, additional listing							X			X	Main line listed - straight line listing and additional listing for both lines	N-7				
4.B.M.8.1	Resale New	N/E	Install 2 Bus lines with no features, straight line main listing and circular hunting					X		X				Main line listed - straight line listing for both lines	Y				
4.B.M.9.1	Resale New	N/E	Install 2 Bus lines with single feature, caption listing								X			Main line listed - caption - both lines	N-7				
4.B.M.10.1	Resale New	N/E	Install 3 Bus lines with multiple features, straight line main listing									X		Main line listed - straight line listing for both lines	N-7				
4.B.M.11.1	Resale New	N/E	Install 2 Bus lines with multiple features, 2-Way EAS and straight line main listing							X		X	X	Main line listed - straight line listing for both lines	N-7				

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TEST CASE SCENARIOS

Scenario #	Order Type	Act. Type/Req. Type	Scenario	Res. SL		Res. ML		Bus. SL		Bus. ML		Htg.	EAS	No. Feat.	Single Feat.	Multi Feat.	Directory Listings				DL Explanation	Mog. comm. in	Mainten. Issue
				SL	ML	SL	ML	SL	ML	Strag. Int. Line	Non-Pub						Dual Name	Additio. Listing	Non-Capt. listed				
4.B.M.12.1	Resale New	N/E	Install 3 Bus lines with multiple features, circular hunting, 2-Way EAS, and straight line main directory listing					X				X	X			X						Y	
4.B.M.13.1	Resale New	N/E	Install 2 Bus lines with multiple features, non-pub and non-listed						X							X						N-7	
UNE-P New (residence)																							
5.R.S.1.1-3	UNE-P New	N/M	Install 1 Res line, no features, straight line main listing	X									X									Y	Can't Call Out (6)
5.R.S.2.1-3	UNE-P New	N/M	Install 1 Res line, no features, non-pub listing	X									X									Y	
5.R.S.3.1-3	UNE-P New	N/M	Install 1 Res line, single feature, caption listing	X											X							Y	
5.R.S.4.1-3	UNE-P New	N/M	Install 1 Res line, multiple features, dual name listing	X												X						Y	
5.R.S.5.1-3	UNE-P New	N/M	Install 1 Res line, multiple features, additional listing	X												X						Y	
5.R.S.6.1-3	UNE-P New	N/M	Install 1 Res line, multiple features, straight line main listing with additional listing	X													X					Y	No Dialtone (2)
5.R.S.7.1-3	UNE-P New	N/M	Install 1 Res line, multiple features with 2-Way EAS and straight line main listing	X									X									Y	
5.R.M.8.1	UNE-P New	N/M	Install 2 Res lines with no features, non-pub listing											X								Y	

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Reg Type	Scenario	Res		Bus		Bus		Hlg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mainten. Issue			
				SL	ML	SL	ML	Straght Line	Non Pub						Dual Name	Additio nal Listing	Non-listed	Caption					
5.B.S.2.1	UNE-P New	N/M	Install 1 Bus line, no features with 2-Way EAS and straight line main listing			X					X					X					Y		
5.B.S.3.1	UNE-P New	N/M	Install 1 Bus line, single feature, additional listing			X							X					X				Y	
5.B.S.4.1	UNE-P New	N/M	Install 1 Bus line, multiple features, caption listing			X								X								Y	
5.B.S.5.1	UNE-P New	N/M	Install 1 Bus line, multiple features, straight line main listing with additional listing			X								X				X				Y	
5.B.S.6.1	UNE-P New	N/M	Install 1 Bus line, multiple features with 2-Way EAS and straight line main listing			X					X			X								Y	
5.B.M.7.1	UNE-P New	N/M	Install 2 Bus lines with no features, additional listing									X						X				Y	
5.B.M.8.1	UNE-P New	N/M	Install 2 Bus lines with no features, straight line main listing and circular hunting								X							X				Y	
5.B.M.9.1	UNE-P New	N/M	Install 2 Bus lines with single feature, caption listing								X							X				Y	
5.B.M.10.1	UNE-P New	N/M	Install 3 Bus lines with multiple features, straight line main listing								X							X				Y	
5.B.M.11.1	UNE-P New	N/M	Install 2 Bus lines with multiple features, 2-Way EAS and straight line main listing									X						X				Y	

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res SL	Res ML	Bus SL	Bus ML	Htg	EAS	No Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mog comm	Mainten Issue
													Strg Ht Line	Non Pub	Dual Name	Addio nal Listing			
5.B.M.12.1	UNE-P New	N/M	Install 3 Bus lines with multiple features, circular hunting, 2 Way EAS, and straight line main directory listing			X	X	X	X			X						Y	Main line listed - straight line listing
5.B.M.13.1	UNE-P New	N/M	Install 2 Bus lines with multiple features, non-pub and non-listed			X	X					X						Y	1 main line non-listed and 1 main line non-pub
UNE Loop	UNE Loop New	N/A	Install new Loop			X		NA	NA	NA	NA	NA						Y	Not Applicable
6.B.S.1.1-5	UNE Loop New	N/A	Install multiple new loops			X		NA	NA	NA	NA	NA						Y	Not Applicable
6.B.S.2.1-4	UNE Loop Change	C/A	Change the 'CFA' on an existing loop			X		NA	NA	NA	NA	NA						N-8	Not Applicable
6.B.S.3.1-2	UNE Loop Disc	D/A	Disconnect a loop			X		NA	NA	NA	NA	NA						Y	Not Applicable
6.B.S.4.1-6	UNE Loop Disc	D/A	Disconnect multiple loops			X		NA	NA	NA	NA	NA						Y	Not Applicable
6.B.M.5.1-6	UNE Loop Full Migr	V/A	Full migration of a single loop			X		NA	NA	NA	NA	NA						Y	Not Applicable
6.B.M.7.1-4	UNE Loop Full Migr	V/A	Full migration of existing loops			X		NA	NA	NA	NA	NA						Y	Not Applicable

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res		Bus		Htg.	EAS	No Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mod. Maintenance Issue
				SL	ML	SL	ML						Straight Line	Non Pub	Dual Name	Additional Listing		
6.B.M.8.1-4	UNE Loop Full Migr+Add a new loop	V/A	Full migration of existing loops + add a new loop				x	NA	NA	NA	NA	NA					Y	static (1), no dial tone (2), (3) ring-no-ans
6.B.S.9.1-1	UNE Loop Out Mve	T/A	Outside move of a single loop from address a to address b - Test with LEX. N/A TO MCIW		x			NA	NA	NA	NA	NA					N-8	Not Applicable
6.B.S.10.1-1	UNE Loop Out Mve	N/A	Outside move of a single loop from address a to address b		x			NA	NA	NA	NA	NA					Y	Not Applicable
6.B.M.11.1-4	UNE Loop Part Migr	V/A	Partial migration of multiple loops BTN staying with SWBT				x	NA	NA	NA	NA	NA					N-8	Not Applicable
6.B.M.12.1-2	UNE Loop Part Migr	V/A	Partial migration of multiple loops BTN moving to MCIW				x	NA	NA	NA	NA	NA					N-8	Not Applicable
6.B.M.13.1.7	UNE Loop Supplement Type 1 (Cancel)						x	NA	NA	NA	NA	NA					N/A	Not Applicable

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req. Type	Scenario	Res		Bus		Htg.		EAS		No.		Single		Multi		DL Explanation	Mog. Maintenance Issue		
				SL	ML	SL	ML	SL	ML	SL	ML	SL	ML	SL	ML	SL	ML			SL	ML
7.B.M.5.1-6	UNE Loop w/NP Supplement Type 3 (All Other Changes)																				
UNE NP																					
7.B.M.1.1-2	UNE NP	V/C	Disconnect retail bundled service (multiple lines) and port TNs to MCIW																	N/A	
Change UNE-P (residence)																					
8.R.S.1.1-8	Change	C/M	Add one feature to Res 1 line account with no existing features, no changes to directory listings																		
8.R.S.2.1-8	Change	C/M	Add one feature and remove a feature from Res 1 line account with multiple features, no changes to directory listings																		
8.R.S.3.1-8	Change	C/M	Add 2-Way EAS to existing Res 1 line account with no features, no changes to directory listings																		
8.R.M.4.1-8	Change	C/M	Add 2 new features to resident multiple line account, no changes to directory listing																		

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Req Type	Scenario	Res		Bus		Bus		EAS	Hlg	No	Single	Mult	Directory Listings				DL Explanation	Mog. Maintenance Issue			
				SL	ML	SL	ML	Feat	Feat						Feat	Feat	Straight Line	Non Pub			Dual Name	Additio nal Listing	Non-listed
8.R.M.5.1-8	Change	C/M	Remove 1 feature from resident multiple line account with multiple features, no directory change	X										X							Not Applicable	Y	
8.R.M.6.1-8	Change	C/M	Remove 1 feature & add a feature to resident multiple line account, no directory change	X									X									Not Applicable	Y
8.R.M.7.1-8	Change	C/M	Add circular hunting to a Res 2 line account with multiple features, no directory listing changes	X						X				X								Not Applicable	N-8
8.R.M.8.1-8	Change	C/M	Add 2-Way EAS and circular hunting to a Res 2 line account, no changes to directory listings	X						X												Not Applicable	N-8
8.R.M.9.1-8	Change	C/M	Change DL name on Res 1 line account with 1 feature										X									Change listing from main line listed - straight line listing to main line non-pub	N-8
8.R.M.10.1-8	Change	C/M	Change DL name on Res 2 line account with multiple features												X							Change main line listed - straight line listing DL listed name on both lines	N-8
Change UNE-P (business)																							
8.B.S.1.1-2	Change	C/M	Add one feature to Bus 1 line account with no existing features, no changes to directory listings																			Not Applicable	Y

TEST CASE SCENARIOS

Scenario #	Order Type	Act Type/Reg Type	Scenario	Res		Bus		Hlg	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mgmt Issue
				SL	ML	SL	ML						Straght Line	Non Pub	Dual Name	Additio nal Listing		
8.B.S.2.1-2	Change	C/M	Remove and add one feature from Bus 1 line account with multiple features. no changes to directory listings			X						X					Not Applicable	Y
8.B.S.3.1-2	Change	C/M	Add two new features to Bus 1 line account with one feature existing			X					X						Not Applicable	Y
8.B.S.4.1-2	Change	C/M	Add 2-Way EAS to Bus 1 line account with multiple features, no changes to directory listings						X			X					Not Applicable	N-8
8.B.M.5.1-2	Change	C/M	Add 2 new features to Bus multiple line account, no changes to directory listing					X				X					Not Applicable	Y
8.B.M.6.1-2	Change	C/M	Remove 1 feature from Bus multiple line account with multiple features, no directory change					X				X					Not Applicable	Y
8.B.M.7.1-2	Change	C/M	Remove 1 feature & add a feature to Bus multiple line account with one feature, no directory change					X			X						Not Applicable	Y
8.B.M.8.1-2	Change	C/M	Add circular hunting to 3 line Bus account with multiple features, no change to directory listings					X				X					Not Applicable	N-8
8.B.M.9.1-2	Change	C/M	Add one feature and remove a feature from Bus 2 line account, no changes to directory listings					X				X					Not Applicable	Y
8.B.M.10.1-2	Change	C/M	Add 2-Way EAS and circular hunting to a Bus 2 line account with multiple features, no changes to directory listings					X				X					Not Applicable	N-8

TEST CASE SCENARIOS

Scenario #	Order Type	AcL Type/Req Type	Scenario	Res		Bus		Htg.	EAS	No. Feat	Single Feat	Mult Feat	Directory Listings				DL Explanation	Mog. Maintenance Issue	
				SL	ML	SL	ML						Straight Line	Non Pub	Dual Name	Additio nal Listing			Non- listed
8.B.M.11.1-2	Change	C/M	Change DL name on Bus 1 line account with 1 feature			X					X							N-8	
8.B.M.12.1-2	Change	C/M	Change DL name on Bus mult line account with circular hunt but no features				X	X		X									N-8
8.B.M.13.1-2	Change	C/M	Change DL name on Bus mult line account with multiple features				X				X								N-8
Miscellaneous UNE-P Residence																			
9.R.S.1.S.1-2	Suspend	S/M	Suspend service to Res 1 line account		X					X									N-8
9.R.S.1.R.1-2	Restore	B/M	Restore service to Res 1 line account		X					X									N-8
9.R.S.2.1-2	Disc	D/M	Disconnect 1 Res line		X					X									Y
9.R.M.3.S.1-2	Suspend	S/M	Suspend service to Res 2 line account			X				X									N-8
9.R.M.3.R.1-2	Restore	B/M	Restore service to Res 2 line account			X				X									N-8
9.R.M.4.1-2	Disc	D/M	Disconnect 2 Res line			X				X									Y
9.R.S.5.1-2	Outside Move	T/M	Outside move of single residence UNE-P line from location A to location B								X								N-8
9.R.M.6.1-2	Outside Move	T/M	Outside move of residence multiple UNE-P line from location A to location B									X							N-8

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Texas PUC Master Test Plan High-Level Timeline (Provisional) Framework for Test Participants Test Plans

ID	WBS	Task Name	Duration	Start	Finish	Prod	Resource Name
1	1	Texas PUC SBC OSS Assessment Project and Test Schedule	15d	12/14/98	7/12/99		
2	1.1	Develop Project Plan	13d	1/28/99	2/9/99		
3	1.1.1	High Level Project Plan	5d	1/28/99	1/29/99		Commission, Telco
4	1.1.2	Detailed Project Plan	8d	2/3/99	2/9/99	3	Commission, Telco
5							
6	1.2	Baseline Requirements	65d	12/14/98	3/11/99		Commission
7	1.2.1	Scope of work (11/13/98)	40d	12/14/98	2/5/99		Commission
8	1.2.2	Collaborative Process Report (11/18/98)	40d	12/14/98	2/5/99		Commission
9	1.2.3	LSOR (Version 3.3)	40d	12/14/98	2/5/99	8SS	SBC
10	1.2.4	OBP (12, 15, 1287)	1d	2/24/99	2/24/99		
11	1.2.5	Accessible Letters for 12/19 Release	64d	12/14/98	3/10/99	8SS	SBC
12	1.2.6	Performance/volume/capacity	35d	12/17/98	2/3/99	8SS	Commission
13	1.2.7	Baseline Requirements	1d	3/11/99	3/11/99	7.8	Commission
14							
15	1.3	Develop Master Test Plan (MTP)	44d	2/1/99	3/31/99		Commission
16	1.3.1	Define MTP team	1d	2/3/99	2/3/99		TAG
17	1.3.2	Define Test Plan Outline/Table of Contents/Responsibilities	3d	2/1/99	2/3/99		Telcordia
18	1.3.3	Provide outline to TAG team	3d	2/4/99	2/6/99	17S	Commission
19	1.3.4	Document Master Test Plan	38d	2/10/99	3/31/99		
20	1.3.4.1	Draft of MTP to the Commission	15d	2/10/99	3/2/99	18.1	Commission, Telco
21	1.3.4.2	Draft MTP to TAG (in progress, for discussion)	1d	3/3/99	3/3/99	20	Commission, Telco
22	1.3.4.3	TAG Members MTP Review	3d	3/4/99	3/8/99	21	TAG
23	1.3.4.4	Review Comments, Update Plan as Necessary	4d	3/8/99	3/11/99	22S	Telcordia
24	1.3.4.5	Review Updates with PUC	2d	3/12/99	3/15/99	23	Commission, Telco
25	1.3.4.6	TAG MTP Review/Final Comments	1d	3/16/99	3/16/99	24	TAG
26	1.3.4.6.1	Baseline Project Scope	1d	3/16/99	3/16/99		TAG
27	1.3.4.6.2	Baseline Scenario Scope	1d	3/16/99	3/16/99	26S	TAG
28	1.3.4.7	Review Comments, Update Plan as Necessary	2d	3/17/99	3/18/99	27	Commission, Telco
29	1.3.4.8	Baseline MTP	1d	3/18/99	3/18/99	28.1	Commission
30	1.3.4.9	Revise Master Test Plan as necessary	8d	3/22/99	3/31/99	29	Commission, Telco
31							
32	1.3.5	Develop Test Timeline	18d	2/8/99	3/3/99	17S	
33	1.3.5.1	Rough Draft Preliminary Test Timeline to TAG for review at 2	2d	2/8/99	2/8/99		Commission, Telco
34	1.3.5.2	Rough Draft Preliminary Test Timeline TAG Discussion	1d	2/10/99	2/10/99	33	TAG
35	1.3.5.3	Receive TAG Team Comments	5d	2/11/99	2/17/99	34	TAG, Telcordia
36	1.3.5.4	Integrate Assessment Activities	5d	2/10/99	2/16/99	34S	Commission, Telco
37	1.3.5.5	Update/Detail Timeline (Consider Comments, Detailed MTP)	4d	2/17/99	2/22/99	35	Commission, Telco
38	1.3.5.6	Review Timeline with the Commission	1d	2/23/99	2/23/99	37	Telcordia, Commis
39	1.3.5.7	Provide Timeline to TAG	1d	2/24/99	2/24/99	38	Commission
40	1.3.5.8	TAG Timeline Review	1d	2/25/99	2/25/99	38	TAG
41	1.3.5.9	Update as Necessary	3d	2/26/99	3/2/99	40	Commission, Telco
42	1.3.5.10	TAG Timeline Review	1d	3/3/99	3/3/99	41	TAG
43	1.3.5.11	Baseline Timeline	1d	3/3/99	3/3/99	42S	TAG

North PUC Master Test Plan High-Level Timeline (Phase) Framework for Test Participants Test Plans

ID	WBS	Test Name	Duration	Start	End	Responsible Parties
45	1.4	Functionality Testing Activities	144d	12/14/98	9/28/99	
46	1.4.1	Functionality Test Planning	78d	12/14/98	3/31/99	TAG
47	1.4.1.1	Verify Test Planning Enhances Criteria	1d	12/14/98	12/14/98	TAG
48	1.4.1.2	Create Test Specifications	65d	12/17/98	3/18/99	TAG
49	1.4.1.2.1	Test Specification template draft	1d	12/2/99	12/2/99	Telcordia
50	1.4.1.2.2	Test Specification Template review/walkthrough	1d	12/8/99	12/8/99	TAG
51	1.4.1.2.3	Define Scenario Scope	65d	12/17/98	3/18/99	TAG
52	1.4.1.2.3.1	Test Scenarios Matrix - High Level Definition (Pre-arc)	40d	12/18/98	2/10/99	TAG
53	1.4.1.2.3.2	Test Scenario Matrix Definitions	35d	12/17/98	2/3/99	TAG
54	1.4.1.2.3.3	Validate Test Scenario Matrix Coverage	15d	2/1/99	2/18/99	Telcordia
55	1.4.1.2.3.4	Provide Feature Compatibility (Groupings) Matrix	23d	1/8/99	2/6/99	AT&T
56	1.4.1.2.3.4.1	Feature Compatibility Scenarios	23d	1/8/99	2/5/99	AT&T
57	1.4.1.2.3.4.2	Feature Incompatibilities	17d	1/12/99	2/3/99	SBC
58	1.4.1.2.3.5	Map Features and Groupings to Test Scenarios	28d	2/8/99	3/16/99	AT&T
59	1.4.1.2.3.6	Provide Gap Analysis of AT&T and SWB Proposals	6d	2/28/99	3/3/99	55S Telcordia
60	1.4.1.2.3.7	Provide for Additional Test Coverage (Review conver	22d	2/1/99	3/1/99	54S TAG
61	1.4.1.2.3.8	Test Scenario Enhancements Based on Review	20d	2/2/99	2/28/99	54S TAG
62	1.4.1.2.3.9	Test Scenarios High Level Definition - Maint & Repair	15d	2/8/99	2/28/99	54S TAG
63	1.4.1.2.3.10	Test Scenarios High Level Definition - Billing	3d	3/1/99	3/3/99	TAG
64	1.4.1.2.3.11	Test Scenarios High Level Definition - Billing	12d	2/1/99	2/28/99	54S TAG
65	1.4.1.2.3.12	Provide Test Coverage Master Matrix (Features, Grc	52d	12/22/98	3/2/99	53S Sub-Group, TAG
66	1.4.1.2.3.13	Validate Test Coverage Master Matrix	3d	3/3/99	3/5/99	52S Telcordia
67	1.4.1.2.3.14	Test Coverage Results Review	1d	3/8/99	3/8/99	66E TAG
68	1.4.1.2.4	Baseline Test Scenario Scope	1d	3/8/99	3/8/99	Commission
69	1.4.1.2.5	Create Results, UNE-P Test Specification (AT&T)	36d	1/27/99	3/16/99	60 AT&T
70	1.4.1.2.5.1	Draft Documented (AT&T)	25d	1/27/99	3/1/99	AT&T
71	1.4.1.2.5.2	Define Dependencies of Test Scenarios (Help Map to	25d	1/27/99	3/1/99	70S AT&T
72	1.4.1.2.5.3	Belcore Review Draft Test Specification	10d	3/2/99	3/15/99	71 Telcordia
73	1.4.1.2.5.4	Update Specification (AT&T)	7d	3/8/99	3/15/99	72S AT&T
74	1.4.1.2.5.5	Baseline UNE-P, Resale Test Specification (PUC, AT	1d	3/18/99	3/18/99	73 AT&T, MCI, Commis
75	1.4.1.2.6	Create UNE-L, Test Specification (MCI)	36d	1/27/99	3/18/99	60 MCI
76	1.4.1.2.6.1	Draft Documented (MCI)	26d	1/27/99	3/1/99	MCI
77	1.4.1.2.6.2	Define Dependencies of Test Scenarios (Help Map to	25d	1/27/99	3/1/99	76S MCI
78	1.4.1.2.6.3	Belcore Review Draft Test Specification	10d	3/2/99	3/15/99	77 Telcordia
79	1.4.1.2.6.4	Update Specification (MCI)	7d	3/8/99	3/15/99	78S MCI
80	1.4.1.2.6.6	Baseline UNE-L Test Specification (PUC, AT&T, MCI)	1d	3/18/99	3/18/99	79 AT&T, MCI, Commis
81	1.4.1.2.7	Create Other Coverage (ADSL, ?) Test Specification (26d	1/28/99	3/2/99	60
82	1.4.1.2.7.1	Inform Other CLECs (Test Specification Expectations	3d	2/3/99	2/5/99	Others Representa
83	1.4.1.2.7.2	Draft Documented	22d	1/28/99	2/23/99	Others
84	1.4.1.2.7.3	Belcore Review Draft Test Specification	4d	2/24/99	3/1/99	83 Telcordia
85	1.4.1.2.7.4	Update Specification	1d	3/2/99	3/2/99	84 Others
86	1.4.1.2.7.5	Baseline Other Test Specification (PUC, AT&T, MCI, I	1d	3/3/99	3/3/99	85 Commission, AT&T
87	1.4.1.3	Complete Test Specifications	1d	3/17/99	3/17/99	74E
88	1.4.1.4	Provide CLEC Test Plan to Third Party Assessor	42d	1/27/99	3/24/99	AT&T, MCI, SBC (C

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Texas PUC Master Test Plan High-Level Timeline (Provisional Framework for Test Participants Test Plans)

ID	WBS	Task Name	Start	Finish	Prod Resource Name
89	1.4.1.5	Validate test coverage based on test specifications	3/31/89	3/30/89	66S Telcordia
90	1.4.1.6	Verify Exit Criteria	3/31/89	3/31/89	89 Commission, Telco
91					

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Team PUC Master Test Plan High-Level Timeline (Provides Framework for Test Participants Test Plans)

ID	WBS	Test Name	Describe	Start	Finish	Prod	Resource Name
92	1.4.2	Functionality Test Preparation	47d	1/27/99	3/31/99		
93	1.4.2.1	Verify Functionally Test Preparation Entrance Criteria	1d	2/12/99	2/12/99		TAG
94	1.4.2.2	Prepare Test "Friendlies"	46d	1/27/99	3/30/99		TAG
95	1.4.2.2.1	Define Number of "Friendlies" and Locations	20d	2/11/99	3/10/99		TAG
96	1.4.2.2.2	Recalls, UNE-P (AT&T)	46d	1/27/99	3/30/99		AT&T
97	1.4.2.2.2.1	Define "Friendlies" Management Approach	22d	1/27/99	2/24/99		AT&T
98	1.4.2.2.2.2	TAG Baseline Management Approach	3d	3/3/99	3/5/99	97	TAG
99	1.4.2.2.2.3	Validate Number of "Friendlies" (~525 (150 SBC, 25	20d	3/3/99	3/30/99	89S	AT&T, Telcordia, te
100	1.4.2.2.2.4	Solicit Initial Volunteers (Employees- Management, e	15d	1/27/99	2/15/99		AT&T
101	1.4.2.2.2.6	Define "Friendlies" Data (i.e., Prepare Facilities, etc.)	25d	2/12/99	3/18/99	122	AT&T, SBC
102	1.4.2.2.2.6	Map "Friendlies" to Test Cases (Validate "Friendlies"	20d	2/22/99	3/19/99	123	AT&T- depends on
103	1.4.2.2.2.7	Validate Mapping of "Friendlies" to test scenarios and	20d	2/28/99	3/25/99	102	Telcordia
104	1.4.2.2.2.8	Address Gaps in "Friendlies"	1d	3/28/99	3/28/99	103	TAG
105	1.4.2.2.2.9	Distribute "Friendlies" call scenarios packet	5d	3/22/99	3/28/99	102	AT&T, MCI, SBC, OI
106	1.4.2.2.2.10	Manage "Friendlies" Preparation Activities	30d	2/18/99	3/29/99	100	AT&T
107	1.4.2.2.3	MCI (UNE-L)	45d	1/27/99	3/29/99		
108	1.4.2.2.3.1	Define Location Management Approach (loop focus,	20d	1/27/99	2/22/99		MCI
109	1.4.2.2.3.2	TAG Baseline Management Approach	1d	2/23/99	2/23/99	108	TAG
110	1.4.2.2.3.3	Validate Number of Orders (~77)	30d	1/29/99	3/10/99		Telcordia, MCI
111	1.4.2.2.3.4	Identify Locations	15d	1/27/99	2/15/99		MCI
112	1.4.2.2.3.5	Define Location Data (i.e., Lines and Locations.)	20d	2/1/99	2/25/99	111	AT&T, SBC
113	1.4.2.2.3.6	Map Locations to Test Cases	20d	2/10/99	3/9/99		MCI- depends on c
114	1.4.2.2.3.7	Validate Mapping to test scenarios	5d	3/5/99	3/11/99	113	Telcordia
115	1.4.2.2.3.8	Address Discrepancies	1d	3/12/99	3/12/99	114	TAG
116	1.4.2.2.3.9	Manage Location Preparation Activities	30d	2/18/99	3/29/99	111	MCI
117	1.4.2.2.4	Others (Covid/Nightline, Malignance)	22d	1/27/99	2/24/99		
118	1.4.2.2.4.1	Determine Expectations?	22d	1/27/99	2/24/99		Others Representa
119	1.4.2.2.5	SBC	28d	2/1/99	3/10/99		
120	1.4.2.2.5.1	Validate Number of "Friendlies" (~150)	20d	2/11/99	3/10/99		AT&T, Telcordia, SE
121	1.4.2.2.5.2	Solicit Volunteers (Employees- Management)	11d	2/11/99	2/12/99		SBC
122	1.4.2.2.5.3	Define "Friendlies" Data/Prepare "Friendlies" Facilitie	6d	2/12/99	2/19/99	121	SBC
123	1.4.2.2.5.4	Provide "Friendlies" Information to AT&T for Manager	1d	2/22/99	2/22/99	122	SBC
124	1.4.2.2.5.5	Prepare "Friendlies" Facilities	10d	2/12/99	2/25/99	121	AT&T, SBC
125	1.4.2.3	Verify Functionally Test Preparation Exit Criteria	1d	3/31/99	3/31/99	96,1	

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Texas PUC Master Test Plan High-Level Timeline (P...)'s Framework for Test Participants Test Plans

ID	WBS	Task Name	Duration	Start	Finish	Predecessor Name
127	1.4.3	Functionality Test Execution	61d	4/1/99	6/22/99	Telecordia
128	1.4.3.1	Ensure Appropriate SME's Assistance During Test Interval	30d	4/2/99	5/11/99	Test Execution Test
129	1.4.3.2	Manage Test "Friendlies" or Locations	30d	4/1/99	5/10/99	AT&T, MCI
130	1.4.3.3	Verify Functionality Test Execution Entrance Criteria	1d	4/1/99	4/1/99	TAG
131						
132	1.4.3.4	Functionality Test Execution - Interval 1-1 (Bill Period 4/15, 16)	14d	4/1/99	4/19/99	
133	1.4.3.4.1	Completion Date Bill Period Dependency	1d	4/9/99	4/9/99	
134	1.4.3.4.2	Post Date Bill Period Dependency (Usage done by this interval)	1d	4/14/99	4/14/99	133
135	1.4.3.4.3	Verify Entrance Criteria	1d	4/1/99	4/1/99	TAG
136	1.4.3.4.4	Sanity/Acceptance test	1d	4/1/99	4/1/99	AT&T, MCI, Others
137	1.4.3.4.5	Perform Functional Testing During Test Interval Consistently	11d	4/1/99	4/14/99	
138	1.4.3.4.5.1	Pre-Order (Could be done 1 week in Advance- Preprovisioning)	2d	4/1/99	4/2/99	AT&T, MCI, Others
139	1.4.3.4.5.2	Order	7d	4/1/99	4/9/99	AT&T, MCI, Others
140	1.4.3.4.5.3	Provisioning (Complete by 4/9, Post by 4/14)	7d	4/1/99	4/9/99	AT&T, MCI, Others
141	1.4.3.4.5.4	Maintenance and Repair	4d	4/10/99	4/14/99	AT&T, MCI, Others
142	1.4.3.4.5.5	Billing (reflects end of interval)	10d	4/1/99	4/14/99	AT&T, MCI, Others
143	1.4.3.4.6	Verify Test Execution Complete	1d	4/1/99	4/1/99	AT&T, MCI, Others
144	1.4.3.4.7	Verify Functionality Test Execution Exit Criteria - Interval	1d	4/1/99	4/1/99	AT&T, MCI, Others
145	1.4.3.4.8	Perform Selective Test Cleanup Based on Next Process	2d	4/1/99	4/1/99	TAG
146						
147	1.4.3.5	Functionality Test Execution - Interval 2-1 (Bill Period 4/25, 1st)	14d	4/10/99	4/28/99	Primarily UNE-L and ADSL
148	1.4.3.5.1	Completion Date Bill Period Dependency	1d	4/20/99	4/20/99	Test Execution
149	1.4.3.5.2	Post Date Bill Period Dependency (Usage done by)	1d	4/23/99	4/23/99	148
150	1.4.3.5.3	Verify Entrance Criteria (Primarily for New Additional Test)	1d	4/10/99	4/10/99	Potential Bill Errors
151	1.4.3.5.4	Sanity/Acceptance test	1d	4/10/99	4/10/99	Additional Test
152	1.4.3.5.5	Perform Functional Testing During Test Interval Consistently	11d	4/10/99	4/23/99	needs
153	1.4.3.5.5.1	Pre-Order	5d	4/10/99	4/15/99	151
154	1.4.3.5.5.2	Order	5d	4/10/99	4/15/99	151
155	1.4.3.5.5.3	Provisioning (Complete by 4/20, Post by 4/23)	5d	4/10/99	4/15/99	151
156	1.4.3.5.5.4	Maintenance and Repair	2d	4/21/99	4/22/99	148
157	1.4.3.5.5.5	Billing (reflects end of interval)	11d	4/10/99	4/23/99	151
158	1.4.3.5.6	Verify Test Execution Complete	1d	4/26/99	4/26/99	153
159	1.4.3.5.7	Verify Functionality Test Execution Exit Criteria - Interval	1d	4/26/99	4/26/99	158
160	1.4.3.5.8	Perform Selective Test Cleanup Based on Next Process	2d	4/27/99	4/28/99	159
161						
162	1.4.3.6	Functionality Test Execution - Interval 3-1 (Bill Period 5/6, 7)	17d	4/18/99	5/7/99	Primarily UNE-L and ADSL
163	1.4.3.6.1	Completion Date Bill Period Dependency	1d	4/30/99	4/30/99	Test Execution
164	1.4.3.6.2	Post Date Bill Period Dependency (Usage done by)	1d	5/4/99	5/4/99	163
165	1.4.3.6.3	Verify Entrance Criteria (Primarily for New Additional Test)	1d	4/18/99	4/18/99	Potential Bill Error
166	1.4.3.6.4	Sanity/Acceptance test	1d	4/18/99	4/18/99	Additional Test
167	1.4.3.6.5	Perform Functional Testing During Test Interval Consistently	14d	4/18/99	5/4/99	needs
168	1.4.3.6.5.1	Pre-Order	5d	4/18/99	4/21/99	166
169	1.4.3.6.5.2	Order	5d	4/18/99	4/21/99	166
170	1.4.3.6.5.3	Provisioning (Complete by 5/2, Post by 5/4)	5d	4/18/99	4/21/99	166

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Texas PJL Member Test Plan High-Loyal Timeline (Provides Framework for Test Participants Test Plans)

ID	WBS	Task Name	Duration	Start	Finish	Prod Resource Name
171	1.4.3.6.5.4	Maintenance and Repair	1d	4/10/99	4/23/99	170
172	1.4.3.6.5.5	Billing (reflects end of interval)	1d	4/10/99	6/4/99	166
173	1.4.3.6.5	Verify Test Execution Complete	1d	6/5/99	6/5/99	188
174	1.4.3.6.7	Verify Functionality Test Execution Exit Criteria - Inps	1d	6/5/99	6/5/99	173
175	1.4.3.6.8	Perform Selective Test Cleanup Based on Next Proc	2d	6/5/99	6/7/99	174
176	1.4.3.7	Functionality Test Execution - Interval 1-2 (Bill Period 6/15 2pc)	27d	4/10/99	6/14/99	Primarily UNE-1
177	1.4.3.7.1	Completion Date Bill Period Dependency	1d	6/7/99	6/7/99	Test Execution
178	1.4.3.7.2	Post Date Bill Period Dependency (Usage done by)	1d	6/14/99	6/14/99	Potential Bill Error
179	1.4.3.7.3	Verify Entrance Criteria	1d	4/10/99	4/10/99	Additional Test
180	1.4.3.7.4	Sanity/Acceptance Test	1d	4/10/99	4/10/99	needs
181	1.4.3.7.5	Perform Functional Testing During Test Interval Consist	10d	4/10/99	4/22/99	
182	1.4.3.7.6	Pre-Order	2d	4/10/99	4/12/99	181
183	1.4.3.7.6.2	Order	7d	4/10/99	4/19/99	181
184	1.4.3.7.6.3	Provisioning (Complete by 5/9, Post by 6/14)	7d	4/10/99	4/19/99	181
185	1.4.3.7.6.4	Maintenance and Repair	6d	4/12/99	4/19/99	181
186	1.4.3.7.6.5	Billing (reflects end of interval)	10d	4/10/99	4/23/99	181
187	1.4.3.7.6	Verify Test Execution Complete	1d	4/23/99	4/23/99	183
188	1.4.3.7.7	Verify Functionality Test Execution Exit Criteria - Interval 1	1d	4/23/99	4/23/99	188
189	1.4.3.7.8	Perform Selective Test Cleanup Based on Next Process	2d	4/26/99	4/27/99	189
190		Functionality Test Execution - Interval 1-3 (Bill period 6/15, and bill cycle)	5d	4/29	6/18/99	
191	1.4.3.8	Depurates Need for Additional Test Cycle Analysis	3d	4/29/99	5/17/99	Interval needed as requested
192	1.4.3.8.1	Completion Date Bill Period Dependency	1d	6/9/99	6/9/99	
193	1.4.3.8.2	Post Date Dependency	1d	6/14/99	6/14/99	194S
194	1.4.3.8.3	Verify Entrance Criteria	1d	5/10/99	5/10/99	
195	1.4.3.8.4	Sanity/Acceptance Test	1d	5/10/99	5/10/99	
196	1.4.3.8.5	Perform Functional Testing During Test Interval Consisting of	7d	5/10/99	5/18/99	
197	1.4.3.8.6	Pre-Order	2d	5/10/99	5/11/99	197S
198	1.4.3.8.6.1	Order	2d	5/10/99	5/12/99	197S
199	1.4.3.8.6.2	Provisioning (Complete by 6/9, Post by 6/14)	7d	5/10/99	5/18/99	197S
200	1.4.3.8.6.3	Maintenance and Repair	2d	5/10/99	5/10/99	197S
201	1.4.3.8.6.4	Billing (reflects end of interval)	7d	5/10/99	5/18/99	197S
202	1.4.3.8.6.5	Verify Test Execution Complete	1d	5/18/99	5/18/99	197S
203	1.4.3.8.7	Verify Functionality Test Execution Exit Criteria - Interval 1-3	1d	5/19/99	5/19/99	199.2
204	1.4.3.8.8	Perform Selective Test Cleanup Based on Next Processing/Potential Returns	2d	6/17/99	6/18/99	204S
205	1.4.3.8.9		2d	6/17/99	6/18/99	205
206	1.4.3.9	Test Cleanup	47d	4/20/99	6/22/99	
207	1.4.3.9.1	AT&T	20d	4/21/99	5/17/99	145
208	1.4.3.9.2	MCI	20d	4/21/99	5/17/99	145 MCI
209	1.4.3.9.3	Others (Covad, Nightfire, Allegiance, etc.)	20d	4/21/99	5/17/99	145 Others
210	1.4.3.9.4	SBC	20d	4/20/99	5/14/99	145 SBC
211	1.4.3.9.5	Verify Test Execution Completion	1d	6/21/99	6/21/99	132 TAG
212	1.4.3.9.6	Verify Test Execution Exit Criteria	1d	6/22/99	6/22/99	214 TAG

Texas PUC Meter Test Plan High-Level Timeline (Provides Framework for Test Participants Test Plans)

ID	WBS	Task Name	Duration	Start	Finish	Prd	Resource Name
217	1.4.A	Functionality Test Analysis/Approval	65d	4/1/99	6/28/99		
218	1.4.A.1	Perform Functionality Test Analysis - Interval 1-1	48d	4/1/99	6/2/99		
219	1.4.A.1.1	Verify Functionality Test Analysis Entrance Criteria - Int	1d	4/1/99	4/1/99	136	Telcordia
220	1.4.A.1.2	Provide Functionality Test Results and Data Records Re	20d	4/1/99	4/27/99	219	Test Participants
221	1.4.A.1.3	Provide Performance Measures Data and Results	7d	4/16/99	4/26/99	136	SBC
222	1.4.A.1.4	Provide Analysis of Functionality Test Results	30d	4/16/99	5/13/99	136	Test Participants
223	1.4.A.1.5	Validate Process, Results	40d	4/10/99	6/2/99	222	Telcordia
224	1.4.A.1.6	Verify Functionality Test Analysis Exit Criteria for Interval	1d	6/3/99	6/3/99	223	Commission, Telco
225	1.4.4.2	Perform Functionality Test Analysis - Interval 2-1	62d	4/10/99	6/16/99		
226	1.4.4.2.1	Verify Functionality Test Analysis Entrance Criteria - Int	1d	4/10/99	4/10/99	150	Telcordia
227	1.4.4.2.2	Provide Functionality Test Results and Data Records Re	12d	4/10/99	4/26/99	227	Test Participants
228	1.4.4.2.3	Provide Performance Measures Data and Results	5d	4/20/99	4/26/99	228	SBC
229	1.4.4.2.4	Provide Analysis of Functionality Test Results	30d	4/13/99	5/21/99	228	Test Participants
230	1.4.4.2.5	Validate Process, Results	40d	4/26/99	6/17/99	228	Telcordia
231	1.4.4.2.6	Verify Functionality Test Analysis Exit Criteria for - Interv	1d	6/18/99	6/18/99	231	Commission, Telco
232	1.4.4.3	Perform Functionality Test Analysis - Interval 3-1	48d	4/15/99	6/16/99		
233	1.4.4.3.1	Verify Functionality Test Analysis Entrance Criteria -	1d	4/15/99	4/15/99		Telcordia
234	1.4.4.3.2	Provide Functionality Test Results and Data Records	12d	4/15/99	4/30/99	236	Test Participants
235	1.4.4.3.3	Provide Performance Measures Data and Results	12d	4/20/99	5/5/99	238	SBC
236	1.4.4.3.4	Provide Analysis of Functionality Test Results	30d	4/18/99	5/26/99	238	Test Participants
237	1.4.4.3.5	Validate Process, Results	40d	4/26/99	6/17/99	238	Telcordia
238	1.4.4.3.6	Verify Functionality Test Analysis Exit Criteria for - In	1d	6/18/99	6/18/99	238	Commission, Telc
239	1.4.4.4	Perform Functionality Test Analysis - Interval 1-2	48d	4/20/99	6/21/99		
240	1.4.4.4.1	Verify Functionality Test Analysis Entrance Criteria - Int	1d	4/20/99	4/20/99		Telcordia
241	1.4.4.4.2	Provide Functionality Test Results and Data Records Re	21d	4/20/99	5/17/99	243	Test Participants
242	1.4.4.4.3	Provide Performance Measures Data and Results ?	21d	4/20/99	5/17/99	244	SBC
243	1.4.4.4.4	Provide Analysis of Functionality Test Results	25d	4/20/99	5/21/99	245	Test Participants
244	1.4.4.4.5	Validate Process, Results	45d	4/20/99	6/18/99	244	Telcordia
245	1.4.4.4.6	Verify Functionality Test Analysis Exit Criteria for - Interv	1d	6/21/99	6/21/99	247	Commission, Telco
246	1.4.4.5	Perform Functionality Test Analysis - Interval 1-3 (3rd Billing Cycle)	5d	4/2/99	4/2/99		
247	1.4.4.5.1	Determine Need for Additional Test Cycle Analysis	3d	4/2/99	4/2/99	245	
248	1.4.4.6	Validate Functionality Test Analysis Complete	6d	6/21/99	6/28/99		TAG
249	1.4.4.6.1	Provide Functionality Test Report	6d	6/21/99	6/28/99	247	Commission

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Texas PUC Master Test Plan High-Level Timeline - Milestones Framework for Test Participants Test Plans

ID	WBS	Task Name	Duration	Start	Finish	Prod	Resource Names
266	1.0	Capacity Testing	131d	1/14/99	7/12/99		
267	1.0.1	Capacity Test Planning	44d	1/14/99	3/16/99		
268	1.5.1.1	Determine Approach	18d	2/10/99	3/5/99		TAG
269	1.5.1.2	Provide Plan to Support Approach	5d	3/8/99	3/12/99	258	Test Participants
270	1.5.1.3	Verify Capacity Planning Entrance Criteria	1d	3/15/99	3/15/99	258	Test Participants
271	1.5.1.4	Determine Test Requirements (i.e., Measures/Benchmarks R)	15d	2/11/99	3/3/99		TAG
272	1.5.1.5	Determine Test Volumes	15d	1/14/99	2/3/99		Telcordia
273	1.5.1.6	Create Capacity Test Specification - Primarily Methodology	22d	2/3/99	3/3/99		SBC, TAG
274	1.5.1.6.1	Define Source of Measurements	15d	2/3/99	2/22/99		SBC
275	1.5.1.6.2	Define Measurements Processes (measuring, collecting)	15d	2/5/99	2/24/99	284	SBC
276	1.5.1.6.3	Determine Workload Mix and Arrival Rate Schedule	15d	2/11/99	3/3/99	282	TAG
277	1.5.1.7	Validate (Perform Walk-Through of Process, Test Env Requirements)	2d	3/8/99	3/9/99	284	Telcordia
278	1.5.1.8	Validate Source and Processes	10d	2/28/99	3/10/99	285	Telcordia
279	1.5.1.8	Verify Capacity Planning Exit Criteria	1d	3/15/99	3/15/99	286	Telcordia
280	1.0.2	Capacity Test Preparation	8d	4/2/99	4/8/99		
281	1.5.2.1	Verify Capacity Test Preparation Entrance Criteria	1d	4/2/99	4/2/99		
282	1.5.2.2	Perform Pre-Order Walkthru to Third Party Consultant:	2d	4/2/99	4/6/99		AT&T
283	1.5.2.2.1	Environment Readiness	1d	4/5/99	4/5/99	272	AT&T, Telcordia
284	1.5.2.2.2	Workload Mix Scripts	1d	4/2/99	4/2/99	272	AT&T, Telcordia
285	1.5.2.2.3	Test Execution Arrival Rate Capabilities	1d	4/2/99	4/2/99	272	AT&T, Telcordia
286	1.5.2.2.4	Test Scripting and Processing Tools Validation	1d	4/2/99	4/2/99	272	AT&T, Telcordia
287	1.5.2.3	Perform Order Walkthru to Third Party Consultant:	3d	4/2/99	4/6/99		AT&T, MCI
288	1.5.2.3.1	Environment Readiness	2d	4/5/99	4/6/99	272	AT&T, MCI, Telcord
289	1.5.2.3.2	Workload Mix Scripts	2d	4/2/99	4/5/99	286	AT&T, MCI, Telcord
290	1.5.2.3.3	Test Execution Arrival Rate Capabilities	2d	4/2/99	4/5/99	280	AT&T, MCI, Telcord
291	1.5.2.3.4	Test Scripting and Processing Tools Validation	2d	4/2/99	4/5/99	280	AT&T, MCI, Telcord
292	1.5.2.4	Verify Capacity Test Preparation Exit Criteria	2d	4/7/99	4/8/99	278	AT&T, MCI, Telcord
293	1.5.3	Capacity Test Execution (Illustrative Purposes)	33d	4/5/99	5/17/99		Test Execution
294	1.5.3.1	Verify DataGate, Verigate Release (Testing can be done anytime if AT&T Ready)	1d	4/5/99	4/5/99		will occur
295	1.5.3.2	Verify Capacity Test Execution Entrance Criteria	1d	4/5/99	4/5/99		within a given
296	1.5.3.3	Verify Test S/MEx Available	1d	4/7/99	4/7/99	283	internal across the
297	1.5.3.4	Perform Pre-Order Capacity Test Execution	1d	4/7/99	4/7/99	285	Test 2 weeks of month
298	1.5.3.5	Verify Pre-Order Test Completion	1d	4/7/99	4/7/99	289	Depicts dependency
299	1.5.3.6	Test Environment Cleanup (if needed)	1d	4/8/99	4/8/99	292	and internal needs
300	1.5.3.8	Verify LASR Release Available (Testing can be done anytime after, MCI Ready)	1d	5/3/99	5/3/99		Depicts dependency
301	1.5.3.9	AT&T Ready	1d	5/4/99	5/4/99	297	and internal needs
302	1.5.3.10	Perform Order Capacity Test Execution - Out of hours run - Same S	1d	5/4/99	5/4/99	295	
303	1.5.3.11	Verify Order Test Completion	1d	5/9/99	5/9/99	292	AT&T, MCI
304	1.5.3.12	Test Environment Cleanup	1d	5/9/99	5/9/99	298	AT&T, MCI
305	1.5.3.13		1d	5/10/99	5/10/99	299	Test Participants

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Texas PUC Master Test Plan High-Level Timeline (Provides Framework for Test Participants Test Plans)

ID	WBS	Test Name	Duration	Start	Finish	Prod	Resource Names
301							
302	1.5.3.14	Perform Order Capacity - Production Environment	1d	5/12/99	5/12/99	3005	AT&T/MCI
303	1.5.3.13	Verify Order Test Completions	1d	5/13/99	5/13/99	302	Test Participants
304	1.5.3.16	Test Environment Cleanup	1d	5/14/99	5/14/99	303	Test Participants
305							
306	1.5.3.17	Verify Capacity Test Execution Exit Criteria	1d	5/17/99	5/17/99	202, TAG	
307							
308	1.5.4	Capacity Analysis (Illustrative Purposes Only - over the month)	26d	5/18/99	6/22/99		
309	1.5.4.1	Verify Capacity Test Analysis Entrance Criteria	1d	5/18/99	5/18/99	306	Telecordia
310	1.5.4.2	Acquire Capacity Test Execution Required Reports/Data	2d	5/18/99	5/19/99	306	Telecordia
311	1.5.4.3	Validate Capacity Test Process/Reports/Analysis	20d	5/20/99	6/16/99	310	Telecordia
312	1.5.4.4	Verify Capacity Test Analysis Exit Criteria	1d	6/17/99	6/17/99	311	Telecordia
313							
314	1.5.4.5	Approve Capacity Test Results	3d	6/18/99	6/22/99	312	Telecordia/Commissio
315							
316	1.6.6	Commission Signoff	10d	6/20/99	7/12/99	284	Commission
317							
318							
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EXHIBIT

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07/12/99
Compliance Filing

New York State
Carrier-to-Carrier Guidelines
Performance Standards and Reports

Bell Atlantic Reports

July 1999

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INTRODUCTION

This section of the New York State Carrier-to-Carrier Guidelines Performance Standards and Reports provides the metrics and performance standards that will be applicable to New York Telephone Company, d/b/a Bell Atlantic-New York (“BA-NY”). A comprehensive explanation of the definitions of the standards, the measurement methodologies, reporting levels, geography covered, and current product intervals is included. In addition, this section includes a glossary and appendices that provide explanatory material related to the metrics and standards. The appendices also include a description of a statistical methodology that will be applied to help assess whether there is any difference between the delivery of BA-NY retail services and its wholesale products.

BA-NY will provide Performance Reports on a monthly basis to the Competitive Local Exchange Carriers (“CLECs”) that were members of the working group in Case 97-C-0139 and to any CLEC that has previously made a request to receive Performance Reports issued pursuant to the Interim Guidelines, adopted in Case 97-C-0139. Any other CLEC that wants to obtain reports produced pursuant to the Guidelines must contact the Account Manager that BA-NY has designated for that CLEC to make the appropriate arrangements to receive the reports.

Pre-Ordering (PO)

Function:

PO-1 Response Time OSS Ordering Interface

Definition:

Response time – the time, in seconds, that elapses from issuance of a query request from EnView (formerly called Sentinel) to receipt of a response by the EnView robots. For CLECs this performance is measured through the DCAS access platform. For BA this performance is measured directly to and from the Operations Support System. (OSS). The response time will be measured and reported separately for the EIF, EDI and CORBA interfaces without regard to CLEC usage of each interface. The EnView process will be expanded/updated to monitor and report response times for future OSS interface processes. Note: should any interface be retired, (such as EIF) no further transaction times will be completed.

Average Response time – the sum of all the response times for the successful transactions divided by the number of successful transactions in the report period.

Successful Transactions: A retail pre-order response time transaction is considered successful by the EnView robots when a predefined response is received in a specific field and screen. The robot is coded to wait until the successful response is received. If it is not received within a predetermined amount of time then a time-out is created. The time-out transaction is removed from the daily average response time queue for that transaction type and listed as a time-out error.

For DCAS transactions, a request is sent to the interface. Each request has a unique name based on time and date. The robot monitors for a matching response, and identifies successful responses by the file extension names. However, the file extension varies according to whether the transaction is successful or experiences an error or time-out condition. Successful response for an Address Validation request is identified by a file extension of ".ada." The file is then read to ensure it starts and ends with the appropriate indicators for a successful transaction.

A rejected query is a query that cannot be processed by Bell Atlantic - New York's pre-ordering system due to incomplete or invalid information submitted by a CLEC, and which results in an error message to the CLEC. The Enview process deliberately includes invalid transactions to enable measurement of rejected query response time.

Time-outs are DCAS transactions that are set at 60 seconds except for the Telephone Number Select transaction which is set at 330 seconds to prevent conflicts in processing at different data points. Time-outs are set at long intervals to ensure that the measure includes long response times, but excludes transactions that will never complete, which enables accurate identification and reporting of system downtime. Time-outs that are removed from queues for average response time calculations are included in the monitoring for OSS Interface Availability calculations.

A new % Timeout measurement will be implemented for the 3rd quarter 1999 which will provide a measure of the number of timeouts to the total transactions in a report period.

Sampling Methodology and Rational for Pre-Order Transactions: Because EnView transactions are used in support of the measure of OSS Availability (PO-2), transactions are run continuously and evenly throughout the day.

Report period – Monday through Friday from 08:00 to 17:59 excluding the following major holidays: New Years Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day, and Christmas Day.

PO-1 Pre-Order Response Time (continued)

Methodology:

ENVIEW - a performance evaluation software tool that measures and records the actual response time of transactions through emulation by logging into applications and executing individual transactions. Performance is evaluated on the basis of defined objectives for response time for each transaction. EnView emulates the transactions of a Bell Atlantic service representative using the OSS; and emulates a CLEC representative generating OSS transactions through the DCAS access platform. By replicating the keystrokes of a representative, EnView measures transaction time from the point the "enter" key is hit until a response is received back on the display screen. A statistically valid sample size of at least ten Transactions per hour per transaction type, for each interface is taken from Monday - Friday 8 AM to 6 PM.

Exclusions:

- Normal exclusions include Saturday, Sunday, and major holidays, as well as hours outside of the normal report period.

NOTE: *If response time aberrations occur due to failures of the EnView robot itself or the network between EnView and DCAS or between EnView and the BA OSS, BA will note such failure times and report the data without exclusion in a footnote on the report.*

Performance Standard:

For PO-1-01 through PO-1-07: Parity with Retail plus not more than 4 seconds. 4-Second difference allows for variations in functionality and additional security requirements of interface. For PO-1-08: Not greater than 0.33%.

Formula:

Σ Response Times from enter key to reply on screen for each transaction / Number of Simulated Transactions for each transaction type.

Report Dimensions:

Company: <ul style="list-style-type: none"> • BA Retail • CLEC Aggregate 	Geography: <ul style="list-style-type: none"> • State
--	--

Products	CLEC Aggregate: <ul style="list-style-type: none"> • EIF • EDI • CORBA
-----------------	---

Sub-Metrics – PO-1 Response Time OSS Ordering Interface

PO-1-01	Average Response Time – Customer Service Record (1) ¹	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for CSR transactions.	Number of CSR transactions simulated by EnView.
PO-1-02	Average Response Time – Due Date Availability (3)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Due Date Availability.	Number of Due Date availability transactions simulated by EnView.

¹ (#) indicates metric number from Interim Guidelines

Sub-Metrics – (continued) Response Time OSS Ordering Interface		
PO-1-03	Average Response Time – Address Validation (4)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Address Validation.	Number of address validation transactions simulated by EnView.
PO-1-04	Average Response Time – Product & Service Availability (5)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Product and Service Availability.	Number of Product & Service availability transactions simulated by EnView.
PO-1-05	Average Response Time – Telephone Number Availability & Reservation ² (6)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for TN Availability/Reservation.	Number of TN Availability/Reservation transactions simulated by EnView.
PO-1-06	Average Response Time – Facility Availability (Loop Qualification) (New) 1999 development when functionality is available.	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Loop Qualification.	Number of Loop Qualification transactions simulated by EnView.
PO-1-07	Average Response Time – Rejected Query (New) 1999 development ³	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for a rejected query.	Number of rejected query transactions simulated by EnView.
PO-1-08	% Timeouts (New) 1999 development ⁴	
Calculation	Numerator	Denominator
	Count of transactions that timeout	Total transactions

² While Address Validation can be completed on a stand-alone basis, TN reservation is always combined with Address Validation. For BA retail representatives this is a required two step process requiring two separate transactions.

³ The reporting for PO-01-07 will begin in July 1999 for the month of June.

⁴ The reporting for PO-01-08 will begin in July 1999 for the month of June.

Function:**PO-2 OSS Interface Availability****Definition:**

“OSS Interface Availability” measures the time during which the electronic OSS Interface is actually available as a percentage of scheduled availability. Bell Atlantic service representatives and CLEC service representatives obtain pre-ordering information from the same underlying OSS. As a result, if a particular OSS is down, it is equally unavailable to Bell Atlantic employees and to CLEC employees. Any difference in availability, therefore, will be caused by unavailability of the interface.

Scheduled Availability

- Prime Time: 6 AM to 12:00 Midnight EST Monday through Saturday, excluding Holidays
- Non-Prime Time: 12:01 to 5:59 AM EST Monday through Saturday, and Sundays and Holidays

Note: the number of hours of downtime will be noted in the reports under “observations”.

Separate measurements will be performed for each of the following: Pre-Ordering EDI, Pre-Ordering Web GUI, and Maintenance Web GUI. The EnView process will be expanded/updated to monitor and report on future OSS processes.

Methodology:

Bell Atlantic is modifying the methodology used to calculate system outages, with implementation planned for September 1999. Bell Atlantic will continue to use EnView as a means of monitoring all BA systems, including retail OSS. However, BA will measure reported outages, based on actual reported time frames as well as any outages captured by EnView and not reported by CLECs. Additionally if an outage affects only one CLEC, the system availability will be adjusted based on the number of user ID's assigned to that CLEC. For example, if a single CLEC experienced a 3 hour outage, due to a Bell Atlantic problem, system outage would be counted, on a pro-rated basis based on the number of user ID's of the CLEC with the problem. In this way, outages that impact a single CLEC, but that do not necessarily show up in EnView will be captured. EnView will be used as an alarm for system availability and to supplement CLEC reported outages. If no CLEC reported an outage, but EnView detected an outage, the EnView outage would be included as if the entire CLEC population experienced the outage.

EnView measurement of availability of the EDI interface will be as follows: The mechanized OSS interface availability process is based on the transactions created by the EnView Robots. The program determines whether the transactions are successful or unsuccessful, or that no transactions are issued (not polled). Transactions are processed by transaction type and separately for each interface type and OSS. The hours of the day are divided into 10-minute measurement periods.

If EDI for any Pre-Order transaction type in a 10-minute measurement period has at least one successful transaction, then EDI is considered available. Unavailable time is calculated only when all EDI transactions are unsuccessful and at least one of the corresponding OSS transactions is successful. This indicates that EDI was not available while at least one OSS was available. In this case, the 10-minute measurement period is counted as “unavailable”. If it is determined that no transactions were issued, then the 10-minute measurement period is excluded from all calculations since this is an indication of an EnView problem and not an EDI problem. Availability is calculated by dividing the total number of 10-minute measurement periods in a 24-hour day (excluding unmeasured 10-minute measurement periods) into the number of periods with no successful transactions for the day and subtracting this from 1 and multiplying by 100. For example, there are potentially 96 10-minute measurement periods in a 16-hour period. If two 10-minute measurement periods lack successful transactions, then availability equals $(1 - (2/96)) \times 100 = .97.92\%$ Availability.

Methodology – PO-2 OSS Availability (continued)

Web GUI: BA will implement, date to be determined, a mechanized means to measure availability of the Web GUI interface. Until mechanized measurement of availability of the Web GUI interface is operational, BA will measure availability of the Web GUI interface based on out of service troubles reported by CLECs. Out of service troubles must be reported by CLECs to BA’s designated trouble reporting point. Once mechanized monitoring is in effect, the Web GUI measurement will be identical to EDI.

Trouble Logs: BA will make available for inspection by the CLEC BA’s logs of CLEC reports that the interface is not available.

Exclusions:

The following exclusions will apply

- Troubles reported but not found in BA
- Troubles reported by a CLEC that were not reported to BA’s designated trouble reporting point.

Performance Standard:

Metric PO-2-02: ≥ 99.5%

Formula:

$[(\text{Number of hours scheduled less number of scheduled hours not available}) / (\text{Number of hours scheduled})] \times 100.$

Report Dimensions:

Company: • CLEC Aggregate	Geography: • State Reporting
Products	<ul style="list-style-type: none"> • Maintenance Web GUI (RETAS) • Pre-Order/Order Web GUI • EDI

Sub-Metrics:

PO-2-01	OSS Interface Availability – Total	
Calculation	Numerator	Denominator
	(Number of Hours in Month) - (Number of Hours Interface is not available during Month).	Number of Hours in Month.
PO-2-02	OSS Interface Availability – Prime Time	
Calculation	Numerator	Denominator
	(Number of Prime Time Hours in Month) - (Number of Prime Time Hours in Month Interface is not available).	Number of Prime Time Hours in Month.
PO-2-03	OSS Interface Availability – Non-Prime	
Calculation	Numerator	Denominator
	(Number of Non-Prime Time Hours in Month) - (Number of Non-Prime Time Hours in Month Interface is not available).	Number of Non-Prime Time Hours in Month.

Function:		
PO-3 Contact Center Availability		
Definition:		
<p><u>Contact Center Availability</u> Hours of operation of Center supporting CLECs for ordering, provisioning, maintenance and billing issues. Contact with CLECs is designed to take place via direct access systems. Carrier support centers are designed to handle fall out and not large call volume.</p> <p>Also includes <u>Speed of Answer</u> – CLEC centers. Measured for Ordering and Repair queues. Reported out of the Automated Call Distributor (ACD). Speed of Answer measure includes calls that go to the main number in the center, either directly or from overflow (CLECs choosing the option of the main number).</p> <p>Note: consistent with proposed end user standard, % within 30 seconds includes 15% of Abandons and 10% of busies in denominator.</p> <p><u>Speed of Answer</u> is measured in seconds from the time a call enters the BA ACD until it is answered by a representative. CLECs have the choice of calling the order processing 800 number, in which case the call is directed to the next available representative through an ACD. Alternatively, CLECs can call their dedicated representatives on the representative's direct line. If the representative is unavailable, the CLEC can leave a voice mail or press 0 and be transferred to the pool of representatives. BA measures the speed of answer for calls to the 800 number and for calls where the CLEC presses 0 to speak to the next available representative. For calls to the 800 number, the measurement begins when the call enters BA's ACD; for calls to a dedicated representative, the measurement begins when the CLEC presses 0. In each case, the measurement ends when the call is answered by a representative.</p>		
Exclusions:		
Calls directed to and answered by dedicated representatives		
Performance Standard:		
<p>Center Hours of Operation:</p> <ul style="list-style-type: none"> Repair Help Desk: 24 Hours/Day – 7 Days a week Order Entry Assistance: 7AM to Midnight M-F and 8AM to 6PM Sat. Order Processing Assistance: 7AM to 6PM M-F Billing & Collections: 7AM to 6PM M-F System Administration 8AM to 6PM M-F Pre-Order Center: Such center does not exist. Pre-order assistance is handled by Order Entry Assistance or system administration, depending on the nature of the problem. <p>To match proposed End User Standard: Speed of Answer: 80% within 30 Seconds</p>		
Products	• Resale	• UNE
Sub-Metrics		
PO-3-01	Average Speed of Answering – Ordering (New)	
Calculation	Numerator	Denominator
	Sum of time from call initiated to call answered for calls placed to main number through the automatic call distributor (ACD).	Total Calls Answered by ordering center.
PO-3-02	% Answered within 30 Seconds – Ordering (New)	
Calculation	Numerator	Denominator
	Count of calls to main number answered within 30 seconds of call received by the ACD.	Total Calls Answered in ordering center plus 15% of abandoned calls plus 10% of busy calls.

Sub-Metrics (continued) Contact Center Availability		
PO-3-03	Average Speed of Answering – Repair (New)	
Calculation	Numerator	Denominator
	Sum of time from call initiated to call answered for calls placed to main repair number through the call distributor (ACD.)	Total Calls Answered by repair center.
PO-3-04	% Answered within 30 Seconds – Repair (New)	
Calculation	Numerator	Denominator
	Count of calls to main number answered within 30 seconds of call received by the ACD.	Total Calls Answered in repair center plus 15% of abandoned calls plus 10% of busy calls.

Function:		
PO-4 Timeliness of Change Management Notice		
Definition:		
The percent of change management notices (i.e., notices scheduling interface affecting changes) and documentation availability before implementation sent according to prescribed timeliness standards within prescribed timeframes. Documentation should not be considered available until all material changes are made.		
Exclusions:		
None:		
Performance Standard:		
Performance standards are set forth in the change management processes and procedures. BA will comply with applicable change management processes and procedures. Performance standard for % Change Management Notices sent on time is 95% or greater and no delayed notices and documentation over 8 days. * regulatory changes will vary based on application law/regulatory rules		
Timeliness Standards:		
Change type	<u>Change Notification:</u> Interval between notification and implementation	<u>Change Confirmation:</u> Final Documentation Availability before implementation ⁵
Type 5 – TC originated	>= 66 days	>= 45 days
Type 4 – Bell Atlantic originated	>= 66 days	>= 45 days
Type 3 – Industry Standard	>= 66 days	>= 45 days
Type 2 – Regulatory	Time periods established in Regulatory Order. If no time periods set, default to above time period.	Time periods established in Regulatory Order. If no time periods set, default to above time period.
Type 1 – Emergency Maintenance	Notification before implementation	N/A
Products	<u>Change Notification:</u> <ul style="list-style-type: none"> • Type 1 – Emergency Maintenance • Type 2 - Regulatory • Type 3 – Industry Standard • Type 4 – BA originated • Type 5 – TC originated 	<u>Change Confirmation</u> <ul style="list-style-type: none"> • Type 2 - Regulatory • Type 3 – Industry Standard • Type 4 – BA originated • Type 5 – TC originated
Sub-Metrics		
PO-4-01	% Change Management Notices sent on Time (New)	
Calculation	Numerator	Denominator
	Change management notifications sent within required time frames.	Total number of change management notices sent.
PO-4-02	Change Management Notice – Delay 1 to 7 days (New)	
Calculation	Data Value	
	Cumulative delay days for all notices sent 1 to 7 days late	
PO-4-03	Change Management Notice – Delay – 8 plus days (New)	
Calculation	Data Value	
	Cumulative delay days for all notices sent 8 or more days late	

⁵ Type 1 change confirmation is not applicable

Function:		
PO-5 Average Notification of Interface Outage		
Definition:		
The average amount of time that elapses between BA identification of an interface outage and BA notification to CLECs that an outage exists. Notice will be provided by electronic mail.		
Exclusions:		
None.		
Performance Standard:		
Not more than: 20 minutes.		
Report Dimensions		
Company:		Geography:
<ul style="list-style-type: none"> • CLEC Aggregate 		<ul style="list-style-type: none"> • BA North States
Sub-Metrics		
PO-5-01	Average Notice of Interface Outage (New)	
Calculation	Numerator	Denominator
	(Date and time of outage notification to CLECs) - (Date and time interface outage was identified by BA)	Total number of interface outages for which notice was given

Function:		
PO-6 Software Validation		
Definition:		
<p>Bell Atlantic maintains a test deck of transactions that will be used to validate that functionality in a software release works as prescribed. Each transaction in the test deck will be assigned a weight factor, which will be based on the weights that have been assigned to the metrics in any Performance Assurance Plan that the Commission may adopt in relationship to BA-NY's application to provide interLATA services in New York. Within the software validation metric, weight factors will be allocated among transaction types (i.e., pre-order, resale-order, UNE-order, platform-order) and then equally distributed across specific transactions within type. The initial array of weights for the transaction types are displayed in Appendix O. If test transactions are added to the test deck, the distribution of weights between transaction types will be retained, and then equally re-distributed across specific transactions within type. The allocation of weight factors among transaction types may be adjusted as part of the annual review process.</p> <p>The test deck will be executed by Bell Atlantic - New York at the start of the QA and at the completion of QA. Within 1 business day, following a non-emergency software release to production as communicated through Change Management, BA-NY will begin to execute the test deck in production using training mode. Upon completion of the test BA-NY will report the number of test deck transaction that are rejected or otherwise fail while executing the test. Each failed transaction will be multiplied by the transaction's weight factor.</p> <p>A transaction is defined as failed if the request cannot be submitted or processed, or results in incorrect or improperly formatted data.</p> <p>This software validation metric is defined as the ratio of the sum of the weights of failed transactions in production using training mode to the sum of the weights of all transactions in the test deck.</p>		
Exclusions:		
None		
Performance Standard:		
≤ 5 %		
Sub-Metrics		
PO-6-01	Software Validation (New)	
Calculation	Numerator	Denominator
	sum of (weights of failed transactions)	sum of (weights of all transactions in the test deck)

Function:					
PO-7 Software Problem Resolution Timeliness					
Definition:					
Each month, Bell Atlantic will track the number of rejected pre-order and order transactions reported to the Help Desk, and resulting from execution of the test deck and the time frame to resolve. Rejected transactions caused by Bell Atlantic code or documentation errors or omissions that result in type 1 changes are production referrals for the purposes of this metric.					
PO-7-01 is defined as the ratio of production referrals resolved within target response intervals to the total number of production referrals, during the 30 calendar days following a non-emergency software release.					
Exclusions:					
Pre-orders and orders received after 6:00 PM on Friday and before 9:00 AM on Monday will be treated as received at 9:00 AM Monday.					
Performance Standard:					
≥ 95% according to schedule below:					
Problem Resolution Timeliness Standard measured from time reported to the Help Desk: (See Appendix O).					
Change type	Timeliness standard:				
Orders rejected, with no workaround	48 hours				
Orders rejected, with workaround	10 days				
Sub-Metrics					
PO-7-01	% Software Problem Resolution Timeliness (New)				
Calculation	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%;">Numerator</th> <th style="width: 50%;">Denominator</th> </tr> </thead> <tbody> <tr> <td>number of production referrals resolved within timeliness standard</td> <td>Total number production referrals</td> </tr> </tbody> </table>	Numerator	Denominator	number of production referrals resolved within timeliness standard	Total number production referrals
Numerator	Denominator				
number of production referrals resolved within timeliness standard	Total number production referrals				
PO-7-02	Delay Hours – Software Resolution – Change – Transactions failed, no workaround (New)				
Calculation	Data Value				
	Number of cumulative delay hours (i.e., beyond the 48-hour standard) for Identified software resolution changes associated with order rejects with no workaround.				
PO-7-03	Delay Days – Software Resolution – Change – Transactions failed with workaround (New)				
Calculation	Data Value				
	Number of cumulative delay days (i.e., beyond the 10-day standard) for identified software resolution changes associated with order rejects with a workaround.				
PO-7-04	Delay Hours - Failed/Rejected Test Deck Transactions – Transactions failed, no workaround ⁶ (New)				
Calculation	Data Value				
	Number of cumulative delay hours (i.e., beyond the 48-hour standard) for software resolution changes associated with order rejects with no workaround for Test Deck Transactions				

⁶ This performance measure is to address the resolution timeliness for failed or rejected test deck transactions that are executed in production using training mode.

Ordering (OR)

Function:	
OR-1 Order Confirmation Timeliness	
Definition:	
<u>Resale & UNE:</u>	
<p><u>Order Confirmation Response Time:</u> The amount of elapsed time (in hours and minutes) between receipt of a valid order request (DCAS) (or fax date and time stamp) and distribution of a service order confirmation. Orders that are rejected will have the clock re-started upon receipt of a valid order. Partial migrations for less than 10 lines – with accounts that include more than 10 lines that must be rearranged will be treated as 10 lines or greater.</p> <p><u>Average Confirmation Response Time:</u> The mean of all confirmation response times associated with a product group.</p> <p><u>Percent of Orders Confirmed On Time:</u> The percentage of orders confirmed within the agreed upon timeframes as specified in the Performance Standards.</p>	
<u>Trunks:</u>	
The amount of time in business days between receipt of a clean ASR (received date restarted for each SUPP) and distribution of a firm order confirmation. Measures service orders completed between the measured dates.	
<u>Notes:</u>	
<p>(1) Rejected Orders – Orders failing “Basic front-end edits”⁷ are not placed on Completed PON Master File.</p> <p>(2) Bell Atlantic - New York includes in the Order confirmation Timeliness measurement CLEC requests for resent confirmations that are submitted electronically as well as resent confirmations due to Bell Atlantic - New York’s error in initial confirmation⁸. The measurements are based on confirmed orders. Also included are cancelled orders.</p> <p>(3) If no order confirmations time exists due to a missing order confirmations, BA-NY will use the completion notification time.</p>	
Exclusions:	
<u>Resale & UNE:</u>	
<ul style="list-style-type: none"> • BA Test Orders⁹ • Orders that are not completed or cancelled • Weekend and Holiday Hours (Other than Flow-through) – Weekend Hours are from 5:00pm Friday to 8:00am Monday. Holiday Hours are from 5:00pm of the business day preceding the holiday to 8:00am of the first business day following the holiday. These hours are excluded from the elapsed time when calculating the response times for non-flow-through requests. 	
Report Dimensions	
Company: <ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 	Geography: <ul style="list-style-type: none"> • State

⁷ Basic front-end edits – see Glossary.

⁸ Resent confirmations due to CLEC error – such as duplicate PON numbers, or confirmations resent to reschedule a missed provisioning appointment – either due to CLEC, End User or BA-NY reasons are not counted as resent confirmations.

⁹ BA-Test Orders – see Glossary.

Performance Standard: OR-1 Order Confirmation Timeliness		
95% On Time According to schedule below:		
Resale:	UNE:	Interconnection Trunks:
Electronically Submitted Orders: <i>POTS/Pre-Qualified Complex:</i> <ul style="list-style-type: none"> Flow-Through Orders: 2 Hours Orders with < 10 Lines: 24 Hours Orders with ≥ 10 Lines: 72 Hours <i>Complex POTS Services (ISDN) (requiring loop qualification)</i> <ul style="list-style-type: none"> Orders with < 10 Lines: 72 Hours Orders with ≥ 10 Lines: 72 Hours <i>Special Services:</i> <ul style="list-style-type: none"> Orders with < 10 Lines: 48 Hours Orders with ≥ 10 Lines: 72 Hours ¹⁰ Faxed/Mailed Orders: <i>Not available for Resale</i>	Electronically Submitted Orders: <i>POTS/Pre-Qualified Complex:</i> <ul style="list-style-type: none"> Flow-Through Orders: 2 Hours Orders with < 10 Lines: 24 Hours Orders with ≥ 10 Lines: 72 Hours <i>Complex POTS: Two Wire ISDN (requiring loop qualification)</i> <ul style="list-style-type: none"> Orders with < 10 Lines: 72 Hours Orders with ≥ 10 Lines: 72 Hours <i>Special Services:</i> <ul style="list-style-type: none"> Orders with < 10 Lines: 48 Hours Orders with ≥ 10 Lines: 72 Hours ⁵ Faxed/Mailed Orders: Add 24 Hours to intervals above. Not available for UNE POTS	Electronically Submitted Orders: Firm Order Confirmation: <ul style="list-style-type: none"> ≤ 192 Trunks: 10 Business Days > 192 Trunks: Negotiated Process Design Layout Record <ul style="list-style-type: none"> ≤ 192 Trunks: 10 Business Days > 192 Trunks: Negotiated Process Faxed/Mailed Orders: Add 24 Hours to intervals above
Sub-Metrics		
OR-1-01	Average Local Service Request Confirmation (LSRC) Time (Flow-Through) ¹¹ (13)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> POTS/Pre-qualified Complex 	<i>UNE:</i> <ul style="list-style-type: none"> POTS/Pre-Qualified Complex
Calculation	Numerator	Denominator
	Sum of confirmation date and time less order submission date and time for all orders that flow through to service order processor without manual intervention (no typing into SOP) for specified product.	Total number of flow through LSR's confirmed for specified product.
OR-1-02	% On Time LSRC – Flow Through (14)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> POTS/Pre-qualified Complex 	<i>UNE:</i> <ul style="list-style-type: none"> POTS/Pre-Qualified Complex
Calculation	Numerator	Denominator
	Number of electronic LSRCs sent where confirmation date and time less submission date and time is less than 2 hours for specified product.	Total number of flow through LSRs confirmed for specified product.

¹⁰ Also includes orders requiring facility verification as specified in the interval appendix

¹¹ BA will add complex and specials if this type of order is ever eligible for flow-through. However, manual intervention is currently required for retail and wholesale services for loop qualification or design.

Sub-Metrics OR-1 Order Confirmation Timeliness (continued)		
OR-1-03	Average LSRC Time < 10 Lines (Electronic Submission – No Flow Through) (8)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3
Calculation	Numerator	Denominator
	Sum of confirmation date and time less order submission date and time for all orders with less than 10 lines electronically submitted, by product group.	Total number of electronic LSRs for less than 10 lines confirmed for specified product.
OR-1-04	% On Time LSRC < 10 Lines (Electronic – No Flow Through) (9 and 10)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS • Complex (ISDN) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS • Complex (Two Wire Digital Loop - ISDN) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3
Calculation	Numerator	Denominator
	Number of electronic LSRCs for less than 10 lines, sent where confirmation date and time less submission date and time is less than standard for specified product.	Total number of electronic LSRs for less than 10 lines confirmed for specified product.
OR-1-05	Average LSRC Time ≥ 10 Lines (Electronic) (11)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3
Calculation	Numerator	Denominator
	Sum of confirmation date and time less order submission date and time for all orders with 10 or more lines electronically submitted, by product group.	Total number of electronic LSRs for 10 or more lines, confirmed for specified product.

Sub-Metrics OR-1 Order Confirmation Timeliness (continued)		
OR-1-06	% On Time LSRC ≥ 10 Lines (Electronic) (12)	
Products	Resale: <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	UNE: <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3
Calculation	Numerator	Denominator
	Number of electronic LSRCs for 10 or more lines, sent where confirmation date and time less submission date and time is less than standard for specified product.	Total number of electronic LSRs for 10 or more lines, confirmed for specified product.
OR-1-07	Average ASRC Time < 10 Lines (Fax) (New)	
Products	UNE: <ul style="list-style-type: none"> • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	
Calculation	Numerator	Denominator
	Sum of confirmation date and time less order submission date and time for all orders with less than 10 lines submitted by fax, by product group.	Total number of faxed ASRs for less than 10 lines confirmed for specified product.
OR-1-08	% On Time ASRC < 10 Lines (Fax) (New)	
Products	UNE: <ul style="list-style-type: none"> • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	
Calculation	Numerator	Denominator
	Number of faxed ASRCs for less than 10 lines, sent where confirmation date and time less submission date and time is less than standard for specified product.	Total number of faxed ASRs for less than 10 lines confirmed for specified product.
OR-1-09	Average ASRC Time ≥ 10 Lines (Fax) (New)	
Products	UNE: <ul style="list-style-type: none"> • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	
Calculation	Numerator	Denominator
	Sum of confirmation date and time less order submission date and time for all orders with 10 or more lines submitted by fax, by product group.	Total number of faxed ASRs for 10 or more lines confirmed for specified product.

Sub-Metrics OR-1 Order Confirmation Timeliness (continued)		
OR-1-10	% On Time ASRC \geq 10 Lines (Fax) (New)	
Products	<i>UNE:</i> <ul style="list-style-type: none"> • Specials (Non DS0, DS1 & DS3) • Specials DS0 • Specials DS1 • Specials DS3 	
Calculation	Numerator	Denominator
	Number of faxed ASRCs for 10 or more lines, sent where confirmation date and time less submission date and time is less than standard for specified product.	Total number of faxed ASRs for 10 or more lines confirmed for specified product.
OR-1-11	Average Firm Order Confirmation (FOC) Time (15)	
Products	Trunks: <ul style="list-style-type: none"> • CLEC Trunks (\leq 192 Forecasted Trunks) • CLEC Trunks ($>$ 192 and Unforecasted Trunks) 	
Calculation	Numerator	Denominator
	Sum of order confirmation date and time less submission date and time for trunk orders .	Count of orders confirmed (faxed orders) with 192 or less trunks that are not designated projects.
OR-1-12	% On Time FOC (16)	
Products	Trunks: <ul style="list-style-type: none"> • CLEC Trunks (\leq 192 Forecasted Trunks) • CLEC Trunks ($>$ 192 and Unforecasted Trunks) 	
Calculation	Numerator	Denominator
	Count of orders confirmed within 10 days	Count of orders confirmed (faxed orders) with 192 or less trunks that are not designated projects.
OR-1-13	% On Time Design Layout Record (DLR) (17)	
Products	Trunks: <ul style="list-style-type: none"> • CLEC Trunks 	
Calculation	Numerator	Denominator
	Count of design layout records completed on or before DLRD date in TIRKS	Count of Design Layout Records Completed

Function:**OR-2 Reject Timeliness****Definition:**Reject Response Time:

The amount of elapsed time (in hours and minutes) between receipt of an order request and distribution of a service order reject, both based on DCAS or Fax date and time stamp.

Average Reject Response Time:

The mean of all reject response times associated with a product group.

Percent of Orders Rejected On Time:

The percentage of orders rejected within the agreed-upon timeframes as specified in the Performance Standards.

Notes:

- (1) Rejected Orders – Orders failing “Basic front-end edits”¹² are not placed on Completed PON Master File.
- (2) Measurements are based on rejected orders.
- (3) BA-NY will include cancelled orders in the measurements.

Exclusions:

- BA Test Orders
- Orders that are not completed or cancelled
- Duplicate Rejects – Rejects issued against a unique PON (PON + Version Number + CLEC Id), identical and subsequent to the first reject.
- Weekend and Holiday Hours (Other than Flow-through) – Weekend Hours are from 5:00pm Friday to 8:00am Monday. Holiday Hours are from 5:00pm of the business day preceding the holiday to 8:00am of the first business day following the holiday. These hours are excluded from the elapsed time when calculating the response times for non flow through requests.

Performance Standard:

95% On Time According to schedule below:

Resale:	UNE:	Interconnection Trunks:
Electronically Submitted Orders: POTS: <ul style="list-style-type: none"> • Flow-Through Orders: 2 Hours • Orders with < 10 Lines: 24 Hours • Orders with ≥ 10 Lines: 72 Hours Complex POTS Services (ISDN): <ul style="list-style-type: none"> • Orders with < 10 Lines: 72 Hours • Orders with ≥ 10 Lines: 72 Hours Special Services: <ul style="list-style-type: none"> • Orders with < 10 Lines: 48 Hours • Orders with ≥ 10 Lines: 72 Hours Faxed/Mailed Orders: <i>Not available for Resale</i>	Electronically Submitted Orders: POTS: <ul style="list-style-type: none"> • Flow-Through Orders: 2 Hours • Orders with < 10 Lines: 24 Hours • Orders with ≥ 10 Lines: 72 Hours Complex POTS Services (ISDN) & Two Wire Digital Loop: <ul style="list-style-type: none"> • Orders with < 10 Lines: 72 Hours • Orders with ≥ 10 Lines: 72 Hours Special Services: <ul style="list-style-type: none"> • Orders with < 10 Lines: 48 Hours • Orders with ≥ 10 Lines: 72 Hours Faxed/Mailed Orders: Add 24 Hours to intervals above. <i>Not available for UNE POTS</i>	Electronically Submitted Orders: <ul style="list-style-type: none"> • ≤ 192 Trunks: 10 Business Days • > 192 Trunks: Negotiated Process Faxed/Mailed Orders: Add 24 Hours to intervals above

Report Dimensions :

Company: <ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 	Geography: <ul style="list-style-type: none"> • State
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¹² Basic front-end edits – see Glossary.

Sub-Metrics – OR-2 Reject Timeliness		
OR-2-01	Average Local Service Request (LSR) Reject - Time (Flow-Through) (22)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex
Calculation	Numerator	Denominator
	Sum of reject date and time less order submission date and time for all orders that flow through to service order processor without manual intervention (no typing into SOP) for specified product.	Total number of flow-through LSRs rejected for specified product.
OR-2-02	% On Time LSR Reject – Flow Through (23)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex
Calculation	Numerator	Denominator
	Number of electronic rejects sent where reject date and time less submission date and time is less than 2 hours for specified product.	Total number of flow-through LSRs rejected for specified product.
OR-2-03	Average LSR Reject Time < 10 Lines (Electronic – No Flow Through) (18)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator	Denominator
	Sum of reject date and time less order submission date and time for all rejected LSRs that are electronically submitted for less than 10 lines for specified product.	Total number of LSRs electronically submitted for less than 10 lines rejected for specified product.
OR-2-04	% On Time LSR Reject < 10 Lines (Electronic – No Flow Through) (19 and 21)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator	Denominator
	Number of electronic rejects sent where reject date and time less submission date and time is within standard for orders less than 10 lines for specified product.	Total number of LSRs electronically submitted for less than 10 lines rejected for specified product.

Sub-Metrics OR-2 Reject Timeliness (continued)		
OR-2-05	Average LSR Reject Time \geq 10 Lines (Electronic) (20)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator	Denominator
	Sum of reject date and time less order submission date and time for all rejected LSRs that are electronically submitted for 10 or more lines for specified product.	Total number of LSRs electronically submitted for 10 or more lines rejected for specified product.
OR-2-06	% On Time LSR Reject \geq 10 Lines (Electronic) (24)	
Products	<i>Resale:</i> <ul style="list-style-type: none"> • POTS/Pre-qualified Complex • Complex (ISDN) (requiring loop qualification) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS/Pre-Qualified Complex • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator	Denominator
	Number of electronic rejects sent where reject date and time less submission date and time is within standard for orders 10 or more lines for specified product.	Total number of LSRs electronically submitted for 10 or more lines rejected for specified product.
OR-2-07	Average Reject Time $<$ 10 Lines (Fax) (New)	
Products	<i>UNE:</i> <ul style="list-style-type: none"> • Specials 	
Calculation	Numerator	Denominator
	Sum of reject date and time less order submission date and time for all orders with less than 10 lines submitted by fax, by product group.	Total number of faxed rejects for less than 10 lines confirmed for specified product.
OR-2-08	% On Time Reject $<$ 10 Lines (Fax) (New)	
Products	<i>UNE:</i> <ul style="list-style-type: none"> • Specials 	
Calculation	Numerator	Denominator
	Number of faxed Rejects for less than 10 lines, sent where Reject date and time less submission date and time is less than standard for specified product.	Total number of faxed rejects for less than 10 lines confirmed for specified product.
OR-2-09	Average Reject Time \geq 10 Lines (Fax) (New)	
Products	<i>UNE:</i> <ul style="list-style-type: none"> • Specials 	
Calculation	Numerator	Denominator
	Sum of reject date and time less order submission date and time for all orders with 10 or more lines submitted by fax, by product group.	Total number of faxed rejects for 10 or more lines rejected for specified product.

Sub-Metrics OR-2 Reject Timeliness (continued)		
OR-2-10	% On Time Reject \geq 10 Lines (Fax) (New)	
Products	UNE: <ul style="list-style-type: none"> • Specials 	
Calculation	Numerator	Denominator
	Number of faxed rejects for 10 or more lines, sent where confirmation date and time less submission date and time is less than standard for specified product.	Total number of faxed rejects for 10 or more lines rejected for specified product.
OR-2-11	Average Trunk ASR Reject Time (25)	
Products	Trunks: <ul style="list-style-type: none"> • CLEC Trunks 	
Calculation	Numerator	Denominator
	Sum of reject date less submission date for rejected Access Service requests for trunk orders with less than 192 trunks.	Count of rejected trunk orders for less than 192 trunks.
OR-2-12	% On Time Trunk ASR Reject (26)	
Products	Trunks: <ul style="list-style-type: none"> • CLEC Trunks 	
Calculation	Numerator	Denominator
	Count of rejected trunk orders that meet reject trunk standard (10 days).	Count of rejected trunk orders for less than 192 trunks.

Function:		
OR-3 Percent Rejects		
Definition:		
<p>Percent Rejects: The percent of orders received (including supplements and re-submissions) by Bell Atlantic that are rejected or queried. (Orders that are queried are considered rejected.) Orders are rejected due to omission or error of required order information.</p> <p>The percent reject measure is reported against all order submitted transactions processed in DCAS, not just those with associated CRIS completions.</p> <p>Note: Edit Rejects – Orders failing “Basic front-end edits”¹³ are not placed on Completed PON Master File.</p>		
Exclusions:		
<ul style="list-style-type: none"> • BA Test Orders 		
Performance Standard:		
No standard.		
Report Dimensions		
Company: <ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 		Geography: <ul style="list-style-type: none"> • State
Sub-Metrics		
OR-3-01	% Rejects (27)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Sum of all rejected LSR/ASR transactions [records with REJECT-DATE1 of ORDERING-MASTER-REC > 0 for specified product].	Total number of LSR/ASR records with unique PONs (STATE-CD + CLEC-ID + PON) for specified product.

¹³ Basic front-end edits – see Glossary.

Function:**OR-4 Timeliness of Completion Notification****Definition:**Resale & UNE:Completion Notification Response Time:

The elapsed time between the actual order completion in the billing system and the distribution of the order completion notification. If multiple orders have been generated from a single CLEC/Reseller request, the measure is taken between completion of the last order associated with the request and the distribution of the completion notification.

Completion notifications for Resale and UNE orders received via EIF, EDI or WEB/GUI are delivered mechanically via the same interface. For UNEs where no switching is involved in all Bell Atlantic states, the measure is taken from the actual turnover of Loop to verbal acceptance by the CLEC representative. This handshake is documented via serial numbers provided by CLEC.

Average Completion Notification Response Time For Resale and UNE:

The mean of all completion notification response times associated with a product group.

Percent On Time:

The percentage of completion notifications sent within the agreed-upon timeframes as specified in the Performance Standards.

Note: Rejected Orders – Orders failing “Basic front-end edits”¹⁴ are not placed on Completed PON Master File.

Exclusions:

- BA Test Orders
- When the order completion time in the billing system cannot be determined, the order is excluded from the measurements, and the percentage of orders so excluded is reported each month.

Performance Standard:

Other than Coordinated Conversions and Trunks: 95% by next business day at noon.

Coordinated Conversions & Trunks: Acceptance at turn-up via CLEC-provided serial number. Note: If a CLEC is not available for testing on the Due Date (within 1 hour of conversion interval), the order will be considered to be missed for customer reasons.

Report Dimensions

Company:

- CLEC Aggregate
- CLEC Specific

Geography:

- State

Sub-Metrics

OR-4-01	Completion Notice – Average Response Time (28)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Sum of notification date and time less CRIS bill completion date and time. [NOTFCTN-RESPONSE-TIME of ORDERING-MASTER-REC for specified product.]	Total number of completion notices for specified product.

¹⁴ Basic front-end edits – see Glossary.

Sub-Metrics (continued) Timeliness of Completion Notification		
OR-4-02	Completion Notice – % On Time (29)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Number of completion notices where notice occurs on or before noon the day after bill completion [records for specified product with ON-TIME-NOTFCTN of ORDERING-MASTER-RECORD = 'Y'].	Number of PONs for specified product with ON-TIME-NOTFCTN of ORDERING-MASTER-RECORD = 'Y' or 'N'.
OR-4-03	% Orders excluded from % On Time Measurement (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Number of orders where completion time in billing system can not be determined	Number of PONs for specified product with ON-TIME-NOTFCTN of ORDERING-MASTER-RECORD = 'Y' or 'N'.

Function:		
OR-5 Percent Flow-Through		
Definition:		
<p>Total Flow-Through: The percent of valid orders received through the electronic ordering interface (DCAS) and processed directly to the legacy service order processor (Service Order System – SOP) without manual intervention. These service orders require no action by a BA service representative to type an order into the Service Order Processor. This is also known as “ordering” flow-through.</p> <p>Simple Flow Through: % of Basic POTS Services (excludes Centrex) that actually flow-through from DCAS to Service Order Processor.</p> <p>% Flow Through Achieved: % of valid orders received through the electronic ordering interface DCAS that are designed to flow through and actually flow through, but excluding those orders that do not flow due to CLEC errors or a pending order status.</p> <p>A summary of order types that flow-through for BA and are designed to flow-through for CLECs is included in appendix H. Orders designed to flow-through may also fall out for both BA and CLECs. Non Flow Throughs include orders where there are other pending orders on the same line and require manual intervention to ensure that the correct action is taken.</p> <p>Note: Rejected Orders – Orders failing “Basic front-end edits” ¹⁵ are not placed on Completed PON Master File.</p>		
Exclusions:		
<ul style="list-style-type: none"> • BA Test Orders • Orders sent via US Mail or Fax • From Achieved Flow Through: Orders that fall out due to CLEC error or Pending Order status 		
Performance Standard:		
<p>No Standard Developed for Total Flow-Through or simple flow through. 99% for % Flow Through achieved</p>		
Report Dimensions		
Company:		Geography:
<ul style="list-style-type: none"> • CLEC Aggregate 		<ul style="list-style-type: none"> • State
Sub-Metrics		
OR-5-01	% Flow Through – Total (30)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Sum of all orders that flow through (FLWTHRU-CAND-IND = '1') for specified product.	Total number of LSR/ASR records (orders) for specified product.
OR-5-02	% Flow Through – Simple (29)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Sum of all orders that flow through (FLWTHRU-CAND-IND = '1') for specified product. (less CENTREX [SVC-ORD TYPR = 2] and Specials [SVC-CLASSIFICATION =1])	Total number of LSR/ASR records (orders) for specified product. (less CENTREX [SVC-ORD TYPR =2] and Specials [SVC-CLASSIFICATION =1]).

¹⁵ Basic front-end edits – see Glossary.

Sub-Metrics – OR-5 % Flow Through (continued)		
OR-5-03	% Flow Through Achieved (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Count of orders that flow through (FLWTHRU-CAND-IND='1') for specified product	Count of flow through eligible orders

Function:		
OR-6 Order Accuracy		
Definition:		
Accuracy is defined as the percent of orders completed as ordered by the CLEC. Two dimensions will be measured. The first is a measure of orders with error. The second measure is focused on the percent of fields that are populated correctly.		
Methodology:		
BA will use a manual audit process of sampled orders. A statistically valid random sample of approximately 400 orders for resale and 400 orders for UNE each month, (20 orders randomly sampled each business day for Resale and UNE respectively) will be pulled from DCAS. BA will compare required fields on the latest version of the LSR to the completed Bell Atlantic service order(s).		
Exclusions:		
<ul style="list-style-type: none"> Orders that are entered by the CLEC and Flow through. 		
Performance Standard:		
95% Orders without errors.		
Report Dimensions		
Company:		Geography:
<ul style="list-style-type: none"> CLEC Aggregate 		<ul style="list-style-type: none"> State
Sub-Metrics		
OR-6-01	% Accuracy - Orders (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Count of Orders Sampled less Orders with Errors for specified product.	Count of Orders Sampled for specified product.
OR-6-02	% Accuracy – Opportunities (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Count of Fields Sampled less fields with errors for specified product.	Count of fields sampled for specified product.
OR-6-03	% Accuracy – LSRC (Interim Measure) (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Count of LSRCs Sampled less LSRCs with errors for specified product.	Count of LSRC's sampled
OR-6-03	% Accuracy – LSRC (Long Term Measure) (New)	
Products	Resale	UNE
Calculation	Numerator	Denominator
	Count of LSRCs resent due to error	Count of LSRC's

Provisioning (PR)

Function:	
PR-1 Average Interval Offered	
Definition:	
<p><u>POTS and Specials:</u> Average Offered Interval is also known as the average appointed interval. The average number of business days between order application date and committed due date (appointment date). The application date is the date that a valid service request is received.</p> <p><u>POTS Complex</u> Orders include: Basic Rate ISDN and Two Wire Digital Loops.</p> <p><u>Specials Orders Include:</u> All Designed circuits, 4 wire circuits (including Primary rate ISDN), all DS0, DS1 and DS3 circuits. EEL and IOF to be reported separately.</p> <p><u>Trunks:</u> The amount of time in business days between receipt of a clean ASR (received date restarted for each SUPP) and due date committed to from firm order confirmation. Measures service orders completed between the measured dates.</p> <p><u>Notes:</u></p> <p>(1) The offered intervals for cancelled orders are counted in the month in which the cancellation occurs. (2) Sub-metrics reported according to line size groupings will be based on the total lines in the orders.</p>	
Exclusions:	
<ul style="list-style-type: none"> • BA Test Orders. • Orders where customers request a due date that is beyond the standard available appointment interval. (X Appointment Code). • Bell Atlantic Administrative orders.¹⁶ • Orders with invalid intervals (Negative Intervals or intervals over 200 business days – indicative of typographical error). • Additional Segments (pages or sections on individual orders) on orders (parts of a whole order are included in the whole). • Retail Suspend for non-payment and associated restore orders. • Orders that are not completed or cancelled 	
Performance Standard:	
Parity with BA Retail. See Interval Guide for specific products and services.	
Report Dimensions	
Company: <ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 	Geography: <ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State • Specials & Trunks: NY State (LATA 132 and Remaining State – as identified)

¹⁶ BA Administrative Orders – See Glossary

Sub-Metrics – PR-1 Average Interval Offered			
PR-1-01	Average Interval Offered – Total No Dispatch (31)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business • Complex (ISDN) • Specials 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business • Complex (ISDN) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Hot Cut Loop • POTS – Platform • POTS - Other (UNE Switch & INP) • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator		Denominator
	Sum of committed due date less application date for Orders without an outside dispatch in Product Groups		Count of Orders without an outside dispatch in Product Groups
PR-1-02	Average Interval Offered – Total Dispatch (32)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • Complex (ISDN) • Specials 	<i>Resale:</i> <ul style="list-style-type: none"> • Complex (ISDN) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator		Denominator
	Sum of committed due date less application date for Orders with an outside dispatch in Product Groups.		Count of Orders with an outside dispatch in Product Groups.
PR-1-03	Average Interval Offered – Dispatch (1-5 Lines) (33)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Platform • POTS - Loop
Calculation	Numerator		Denominator
	Sum of committed due date less application date for POTS Orders with an outside dispatch in Product Groups for orders with 1 to 5 lines.		Count of POTS Orders with an outside dispatch in Product Groups for orders with 1 to 5 lines.
PR-1-04	Average Interval Offered – Dispatch (6-9 Lines) (34)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS - Total 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS – Total 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Platform • POTS - Loop
Calculation	Numerator		Denominator
	Sum of committed due date less application date for POTS Orders with an outside dispatch in Product Groups for orders with 6 to 9 lines.		Count of POTS Orders with an outside dispatch in Product Groups for orders with 6 to 9 lines.

Sub-Metrics – PR-1 Average Interval Offered (continued)			
PR-1-05	Average Interval Offered – Dispatch (≥ 10 Lines) (35)		
Products	<i>Retail:</i> • POTS - Total	<i>Resale:</i> • POTS – Total	<i>UNE:</i> • POTS – Platform • POTS - Loop
Calculation	Numerator	Denominator	
	Sum of committed due date less application date for POTS Orders with an outside dispatch in Product Groups for orders with 10 or more lines.	Count of POTS Orders with an outside dispatch in Product Groups for orders with 10 or more lines.	
PR-1-06	Average Interval Offered – DS0 (36)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator	Denominator	
	Sum of committed due date less application date for Special Services orders for DS0 services.	Count of Special Services orders for DS0 services.	
PR-1-07	Average Interval Offered – DS1 (37)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator	Denominator	
	Sum of committed due date less application date for Special Services orders for DS1 services.	Count of Special Services orders for DS1 services.	
PR-1-08	Average Interval Offered – DS3 (38)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator	Denominator	
	Sum of committed due date less application date for Special Services orders for DS3 services.	Count of Special Services orders for DS3 services.	
PR-1-09	Average Interval Offered – Total (Trunks) (39)		
Products	<i>UNE:</i> • IOF • EEL – Backbone • EEL – Loop	<i>Retail Trunks:</i> • IXC FG D Trunks	<i>CLEC Trunks:</i> • Interconnection Trunks (≤ 192 Trunks) • CLEC Trunks (> 192 and Unforecasted Trunks)
Calculation	Numerator	Denominator	
	Sum of committed due date less application date for product group orders.	Count of orders for product group.	

Sub-Metrics – PR-1 Average Interval Offered (continued)			
PR-1-10	Average Interval Offered – Disconnects – No Dispatch		
Products	<i>Retail:</i> • POTS (incl. Complex) • Specials	<i>Resale:</i> • POTS (incl. Complex) • Specials	<i>UNE:</i> • POTS (Incl. Complex) • Specials
Calculation	Numerator		Denominator
	Sum of committed due date less application date for product group no dispatch disconnect (D & F) orders.		Count of orders for product group.
PR-1-11	Average Interval Offered – Disconnects – Dispatch		
Products	<i>Retail:</i> • POTS (incl. Complex) • Specials	<i>Resale:</i> • POTS (incl. Complex) • Specials	<i>UNE:</i> • POTS (Incl. Complex) • Specials
Calculation	Numerator		Denominator
	Sum of committed due date less application date for product group dispatch disconnect (D&F) orders.		Count of orders for product group.

Function:**PR-2 Average Interval Completed****Definition:**

POTS and Specials: The average number of business days between order application date and actual work completion date. The application date is the date that a valid service request is received.

Coordinated Cut-over (Hot Cut) Loop orders are considered complete upon acceptance by CLEC.

However, if a CLEC is not ready on the due date to test and accept, BA will complete the order. Any problems with the loop subsequent to this completion should be entered into RETAS as a trouble. If the trouble can not be entered, due to order processing, the CLEC should call into the BA center (RCCC) where the trouble will be tracked. CLECs should provide serial number to BA at turn-up for documentation.

Trunks: The amount of time in business days between receipt of a clean ASR (received date restarted for each SUPP) and date order is completed and customer is notified. Measures service orders completed between the measured dates.

Note:

(1) Sub-metrics reported according to line size groupings will be based on the total lines in the orders.

Exclusions:

- BA Test Orders
- Orders where customers request a due date that is beyond the standard available appointment interval. (X Appointment Code).
- Bell Atlantic Administrative orders.¹⁷
- Orders with invalid intervals (Negative Intervals or intervals over 200 business days – indicative of typographical error).
- Additional Segments on orders (parts of a whole order are included in the whole).
- Orders that are not complete. (Orders are included in the month that they are complete).
- Suspend for non-payment and associated restore orders.
- Orders completed late due to any end user or CLEC caused delay.
- Trunks: Excludes all customer desired due dates > 18 days, projects, trunk quantities greater than 192 and reciprocal trunks from BA to the CLEC, and N orders for new CLEC entrants to BA.

Performance Standard:

Parity with BA Retail.

See Interval Guide for specific products and services.

Report Dimensions**Company:**

- BA Retail
- CLEC Aggregate
- CLEC Specific

Geography:

- POTS: Manhattan, Greater Metro, Suburban and North-State
- Specials & Trunks: NY State (LATA 132 and Remaining State – as identified)

¹⁷ BA Administrative Orders – See Glossary

Sub-Metrics – PR-2 Average Interval Completed			
PR-2-01	Average Interval Completed – Total No Dispatch (40)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business • Complex (ISDN) • Specials 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business • Complex (ISDN) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Hot Cut Loop • POTS – Platform • POTS - Other (UNE Switch & INP) • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator		Denominator
	Sum of completion date less application date for Orders without an outside dispatch in Product Groups		Count of orders for Orders without an outside dispatch in Product Groups
PR-2-02	Average Interval Completed – Total Dispatch (50)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • Complex (ISDN) • Specials 	<i>Resale:</i> <ul style="list-style-type: none"> • Complex (ISDN) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • Complex (Two Wire Digital Loop - ISDN) • Specials
Calculation	Numerator		Denominator
	Sum of completion date less application date for Orders with an outside dispatch in Product Groups.		Count of orders for Orders with an outside dispatch in Product Groups.
PR-2-03	Average Interval Completed – Dispatch (1-5 Lines) (44)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS: Residence • POTS: Business 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Platform • POTS - Loop
Calculation	Numerator		Denominator
	Sum of completion date less application date for POTS Orders with 1 to 5 lines with an outside dispatch in Product Groups.		Count of orders for POTS Orders with 1 to 5 lines with an outside dispatch in Product Groups.
PR-2-04	Average Interval Completed - Dispatch (6-9 Lines) (48)		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS - Total 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS - Total 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS – Platform • POTS - Loop
Calculation	Numerator		Denominator
	Sum of completion date less application date for POTS Orders with 6 to 9 lines with an outside dispatch in Product Groups.		Count of orders for POTS Orders with 6 to 9 lines with an outside dispatch in Product Groups.

Sub-Metrics – PR-2 Average Interval Completed(continued)			
PR-2-05	Average Interval Completed - Dispatch (≥ 10 Lines) (49)		
Products	<i>Retail:</i> • POTS - Total	<i>Resale:</i> • POTS - Total	<i>UNE:</i> • POTS – Platform • POTS - Loop
Calculation	Numerator Sum of completion date less application date for POTS Orders with 10 or more lines with an outside dispatch in Product Groups.	Denominator Count of orders for POTS Orders with 10 or more lines with an outside dispatch in Product Groups.	
PR-2-06	Average Interval Completed – DS0 (51)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator Sum of completion date less application date for Special Services DS0 Orders.	Denominator Count of orders for Special Services DS0 Orders.	
PR-2-07	Average Interval Completed – DS1 (52)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator Sum of completion date less application date for Special Services DS1 Orders.	Denominator Count of orders for Special Services DS1 Orders.	
PR-2-08	Average Interval Completed – DS3 (53)		
Products	<i>Retail:</i> • Specials	<i>Resale:</i> • Specials	<i>UNE:</i> • Specials
Calculation	Numerator Sum of completion date less application date for Special Services DS3 Orders.	Denominator Count of orders for Special Services DS3 Orders.	
PR-2-09	Average Interval Completed – Total (54)		
Products	<i>UNE:</i> • IOF • EEL – Backbone • EEL – Loop	<i>Retail Trunks:</i> • IXC FG D Trunks	<i>CLEC Trunks:</i> • Interconnection Trunks
Calculation	Numerator Sum of completion date less application date for orders within product groups.	Denominator Count of orders for orders within product groups.	
PR-2-10	Average Interval Completed – Disconnects – No Dispatch		
Products	<i>Retail:</i> • POTS (incl. Complex) • Specials	<i>Resale:</i> • POTS (incl. Complex) • Specials	<i>UNE:</i> • POTS (Incl. Complex) • Specials
Calculation	Numerator Sum of due date less completion date for product group no dispatch disconnect (D&F) orders.	Denominator Count of no dispatch disconnect orders for product group.	

Sub-Metrics – PR-2 Average Interval Completed (continued)			
PR-2-11	Average Interval Completed – Disconnects – Dispatch		
Products	<i>Retail:</i> <ul style="list-style-type: none"> • POTS (incl. Complex) • Specials 	<i>Resale:</i> <ul style="list-style-type: none"> • POTS (incl. Complex) • Specials 	<i>UNE:</i> <ul style="list-style-type: none"> • POTS (Incl. Complex) • Specials
Calculation	Numerator		Denominator
	Sum of due date less completion date for product group dispatch disconnect (D&F) orders.		Count of dispatch disconnect orders for product group.

Function:			
PR-3 Completed within Specified Number of Days (1-5 Lines)			
Definition:			
For POTS orders with 5 or fewer lines, the percent of orders completed in specified number (by metric) of business days, between application and work completion dates. The application date is the date (day 0) that a valid service request is received.			
Exclusions:			
<ul style="list-style-type: none"> • BA Test Orders. • Disconnect Orders. • Orders where customers request a due date that is beyond the standard available appointment interval. (X Appointment Code). • Bell Atlantic Administrative orders.¹⁸ • Orders with invalid intervals (Negative Intervals or intervals over 200 business days – indicative of typographical error). • Additional Segments on orders (parts of a whole order are included in the whole). • Orders that are not complete. (Orders are included in the month that they are complete). • Suspend for non-payment and associated restore orders. • Orders completed late due to any end user or CLEC caused delay. • Coordinated cut-over Unbundled Network Elements such as loops or number portability orders. 			
Performance Standard:			
Parity with BA Retail. See Interval Guide for specific products and services.			
Report Dimensions			
Company:		Geography:	
<ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 		<ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State 	
Products (For all PR-3)	Retail:	Resale:	UNE:
	<ul style="list-style-type: none"> • POTS - Total 	<ul style="list-style-type: none"> • POTS - Total 	<ul style="list-style-type: none"> • POTS – Platform & Other (UNE Switch & INP)
Sub-Metrics			
PR-3-01	% Completed in 1 Day (1-5 Lines - No Dispatch) (41)		
Calculation	Numerator		Denominator
	Count of No Dispatch POTS orders with 1 to 5 lines where completion date less application date is 1 or fewer days.		Count of No Dispatch POTS orders with 1 to 5 lines.
PR-3-02	% Completed in 2 Days (1-5 Lines - No Dispatch) (42)		
Calculation	Numerator		Denominator
	Count of No Dispatch POTS orders with 1 to 5 lines where completion date less application date is 2 or fewer days.		Count of No Dispatch POTS orders with 1 to 5 lines.

¹⁸ BA Administrative Orders – See Glossary

**Sub-Metrics PR-3 % Completed within Specified Number of Days (1-5 Lines)
(continued)**

PR-3-03	% Completed in 3 Days (1-5 Lines - No Dispatch) (43)	
Calculation	Numerator	Denominator
	Count of No Dispatch POTS orders with 1 to 5 lines where completion date less application date is 3 or fewer days.	Count of No Dispatch POTS orders with 1 to 5 lines.
PR-3-04	% Completed in 1 Day (1-5 Lines - Dispatch) (45)	
Calculation	Numerator	Denominator
	Count of Dispatch POTS orders with 1 to 5 lines where completion date less application date is 1 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-05	% Completed in 2 Days (1-5 Lines - Dispatch) (46)	
Calculation	Numerator	Denominator
	Count of Dispatch POTS orders with 1 to 5 lines where completion date less application date is 2 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-06	% Completed in 3 Days (1-5 Lines - Dispatch) (47)	
Calculation	Numerator	Denominator
	Count of Dispatch POTS orders with 1 to 5 lines where completion date less application date is 3 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-07	% Completed in 4 Days (1-5 Lines - Total) (55)	
Calculation	Numerator	Denominator
	Count of POTS orders with 1 to 5 lines where completion date less application date is 4 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-08	% Completed in 5 Days (1-5 Lines – No Dispatch) (56)	
Calculation	Numerator	Denominator
	Count of POTS orders with 1 to 5 lines where completion date less application date is 5 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-09	% Completed in 5 Days (1-5 Lines – Dispatch) (56)	
Calculation	Numerator	Denominator
	Count of POTS orders with 1 to 5 lines where completion date less application date is 5 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.
PR-3-10	% Completed in 6 Days (1-5 Lines - Total) (57)	
Calculation	Numerator	Denominator
	Count of POTS orders with 1 to 5 lines where completion date less application date is 6 or fewer days.	Count of Dispatch POTS orders with 1 to 5 lines.

Function:	
PR-4 Missed Appointments	
Definition:	
The Percent of Orders completed after the commitment date.	
<u>Trunks:</u> Includes reciprocal trunks from BA to CLEC. The percentage of <u>trunks</u> completed for which there was a missed appointment.	
Methodology:	
Bell Atlantic will mechanize the performance calculation of On Time Performance for LNP and Hot Cuts using WFA. Time stamps for framework start and stop times and translation start and stop times will be used to ensure work is completed according to prescribed requirements. "Bed-sheets" have been used historically to manually calculate on time performance for Hot Cuts and LNP. BA plans to stop using bed-sheets for performance measures as of March 31, 1999. Significant changes have been and are in the processing of being made in WFA to enable this automation.	
<ul style="list-style-type: none"> • Two new work types will be created in WFA-DI <ul style="list-style-type: none"> NDSUB - for pre-wire and testing CLEC dial-tone on DD-1 NDSCT - for performing "hot cut" on DD 	
Note: Separate work requests will be created for RCMAC	
The work requests will include combined order number, lead CKID, number of ckts/segments, NPA-NXX, commitment date & time.	
Exclusions:	
<ul style="list-style-type: none"> • BA Test Orders • Disconnect Orders • Bell Atlantic Administrative orders ¹⁹ • Additional Segments ²⁰ on orders (parts of a whole order are included in the whole) • Orders that are not complete. (Orders are included in the month that they are complete) • Suspend for non-payment and associated restore orders. 	
Performance Standard:	
Parity with BA Retail ²¹	
LNP: 95% on Time	
Hot Cuts: 95% completed within window.	
Standard for Cut-Over Window: Amount of time from start to completion of physical cut-over of lines:	
1 to 9 lines: 1 Hour	
10 to 49 lines: 2 Hours	
50 to 99 lines: 3 Hours	
100 to 199 lines: 4 Hours	
200 plus lines: 8 Hours	
Report Dimensions	
Company:	Geography:
<ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 	<ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State • Specials & Trunks: NY State (LATA 132 and Remaining State – as identified)

¹⁹ BA Administrative Orders – See Glossary

²⁰ Segments – See Glossary

²¹ % Missed Appointment Customer – No Standard – Not in Control of Bell Atlantic

Sub-Metrics				
PR-4-01	% Missed Appointment – Bell Atlantic – Total (58)			
Description	The Percent of Orders completed after the commitment date due to Bell Atlantic reasons.			
Products	Retail: • Specials • IXC FGD Trunks	Resale: • Specials	UNE: • EEL • IOF • Specials	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of Orders where the Order completion date is greater than the order due date due to Company Reasons (CISR_MAC like 'C*') for product group		Count of Orders Completed for product group.	
PR-4-02	Average Delay Days – Total (59)			
Description	For orders missed due to Bell Atlantic reasons, the average number of days between committed due date and actual work completion date.			
Products	Retail: • POTS • Complex • Specials • IXC FGD Trunks	Resale: • POTS • Complex • Specials • IXC FGD Trunks	UNE: • POTS • Complex • Specials • EEL • IOF	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Sum of the completion date less due date for orders missed due to company reasons by product group.		Count of orders missed for company reasons, by product group.	
PR-4-03	% Missed Appointment – Customer (60)			
Description	The Percent of Orders completed after the commitment date, due to CLEC or end user delay. (See appendix B for customer miss codes)			
Products	Retail: • POTS • Complex • Specials • IXC FGD Trunks	Resale: • POTS • Complex • Specials • IXC FGD Trunks	UNE: • POTS • Complex • EEL • Specials	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of Orders where the Order completion date is greater than the order due date due to Customer Reasons (CISR_MAC ='SA','SR','SO','SL') for product group		Count of Orders Completed for product group.	

Sub-Metrics (continued) PR-4 Missed Appointments		
PR-4-04	% Missed Appointment – Bell Atlantic – Dispatch (61)	
Description	The Percent of Dispatched Orders completed after the commitment date, due to Bell Atlantic reasons.	
Products	Retail: <ul style="list-style-type: none"> • POTS • Complex 	Resale: <ul style="list-style-type: none"> • POTS • Complex
		UNE: <ul style="list-style-type: none"> • Platform • Loop – New • Loop – Hot Cut • Complex
Calculation	Numerator	Denominator
	Count of Dispatched Orders where the Order completion date is greater than the order due date due to Company Reasons (CISR_MAC like 'C*') for product group.	0Count of Dispatched Orders Completed for product group.
PR-4-05	% Missed Appointment – Bell Atlantic – No Dispatch (62)	
Description	The Percent of No-Dispatch Orders completed after the commitment date, due to Bell Atlantic reasons.	
Products	Retail: <ul style="list-style-type: none"> • POTS • Complex 	Resale: <ul style="list-style-type: none"> • POTS • Complex
		UNE: <ul style="list-style-type: none"> • Platform • Loop – Hot Cut • POTS - Other • Complex
Calculation	Numerator	Denominator
	Count of No Dispatch Orders where the Order completion date is greater than the order due date due to Company Reasons (CISR_MAC like 'C*') for product group.	1Count of No Dispatch Orders Completed for product group.
PR-4-06	% On Time Performance – Hot Cut (New)	
Description	% of all UNE Loop orders completed within cut-over window. Start time specified on LSR. For UNE Loops, includes both Loop only and Loop & number portability. Orders disconnected early are considered not met.	
Products	UNE: <ul style="list-style-type: none"> • Loop – Hot Cut (Coordinated Cut-over) 	
Calculation	Numerator	Denominator
	Count of hot cut (coordinated loop orders) (With or without number portability) completed within commitment window (as scheduled on order) on due date.	Count of hot cut (coordinated loop orders) completed.

Sub-Metrics (continued) PR-4 Missed Appointments		
PR-4-07	% On Time Performance – LNP Only (New)	
Description	% of all LNP PONs (including the associated retail disconnect orders) where trigger is in place before the frame due date and disconnect is completed after, but on the due date. For LNP only orders, the percent of LNP (retail disconnect) orders completed in translation on or after date and time on order. Reported in Aggregate. Orders disconnected early are considered not met.	
Products	UNE: • LNP	
Calculation	Numerator	Denominator
	Count of LNP orders, where port trigger is completed before frame due time (as scheduled on order) and retail disconnect is completed on or after committed time frame. (manual count)	Count of LNP orders completed. (Manual count)
PR-4-08	% Missed Appointment – Customer – Due to Late Order Confirmation (New)	
Description	The Percent of Orders completed after the commitment date, due to CLEC or end user delay, where the reason for customer delay is identified as a late order confirmation.	
Products	Resale: • POTS • Complex • Specials	UNE: • Platform • Loop – Hot Cut • POTS – Other • Complex • Specials
Calculation	Numerator	Denominator
	Count of Orders where the Order completion date is greater than the order due date due to Customer Reasons (for late Order Confirmation [MAC = SC]) for product group	Count of Orders Completed for product group.

Function:				
PR-5 Facility Missed Orders				
Definition:				
<p>% Facility Miss: The Percent of Orders completed after the commitment date, where the cause of the delay is lack of facilities.</p> <p>% Facility Orders > 30 Days: The percent of orders missed for lack of facilities where the completion date minus the appointment date is greater than 30 calendar days.</p> <p>Trunks: The percentage of <u>trunks</u> completed after the commitment date, where the cause of the delay is lack of facilities.</p>				
Exclusions:				
<ul style="list-style-type: none"> • BA Test Orders • Disconnect Orders • Bell Atlantic Administrative orders ²² • Additional Segments on orders (parts of a whole order are included in the whole) • Orders that are not complete. (Orders are included in the month that they are complete) • Suspend for non-payment and associated restore orders. 				
Performance Standard:				
Parity with BA Retail.				
Report Dimensions				
Company:		Geography:		
<ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 		<ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State • Specials & Trunks: NY State (LATA 132 and Remaining State – as identified) 		
Sub-Metrics				
PR-5-01	% Missed Appointment – Bell Atlantic – Facilities (63)			
Products	Retail: <ul style="list-style-type: none"> • POTS • Specials • IXC FGD Trunks 	Resale: <ul style="list-style-type: none"> • POTS • Specials 	UNE: <ul style="list-style-type: none"> • POTS • Specials 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks
Description	The Percent of Orders completed after the commitment date, due to lack of Bell Atlantic facilities.			
Calculation	Numerator		Denominator	
	Count of Orders where the Order completion date is greater than the order due date due to Company Facility Reasons (CISR_MAC 'CF') for product group.		Count of Orders Completed for product group.	

²² BA Administrative Orders – See Glossary

Sub-Metrics (continued) Facility Missed Orders				
PR-5-02	% Orders Held for Facilities > 15 Days (New)			
Products	Retail: • POTS • Specials • IXC FGD Trunks	Resale: • POTS • Specials	UNE: • POTS • Specials	Trunks: • CLEC Trunks
Description	The Percent of Orders completed more than 15 days after the commitment date, due to lack of Bell Atlantic facilities.			
Calculation	Numerator		Denominator	
	Count of Orders where the completion date less due date is 15 or more days for Company Facility Reasons (CISR_MAC 'CF') for product group.		Count of Orders Completed for product group.	
PR-5-03	% Orders Held for Facilities > 60 Days (New)			
Products	Retail: • POTS • Specials • IXC FGD Trunks	Resale: • POTS • Specials	UNE: • POTS • Specials	Trunks: • CLEC Trunks
Description	The Percent of Orders completed more than 60 days after the commitment date, due to lack of Bell Atlantic facilities.			
Calculation	Numerator		Denominator	
	Count of Orders where the completion date less due date is 60 or more days for Company Facility Reasons (CISR_MAC 'CF') for product group		Count of Orders Completed for product group.	

Function:					
PR-6 Installation Quality					
Definition:					
The percent of lines/circuits/trunks installed where a trouble was reported and found in the network within 30 days (and within 7 days for POTS services) of order completion. Includes disposition codes 3 (Drop Wire), 4 (Cable) and 5(Central Office). Disposition Code 5 includes translation troubles closed via STARMEM automatically by CLEC.					
Exclusions:					
<ul style="list-style-type: none"> • Subsequent reports (additional customer calls while the trouble is pending) • Troubles closed due to customer action. • Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble. 					
Formula:					
Installation Troubles (within 7 or 30 days) with Disposition Code 3, 4 and 5 / Lines completed x 100					
Performance Standard:					
Parity with BA Retail For Found Troubles					
Report Dimensions					
Company: <ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 	Geography: <ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State • Specials & Trunks: NY State (LATA 132 and Remaining State – as identified) 				
Sub-Metrics					
PR-6-01	% Installation Troubles reported within 30 Days (64)				
Description	The percent of lines/circuits/trunks installed where a trouble was reported and found in the network within 30 days of order completion. Includes disposition codes 03 (Drop Wire), 04 (Cable) and 05(Central Office).				
Products	<table border="1"> <tr> <td> Retail: <ul style="list-style-type: none"> • POTS • Specials • IXC FGD Trunks </td> <td> Resale: <ul style="list-style-type: none"> • POTS • Complex • Specials </td> <td> UNE: <ul style="list-style-type: none"> • POTS – Loop • POTS - Other • Complex • Specials </td> <td> Trunks: <ul style="list-style-type: none"> • CLEC Trunks </td> </tr> </table>	Retail: <ul style="list-style-type: none"> • POTS • Specials • IXC FGD Trunks 	Resale: <ul style="list-style-type: none"> • POTS • Complex • Specials 	UNE: <ul style="list-style-type: none"> • POTS – Loop • POTS - Other • Complex • Specials 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks
Retail: <ul style="list-style-type: none"> • POTS • Specials • IXC FGD Trunks 	Resale: <ul style="list-style-type: none"> • POTS • Complex • Specials 	UNE: <ul style="list-style-type: none"> • POTS – Loop • POTS - Other • Complex • Specials 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks 		
Calculation	<table border="1"> <tr> <td style="text-align: center;">Numerator</td> <td style="text-align: center;">Denominator</td> </tr> <tr> <td>Count of central office and outside plant loop (disposition code 03, 04 and 05) troubles with installation activity within 30 days of trouble report.</td> <td>Total Lines with installation activity within 30 days.</td> </tr> </table>	Numerator	Denominator	Count of central office and outside plant loop (disposition code 03, 04 and 05) troubles with installation activity within 30 days of trouble report.	Total Lines with installation activity within 30 days.
Numerator	Denominator				
Count of central office and outside plant loop (disposition code 03, 04 and 05) troubles with installation activity within 30 days of trouble report.	Total Lines with installation activity within 30 days.				

Sub-Metrics (continued) Installation Quality			
PR-6-02	% Installation Troubles reported within 7 Days (65)		
Description	The percent of lines/circuits/trunks installed where a trouble was reported and found in the network within 7 days of order completion. Includes disposition codes 03 (Drop Wire), 04 (Cable) and 05(Central Office).		
Products	Retail: • POTS	Resale: • POTS	UNE: • POTS – Loop - Total • POTS – Loop Hot Cut ²³ • POTS - Other
Calculation	Numerator		Denominator
	Count of central office and outside plant loop (disposition code 03, 04 and 05) troubles with installation activity within 7 days of trouble report.		Total Lines with installation activity within 30 days.
PR-6-03	% Installation Troubles reported within 30 Days – FOK/TOK/CPE (New)		
Description	The percent of lines/circuits/trunks installed where a trouble was reported and was not found in the network within 30 days of order completion. Includes disposition codes (07, 08, 09) Found OK/Test OK and (12 and 13) CPE		
Products	Retail: • POTS • Specials • IXC FGD Trunks	Resale: • POTS • Specials	UNE: • POTS – Loop • POTS - Other • Specials Trunks: • CLEC Trunks
Calculation	Numerator		Denominator
	Count of Not Found, Test OK and CPE troubles with installation activity within 30 days of trouble report.		Total Lines with installation activity within 30 days.

²³ Subject to Further Discussion on Hot Cuts in Carrier to Carrier Subgroup

Function:		
PR-7 Jeopardy Reports		
Definition:		
The percent of orders completed or cancelled identified with a jeopardy condition. CLECs are provided with jeopardy notices, unless they specifically agree or request, in writing, not to receive them. The jeopardy notifications are now available to all CLEC's and Resellers in NY. These notices are posted twice daily for CLECs to retrieve on the WEB server. All CLEC's and Resellers in NY currently have these posted.		
Exclusions:		
<ul style="list-style-type: none"> • BA Test Orders • Disconnect Orders • Bell Atlantic Administrative orders ²⁴ • Additional Segments on orders (parts of a whole order are included in the whole) • Orders that are not complete or cancelled. 		
Report Dimensions		
Company:	Geography:	
<ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 	<ul style="list-style-type: none"> • State 	
Performance Standard:		
Jeopardy Status Notification:		
Timeliness of notice of jeopardy of service order request where miss is known in advance of due date (missed commitment with new date/time) ²⁵		
<ul style="list-style-type: none"> • Resale and UNE: <ul style="list-style-type: none"> • 100% at least 24 hours before due date with facilities • 100% at least 48 hours before due date without facilities • Interconnection Trunks: 2 Days prior to due date 		
% Orders with Jeopardy status: assessed in conjunction with missed appointments		
Sub-Metrics (continued) Installation Quality		
PR-7-01	% Orders with Jeopardy Status (New)	
Products	UNE: <ul style="list-style-type: none"> • EEL 	
Calculation	Numerator	Denominator
	Count of EEL orders with jeopardy status	Total EEL orders completed or cancelled

²⁴ BA Administrative Orders – See Glossary

²⁵ To the extent that BA has knowledge of a jeopardy condition, notice will be given as soon as it is known on or before committed due date.

Maintenance and Repair (MR) ²⁶

Function:					
MR-1 Response Time OSS Maintenance Interface					
Definition:					
<p>"Response time" is defined as the time, in seconds, that elapses from issuance of a query request to receipt of a response by the requesting carrier. For CLECs this performance is measured at the DCAS access platform.</p>					
Exclusions:					
<ul style="list-style-type: none"> None 					
Methodology:					
<p><u>For BA retail representatives:</u> Simulation of Service Representatives requests using Sentinel System. Sentinel is a system designed to monitor system operations by generating transactions. Sentinel replicates transactions of a Bell Atlantic service representative using the OSS and of a CLEC representative accessing the OSS through the DCAS/RETAS interface. By replicating the keystrokes of a representative, Sentinel is able to measure transaction time from the point the "enter" key is hit until a response is received back on the display screen. A statistically valid sample size of at least ten Transactions per hour per transaction type, for each interface is taken from Monday - Friday 8 AM to 5 PM. Retail: Trouble Status and Trouble history not available pending change to replacement of retail interface during 1999. Upon completion of "Caseworker" (Retail trouble reporting system), retail performance will be reported directly from "Caseworker."</p> <p><u>For CLEC representatives:</u> Actual response times reported by RETAS</p>					
Performance Standard:					
<p>Through 12/31/99 (based on KPMG study):</p> <ul style="list-style-type: none"> MR-1-01 – Create Trouble: 6.5 seconds MR-1-02 – Status Trouble: 8.9 seconds MR-1-03 – Modify Trouble: 5.0 seconds MR-1-04 – Request Cancellation: 5.9 seconds MR-1-05 – Trouble History: 12.4 seconds MR-1-06 – Test (POTS): 73.5 seconds 					
Report Dimensions					
Company: <ul style="list-style-type: none"> BA Retail CLEC Aggregate 	Geography: <ul style="list-style-type: none"> State 				
Products	<ul style="list-style-type: none"> Retail CLEC 				
Sub-Metrics					
MR-1-01	Average Response Time – Create Trouble (66)				
Calculation	<table border="1" style="width: 100%;"> <thead> <tr> <th style="width: 50%; text-align: center;">Numerator</th> <th style="width: 50%; text-align: center;">Denominator</th> </tr> </thead> <tbody> <tr> <td>Sum of all response times from enter key to reply on screen for Create Trouble transactions.</td> <td>Number of Create Trouble transactions.</td> </tr> </tbody> </table>	Numerator	Denominator	Sum of all response times from enter key to reply on screen for Create Trouble transactions.	Number of Create Trouble transactions.
Numerator	Denominator				
Sum of all response times from enter key to reply on screen for Create Trouble transactions.	Number of Create Trouble transactions.				

²⁶ Note: Bell Atlantic uses two databases to collect maintenance performance data. Coding specified in this section is largely POTS services. Special Services and Trunks coding descriptions are included in the appendix at the rear of this document.

Sub-Metrics (continued) MR-1 Response Time OSS Maintenance Interface		
MR-1-02	Average Response Time – Status Trouble (67)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Status Trouble transactions.	Number of Status Trouble transactions
MR-1-03	Average Response Time – Modify Trouble (68)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Modify Trouble transactions	Number of Modify Trouble transactions
MR-1-04	Average Response Time – Request Cancellation of Trouble (69)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Request for Cancellation of Trouble transactions.	Number of Request for Cancellation of Trouble transactions
MR-1-05	Average Response Time –Trouble Report History (by TN/Circuit) (70)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Trouble Report History transactions.	Number of Trouble History transactions
MR-1-06	Average Response Time – Test Trouble (POTS Only) (71)	
Calculation	Numerator	Denominator
	Sum of all response times from enter key to reply on screen for Test Trouble transactions.	Number of Trouble test transactions

Function:				
MR-2 Trouble Report Rate				
Definition:				
<p>Report Rate: Total Initial Customer direct or referred Troubles reported, where the trouble disposition was found to be in the network, per 100 lines/circuits/trunks in service. "Loop" equals Drop Wire plus Outside Plant Loop. Network Trouble means a trouble with a disposition code of 3 (drop-wire), 4 (outside plant loop), or 5 (central office).</p> <p>Subsequent Reports: Additional customer trouble calls while an existing trouble report is pending – typically for status or to change or update information.</p> <p>The Disposition Codes set forth in the CLEC Handbook, Section 8.8 are included in Appendix G.</p>				
Exclusions:				
<ul style="list-style-type: none"> • Report rate excludes Subsequent reports (additional customer calls while the trouble is pending) • Troubles reported on BA official (administrative lines) • Troubles closed due to customer action. • Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble <p>Excluded from Total and Loop/CO report rates:</p> <ul style="list-style-type: none"> • Customer Premises Equipment (CPE) troubles • Troubles reported but not found (Found OK and Test OK). 				
Performance Standard:				
<p>Report Rate: Parity with BA Retail. Trunk Retail Equivalent = IXC FGD. Parity should be assessed in conjunction with MTTR</p> <p>% Subsequent Reports: Parity to be assessed in conjunction with missed appointments.</p> <p>% CPE/TOK/FOK Reports: (Customer Premises Equipment, Test Okay, Found Okay) To be used for root cause analysis. For CLEC troubles a not found trouble is coded as CPE.</p>				
Report Dimensions				
Company:		Geography:		
<ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 		<ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State • Specials & Trunks: NY State (LATA 132 and Remaining State – as identified) 		
Sub-Metrics				
MR-2-01	Network Trouble Report Rate (72)			
Products	Retail: <ul style="list-style-type: none"> • Specials • IXC FGD Trunks 	Resale: <ul style="list-style-type: none"> • Specials 	UNE: <ul style="list-style-type: none"> • Specials 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks
Calculation	Numerator		Denominator	
POTS:	Count of All trouble Reports with found network troubles (trbl_cd is FAC or CO)		Count of Lines or specials or trunks in service	

Sub-Metrics – MR-2 Network Trouble Report Rate (continued)			
MR-2-02	Network Trouble Report Rate – Loop (74)		
Products	Retail: • POTS • Complex	Resale: • POTS • Complex	UNE: • POTS – Platform • POTS – Loop • Complex
Calculation	Numerator		Denominator
	Count of all loop trouble reports (Disposition Code of 03 and 04)		Count of Lines in service
MR-2-03	Network Trouble Report Rate – Central Office (75)		
Products	Retail: • POTS • Complex	Resale: • POTS • Complex	UNE: • POTS • Complex
Calculation	Numerator		Denominator
	Count of all central office trouble Reports (Disposition Code of 05)		Count of Lines in service
MR-2-04	% Subsequent Reports (73)		
Description	Subsequent Reports: Additional customer trouble calls while an existing trouble report is pending (typically for status or to change information)		
Products	Retail: • POTS	Resale: • POTS	UNE: • POTS
Calculation	Numerator		Denominator
	Count of subsequent reports (Field and administrative repeaters for disposition codes, 03, 04 and 05.)		Count of Total disposition code 03, 04, and 05 troubles reported (Per MR-2-01)
MR-2-05	% CPE/TOK/FOK Trouble Report Rate (new)		
Description	Troubles closed to CPE, Found OK and Test OK as a percent of lines in service.		
Products	Retail: • POTS • Complex • Specials	Resale: • POTS • Complex • Specials	UNE: • POTS • Complex • Specials
Calculation	Numerator		Denominator
	Count of all CPE (disposition Code 12/13), Test OK, and Found OK troubles (disposition codes 07, 08 and 09)		Count of Lines in service

Function:			
MR-3 Missed Repair Appointments			
Definition:			
The Percent of reported Network Troubles not repaired and cleared by the date and time committed. Also referred as % of customer troubles not resolved within estimate. Appointment intervals vary with force availability in the POTS environment. Includes disposition codes 03 (Drop Wire), 04 (Cable) and 05(Central Office). Loop is defined as disposition Codes 03 plus 04 and are always dispatched.			
Exclusions:			
<ul style="list-style-type: none"> • Missed appointments where the CLEC or end user causes the missed appointment or required access was not available during appointment interval • Excludes Subsequent reports (additional customer calls while the trouble is pending) • Customer Premises Equipment (CPE) troubles • Troubles reported but not found (Found OK and Test OK). • Troubles closed due to customer action. • Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble 			
Performance Standard:			
MR-3-01 and MR-3-02 - Parity with BA Retail.			
Report Dimensions			
Company:		Geography:	
<ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 		<ul style="list-style-type: none"> • POTS: Manhattan, Greater Metro, Suburban and North-State 	
Sub-Metrics			
MR-3-01	% Missed Repair Appointment – Loop (76)		
Products	Retail: • POTS	Resale: • POTS	UNE: • POTS – Platform • POTS – Loop
Calculation	Numerator		Denominator
	Count of loop troubles where clear time is greater than commitment time (missed appointments for (M=X) for disposition codes 0300-0499).		Count of Loop Troubles (disposition codes 03 and 04).
MR-3-02	% Missed Repair Appointment – Central Office (77)		
Products	Retail: • POTS	Resale: • POTS	UNE: • POTS
Calculation	Numerator		Denominator
	Count of central office troubles where clear time is greater than commitment time (missed appointments (M=X) for disposition code 05).		Count of Central Office Troubles (disposition code 05).

Sub-Metrics MR-3 Missed Repair Appointments (continued)			
MR-3-03	% CPE/TOK/FOK – Missed Appointment (New)		
Products	Retail: • POTS	Resale: • POTS	UNE: • POTS – Platform • POTS – Loop
Calculation	Numerator		Denominator
	Count of CPE, FOK and TOK troubles where clear time is greater than appointment time for (M=X) disposition codes (07, 08, 09, 12 and 13)		Count of CPE, FOK and TOK troubles (disposition code 07,08, 09, 12 and 13)

Function:**MR-4 Trouble Duration Intervals****Definition:**

Mean Time to Repair: (MTTR) For Network Trouble reports, the average duration time from trouble receipt to trouble clearance. Includes disposition codes 03 (Drop Wire), 04 (Cable) and 05(Central Office). For POTS-type services this is measured on a "running clock" basis. Run clock includes weekends and holidays.

For Special Services-type services and interconnection trunks, this is measured on a "stop clock" basis (i.e., the clock is stopped when CLEC testing is occurring, BA is awaiting carrier acceptance, or BA is denied access).

Out of Service Intervals: The percent of Network Troubles that indicate an out of service condition which was repaired and cleared more than "y" hours after receipt of trouble report. Out of Service (OOS) means that there is no dial tone, the customer cannot call out, or the customer cannot be called. The Out of Service period commences when the trouble is entered into BA's designated trouble reporting interface either directly by the CLEC or by a BA representative upon notification. Includes weekends and holidays. Includes disposition codes 03 (Drop Wire), 04 (Cable) and 05(Central Office). Note: "y" equals hours out of service (2, 4, 12 or 24 hours). For Special Services: OOS is defined as troubles where, in the initial contact with the customer it is determined that the circuit is completely out of service and not just intermittent problem (osi = 'y') and that the trouble completion code indicated that a trouble was found within the Bell Atlantic network (trbl_cd is "FAC" or "CO").

Exclusions:

- Subsequent reports (additional customer calls while the trouble is pending)
- Customer Premises Equipment (CPE) troubles
- Troubles reported but not found (Found OK and Test OK).
- Troubles closed due to customer action.
- Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble

Performance Standard:

Parity with BA Retail.

Report Dimensions**Company:**

- BA Retail
- CLEC Aggregate
- CLEC Specific

Geography:

- POTS: Manhattan, Greater Metro, Suburban and North-State
- Specials & Trunks: NY State (LATA 132 and Remaining State – as identified)

Sub-Metrics

MR-4-01	Mean Time To Repair – Total (79)			
Products	Retail: <ul style="list-style-type: none"> • POTS • Complex • Specials • IXC FGD Trunks 	Resale: <ul style="list-style-type: none"> • POTS • Complex • Specials 	UNE: <ul style="list-style-type: none"> • POTS • Complex • Specials 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks
Calculation	Numerator		Denominator	
	Sum of Trouble clear date and time less trouble receipt date and time for central office and loop troubles (disposition code 03, 04 and 05 (Specials – excludes stop time))		Count of central office and loop troubles (disposition codes 03, 04 and 05.)	

Sub-Metrics MR-4 Trouble Duration Intervals (continued)				
MR-4-02	Mean Time To Repair – Loop Trouble (80)			
Products	Retail: • POTS • Complex	Resale: • POTS • Complex	UNE: • POTS – Platform • POTS – Loop • Complex	
Calculation	Numerator		Denominator	
	Sum of Trouble clear date and time less trouble receipt date and time for loop troubles (disposition code 03 and 04)		Count of loop troubles (disposition codes 03 and 04)	
MR-4-03	Mean Time To Repair – Central Office Trouble (81)			
Products	Retail: • POTS • Complex	Resale: • POTS • Complex	UNE: • POTS • Complex	
Calculation	Numerator		Denominator	
	Sum of Trouble clear date and time less trouble receipt date and time for central office troubles (disposition code 05)		Count of Total central office troubles (disposition codes 05)	
MR-4-04	% Cleared (all troubles) within 24 Hours (86)			
Products	Retail: • POTS • Specials • IXC FGD Trunks	Resale: • POTS • Specials	UNE: • POTS • Specials	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of troubles, where the trouble clear date and time less trouble receipt date and time is less than or equal to 24 hours		Count of central office and loop troubles (disposition codes 03, 04 and 05)	
MR-4-05	% Out of Service > 2 Hours (82)			
Products	Retail: • IXC FGD Trunks	Trunks: • CLEC Trunks		
Calculation	Numerator		Denominator	
	Count of Trunk troubles out of service, where the trouble clear date and time less trouble receipt date and time is greater than 2 hours		Count of Total Out of service trunk troubles.(Loop & CO)	
MR-4-06	% Out of Service > 4 Hours (83)			
Products	Retail: • POTS • Specials • IXC FGD Trunks	Resale: • POTS • Specials	UNE: • POTS • Specials	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of troubles out of service, where the trouble clear date and time less trouble receipt date and time is greater than 4 hours.		Count of Out of service troubles (Loop & CO).	

Sub-Metrics MR-4 Trouble Duration Intervals (continued)				
MR-4-07	% Out of Service > 12 Hours (84)			
Products	Retail: • POTS • IXC FGD Trunks	Resale: • POTS	UNE: • POTS	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of troubles out of service, where the trouble clear date and time less trouble receipt date and time is greater than 12 hours.		Count of Out of service troubles (Loop & CO)	
MR-4-08	% Out of Service > 24 Hours (85)			
Products	Retail: • POTS • Complex • Specials • IXC FGD Trunks	Resale: • POTS • Complex • Specials	UNE: • POTS • Complex • Specials	Trunks: • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of troubles out of service, where the trouble clear date and time less trouble receipt date and time is greater than 24 hours.		Count of Out of service troubles (Loop & CO).	

Function:**MR-5 Repeat Trouble Reports****Definition:**

The percent of troubles cleared that have an additional trouble within 30 days for which a network trouble (Disposition Codes 3, 4, or 5) is found. A repeat trouble report is defined as a trouble on the same line/circuit/trunk as a previous trouble report within the last 30 calendar days. Any trouble, regardless of the original disposition code, that repeat as a code 3, 4, or 5 will be classified as a repeat report.

Exclusions:

A report is not scored a repeat where the original reports are:

- Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble

Excluded from the "repeat" reports are:

- Subsequent reports (additional customer calls while the trouble is pending)
- Customer Premises Equipment (CPE) troubles
- Troubles reported but not found upon dispatch (Found OK and Test OK).
- Troubles closed due to customer action.
- Troubles reported by Bell Atlantic employees in the course of performing preventative maintenance, where no customer has reported a trouble

Performance Standard:

Parity with BA Retail.

Report Dimensions**Company:**

- BA Retail
- CLEC Aggregate
- CLEC Specific

Geography:

- POTS: Manhattan, Greater Metro, Suburban and North-State
- Specials & Trunks: NY State (LATA 132 and Remaining State – as identified)

Sub-Metrics**MR-5-01 % Repeat Reports within 30 Days (87)**

Products	Retail:	Resale:	UNE:	Trunks:
	<ul style="list-style-type: none"> • POTS • Complex • Specials • IXC FGD Trunks 	<ul style="list-style-type: none"> • POTS • Complex • Specials 	<ul style="list-style-type: none"> • POTS • Complex • Specials 	<ul style="list-style-type: none"> • CLEC Trunks
Calculation	Numerator		Denominator	
	Count of central office and loop troubles that had previous troubles within the last 30 days. (Disposition codes 03/04/05, That Repeated From Disposition codes < 14)		Total central office and loop Found troubles (Disposition codes 03, 04 and 05)	

Network Performance (NP)

Function:
NP-1 Percent Final Trunk Group Blockage
Definition:
<p>The percent of Final Trunk Groups that exceed blocking design threshold. Monthly trunk blockage studies are based on a time consistent busy hour. The percentage of BA trunk groups exceeding the applicable blocking design threshold will be reported. Data collected in a single study period to monitor trunk group performance is a sample and is subject to statistical variation based upon the number of trunks in the group and the number of valid measurements. With this variation, for any properly engineered trunk group, the measured blocking for a trunk group for a single study may exceed the design-blocking threshold. [Tables specify the blocking threshold (Service Threshold) under which Bell Atlantic operates, above which it is statistically probable that the design blocking standard is not being met and the trunk group requires servicing action. For B.005 design, this is trunk-groups exceeding a threshold of about 2% blocking.]</p> <p>For this measure, BA Retail Trunks are defined as Common Final Trunks carrying Local Traffic between offices. Typical common final trunks are between end offices and access tandems. CLEC Trunks are dedicated final trunks carrying traffic from the BA access tandem to the CLEC.</p>
Exclusions:
<p>Trunks not included:</p> <ul style="list-style-type: none">• IXC Dedicated Trunks• Common Trunks carrying only IXC traffic <p>BA will electronically notify CLECs (operational trunk staffs), of the following situations for blocked trunks. This notification will identify that BA has identified a blocked trunk group and that the trunk group should be excluded from BA performance. Unless the CLEC responds back with documentation that the information on the condition is inaccurate, the trunk group will be excluded:</p> <ul style="list-style-type: none">• Trunks blocked due to CLEC network failure• Trunks that actually overflow to a final trunk, but are not designated as an overflow trunk• Trunks blocked where CLEC order for augmentation is overdue• Trunks blocked where CLEC has not responded to or has denied BA request for augmentation• Trunks blocked due to other CLEC trunk network rearrangements
Performance Standard:
<p>Because Common trunks carry both retail and CLEC traffic, there will be parity with Retail on common trunks.</p> <p>For individual trunk groups carrying traffic between BA and CLECs, BA will provide explanation (and action plan if necessary) on individual trunks blocking for two months consecutively. An individual trunk should not be blocked for three consecutive months.</p> <p>End User Standard:</p> <p>602.1(m) Final Trunk Group - The last choice group of common interoffice communications channels for the routing of local, operator and/or toll calls.</p> <p>603.3(g) Percent Final Trunk Group Blockages. This metric is defined as the monthly percentage of blocked calls on any local, toll and local operator final trunk groups and has a performance threshold of 3.0% or less for each final trunk group.</p> <p>603.4(d)(3) For Percent Final Trunk Group Blockages, a Service Inquiry Report shall automatically be filed whenever performance is not at or better than 3.0 percent for three consecutive months.</p>

Report Dimensions – NP-1 Percent Final Trunk Group Blockage

Company: <ul style="list-style-type: none"> • BA Retail • CLEC Aggregate • CLEC Specific 		Geography: <ul style="list-style-type: none"> • NY State 	
Products		Retail: <ul style="list-style-type: none"> • BA Common Final (Local)Trunks 	Trunks: <ul style="list-style-type: none"> • CLEC Trunks
Sub-Metrics			
NP-1-01		% Final Trunk Groups Exceeding Blocking Standard (88)	
Calculation	Numerator		Denominator
	Count of Final Trunk Groups that Exceed Blocking Threshold for one month exclusive of trunks that block due to CLEC network problems as agreed by CLECs.		Total number of final trunk groups
NP-1-02		% Final Trunk Groups Exceeding Blocking Standard –(No Exceptions) (New)	
Calculation	Numerator		Denominator
	Count of Final Trunk Groups that Exceed Blocking Threshold.		Total number of final trunk groups
NP-1-03		Number Final Trunk Groups Exceeding Blocking Standard – 2 Months (New)	
Calculation	Numerator		Denominator
	Count of Final Trunk Groups that Exceed Blocking Threshold, for two consecutive months, exclusive of trunks that block due to CLEC network problems as agreed by CLECs.		Not applicable
NP-1-04		Number Final Trunk Groups Exceeding Blocking Standard – 3 Months (New)	
Calculation	Numerator		Denominator
	Count of Final Trunk Groups that Exceed Blocking Threshold, for three consecutive months, exclusive of trunks that block due to CLEC network problems as agreed by CLECs.		Not applicable

Function:		
NP-2 Collocation Performance		
Definition:		
<p><u>Interval</u>: The average number of business days between order application date and completion or between order application date and response (notification of space availability) date. The application date is the date that a valid service request is received.</p> <p>Per 914 tariff, (Section 5.5.1(B)(3)) <u>Un-forecasted Demand</u> will have the following Interval Start Date:</p> <ul style="list-style-type: none"> • No Forecast Received: 3 Months after application date • Forecast Received 1 month Prior to application date: 2 Months after application date • Forecast Received 2 months prior to application date: 1 Month after application date • Forecast received 3 months prior to application date: On the application date <p>Interval Stops if: (stop clock)</p> <ul style="list-style-type: none"> • For CLEC milestone misses (Milestones are noted in 914 tariff in section 5.1.4(D) and 5.2.2(F) and in glossary. <p>Completions: BA will not be deemed to have completed work on a collocation case until the cage is suitable for use by the CLEC, and the cable assignment information necessary to use the facility has been provided to the CLEC.</p>		
Exclusions:		
<ul style="list-style-type: none"> • None 		
Formula:		
<p><u>Interval</u>: $\sum (\text{Committed Due Date} - \text{Application Date}) / \text{Number of Cages}$</p> <p><u>% On Time</u>: $\text{Number of Cages completed on Due Date (adjusted for milestone misses)} / \text{Number of Cages completed} \times 100$</p> <p><u>Delay Days</u>: $:\sum (\text{Actual Completion Date} - \text{Committed Due Date}) (\text{adjusted for milestone misses}) / \text{Number of Cages where due date is missed}$</p>		
Performance Standard:		
<p>Physical:</p> <p style="padding-left: 20px;">Notification of Space Availability: 8 Days</p> <p style="padding-left: 20px;">Collocation Interval: 76 Days</p> <p style="padding-left: 20px;">95% On Time</p> <p>Virtual:</p> <p style="padding-left: 20px;">Notification of Space Availability: 14 Days</p> <p style="padding-left: 20px;">Collocation Interval: 105 Days</p> <p style="padding-left: 20px;">95% On Time</p>		
Report Dimensions		
<p>Company:</p> <ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 		<p>Geography:</p> <ul style="list-style-type: none"> • NY State
Sub-Metrics		
NP-2-01	% On Time Response to Request for Physical Collocation (New)	
Calculation	Numerator	Denominator
	Count of requests for Physical collocation cages where response to request is answered on time.	Count of requests for physical collocation received in period.
NP-2-02	% On Time Response to Request for Virtual Collocation (New)	
Calculation	Numerator	Denominator

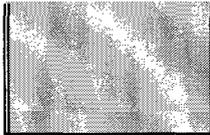
	Count of requests for Virtual collocation arrangements where response to request is answered on time.	Count of requests for virtual collocation received in period.
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Sub-Metrics NP-2 Collocation Performance (continued)		
NP-2-03	Average Interval – Physical Collocation (New)	
Calculation	Numerator	Denominator
	Sum of duration from application date to completion date for physical collocation cages completed during report period. (Excludes time for CLEC milestone misses)	Count of physical collocation cages completed.
NP-2-04	Average Interval – Virtual Collocation (New)	
Calculation	Numerator	Denominator
	Sum of duration from application date to completion date for virtual collocation arrangements completed during report period. (Excludes time for CLEC milestone misses)	Count of virtual collocation arrangements completed.
NP-2-05	% On Time – Physical Collocation (New)	
Calculation	Numerator	Denominator
	Number of Physical collocation arrangements completed on or before due date (including due date extensions resulting from CLEC milestone misses).	Count of physical collocation cages completed.
NP-2-06	% On Time – Virtual Collocation (New)	
Calculation	Numerator	Denominator
	Number of virtual collocation arrangements completed on or before due date (including due date extensions resulting from CLEC milestone misses).	Count of virtual collocation arrangements completed.
NP-2-07	Average Delay Days – Physical Collocation (New)	
Calculation	Numerator	Denominator
	Sum of duration between actual physical collocation cage due completion date and due date for missed physical collocation cages (including due date extensions resulting from CLEC milestone misses).	Count of Missed physical collocation cages.
NP-2-08	Average Delay Days – Virtual Collocation (New)	
Calculation	Numerator	Denominator
	Sum of duration between actual virtual collocation arrangement due completion date and due date for missed <u>virtual</u> collocation cages (including due date extensions resulting from CLEC milestone misses).	Count of Missed virtual collocation arrangements

Function:	
NP-3 Switching Performance	
Performance Standard:	
Parity with Retail - by design of switch	
Metrics Not Reported:	
Reported to NY PSC in Aggregate (Retail/Wholesale):	Reported to NY PSC
Switching Performance - PSC Standards <ul style="list-style-type: none"> • Percent Blockages & Failures • Percent Incoming Matching Loss • Percent Dial Tone Speed over 3 Seconds 	0.0 - 1.0 (weak spot > 2.1) 0.0 - 2.1 (weak spot > 2.8) 0.0 - 1.5 (weak spot > 2.6)
Not Reported Switching Standards:	
<p><i>Switching Index Standards by Switch Type:</i></p> <p>The switching index takes a number of factors, weighs them and calculates an overall score. The overall objective is 95.5 and up for each switch. Individual performances may fall below threshold, but not necessarily drop the index below. This is an overall indicator of switch performance.</p> <p>Thresholds based on industry standard guidelines and vary with switch manufacturer. The performance is grouped into two categories machine access and machine switching. Machine access measurements designed to reflect difficulties experienced by the customer in obtaining service from the switching equipment. Machine switching measurements of customers' call attempts (or incoming call attempts from another switch) that failed during call processing.</p> <p>NOTE: There are no longer any 1AESS switches in NY, hence switching performance plan is removed.</p>	
<u>Switching Performance – Index Plan – 5ESS</u>	<u>Threshold</u>
a.) Machine Access <ul style="list-style-type: none"> • Tone Decoder Overflow • Tone Decoder Attached Delay • Dial Tone Speed • SS7 Link Unavailable 	1.00 0.10 33.34 0.27
b.) Machine Switching <ul style="list-style-type: none"> • Facility Cutoff Calls • Remote Module Stand Alone Time • Initializations SM/RSM • Interrupts (AM) • Maintenance Usage • Audits • Equipment Outage • Equal Access 	2.00 0.50 1.00 80.00 50.00 10.00 1.00 100.00
<u>Switching Performance – Index Plan – DMS100</u>	
a.) Machine Access <ul style="list-style-type: none"> • Dial Tone Speed • Receiver Queue • SS7 Link Unavailable 	33.34 0.00 0.27
b.) Machine Switching <ul style="list-style-type: none"> • Transmitter Time-outs • Errors • EA Wink Equal Access • SS7 Errors • Equipment Outage • RLCM RSC Emergency Stand Alone 	16.00 50.00 100.00 10.00 1.00 5.00

Billing Performance (BI)

Function:		
BI-1 Timeliness of Daily Usage Feed		
Definition:		
<p>The number of business days from the creation of the message to the date that the usage information is made available to the CLEC on the Daily Usage Feed (DUF). Measured in percentage of usage records transmitted within 3, 4, 5, and 8 business days. One report covers both UNE and Resale. For CLECs requesting this service, usage records will be provided to CLECs each business day. The usage process starts with collection of usage information from the switch. Most offices have this information teleprocessed to the data center. Not all offices poll usage every business day. Weekend and holiday usage is captured on the next business day. Usage for all CLECs is collected at the same time as BA's.</p> <p>Note:</p> <ul style="list-style-type: none"> • BA-NY monitors the level of service order errors with the potential of delaying usage feeds; • BA-NY monitors the timeliness of the usage feed to the process on a daily basis; and <p>BA-NY offers its CLEC customers the option of receiving EMI usage feeds through the Network Data Mover (NDM) process to increase the timeliness of delivery</p>		
Exclusions:		
<ul style="list-style-type: none"> • None 		
Formula:		
$0(\text{Total usage records in "y" business days} / \text{total records on file}) \times 100$ <p>1 (note: y = 3, 4, 5 or 8)</p>		
Performance Standard:		
<p>Process is Designed at parity with Retail 95% in 4 Business Days</p>		
Report Dimensions		
Company: <ul style="list-style-type: none"> • CLEC Aggregate • CLEC Specific 		Geography: <ul style="list-style-type: none"> • NY State
Sub-Metrics		
BI-1-01	% DUF in 3 Business Days (89)	
Calculation	Numerator	Denominator
	Count of usage records on daily usage feed tapes processed during month, where the difference between current date and call date is 3 days or less.	Count of Usage Records on DUF tapes processed during month,
BI-1-02	% DUF in 4 Business Days (90)	
Calculation	Numerator	Denominator
	Count of usage records on daily usage feed tapes processed during month, where the difference between current date and call date is 4 days or less.	Count of Usage Records on DUF tapes processed during month,
BI-1-03	% DUF in 5 Business Days (91)	
Calculation	Numerator	Denominator

	Count of usage records on daily usage feed tapes processed during month, where the difference between current date and call date is 5 days or less.	Count of Usage Records on DUF tapes processed during month,
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Sub-Metrics BI-1 Timeliness of DUF (continued)		
BI-1-04	% DUF in 8 Business Days (92)	
Calculation	Numerator	Denominator
	Count of usage records on daily usage feed tapes processed during month, where the difference between current date and call date is 8 days or less.	Count of Usage Records on DUF tapes processed during month,

Function:		
BI-2 Timeliness of Carrier Bill		
Definition:		
The percent of carrier bills sent to the carrier, unless the CLEC 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.		
Exclusions:		
<ul style="list-style-type: none"> • None 		
Formula:		
(Number of Bills sent within 10 business days / number of bills sent) x 100		
Performance Standard:		
98% in 10 Business Days		
Report Dimensions		
Company:		Geography:
<ul style="list-style-type: none"> • CLEC Aggregate 		<ul style="list-style-type: none"> • NY State
Sub-Metrics		
BI-2-01	Timeliness of Carrier Bill (93)	
Calculation	Numerator	Denominator
	Count of carrier bills sent to CLEC ²⁷ within 10 business days of bill date.	Count of Carrier Bills distributed

²⁷ Sent to Carrier, unless other arrangements are made with CLEC

Function:		
BI – 3 Billing Accuracy		
Definition:		
The percent of carrier bill charges adjusted due to billing errors.		
Exclusions:		
<ul style="list-style-type: none"> Adjustments that are not billing errors such as: charges for directories, incentive regulation credits, performance remedies, out of service credits, special promotional credits 		
Performance Standard:		
No Performance Standard yet developed.		
Report Dimensions		
Company: <ul style="list-style-type: none"> BA Retail CLEC Aggregate 		Geography: <ul style="list-style-type: none"> NY State
Sub-Metrics		
BI-3-01	% Billing Adjustments – Dollars Adjusted (New)	
Calculation	Numerator	Denominator
	Count of dollars adjusted for billing errors	Total Dollars Billed
BI-3-02	% Billing Adjustments – Number of Adjustments (New)	
Calculation	Numerator	Denominator
	Count of adjustments for billing errors	Total Bills

Operator Services and Databases (OD)

Function:	
OD-1 Operator Services – Speed of Answer	
Performance Standard:	
<u>Standard:</u> BA-NY's Operator Call Distribution Systems handle all traffic on a first come first served basis, regardless of CLEC or originating trunk group. (Identification of CLEC for branding or billing does not impact call distribution.) Process Parity.	
Exclusions:	
<ul style="list-style-type: none"> • None 	
Report Dimensions	
Company:	Geography:
<ul style="list-style-type: none"> • New York Operator Service Center • Massachusetts Operator Service Center 	<ul style="list-style-type: none"> • NY State
Sub-Metrics	
OD-1-01	Average Speed of Answer – Operator Services (New)
Calculation	Numerator
	Sum of call answer time for calls to operator service (0) from call origination to answer by operator
	Denominator
	Number of Calls Answered
OD-1-02	Average Speed of Answer – Directory Assistance (New)
Calculation	Numerator
	Sum of call answer time for calls to Directory Assistance from call origination to answer by operator
	Denominator
	Number of Calls Answered

Function:
OD-2 LIDB, Routing and OS/DA Platforms
Performance Standard:
LIDB: <ul style="list-style-type: none">• LIDB reply rate to all query attempts: Bellcore produced standard• LIDB query time out: Bellcore produced standard• Unexpected data values in replies for all LIDB queries: 2%• Group troubles in all LIDB queries Delivery to OS Platform: 2%
800 Database: Bellcore produced standard
AIN: Bellcore produced standard
Metrics Not Reported:
BA-NY does not have the capability to report this performance area

General (GE)

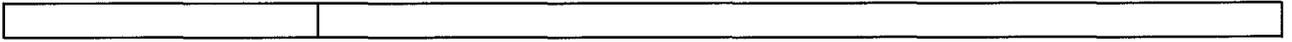
Function:
GE-1 Directory Proofs
Performance Standard:
BA does not provide directory proofs to CLECs. BA provides Listing Verifications Report 90 days before close out date and provides a Directory Listings view of Listings through the Web-GUI. All business rules are documented in the CLEC and Reseller Handbook.
Metrics Not Reported:
BA-NY does not have the capability to report this performance area

Function:
GE-2 Poles, Ducts, Conduit and Rights of Way
Performance Standard:
BA-NY has filed Engineering and Construction Methods and Procedures that included firm time commitments which are consistent with the applicable Federal and State requirements. BA-NY will respond to requests for its engineering records information within a 45-day time period, and pursuant to the terms and conditions set forth in its conduit licensing agreement 1.
Metrics Not Reported:
BA-NY does not have the capability to report this performance area.

Glossary

Application Date	The date that a valid order is received.
ASR	Access Service Request
BA Administrative Orders	Orders completed by BA for administrative purposes and NOT at the request of a CLEC or end user. These also include administrative orders for BA official lines and LIDT (Left in Dial Tone). [SWO<>"NC", "NF"] [CLS<>TOV, or CLS_2<>TOV]
BASIC EDITS	Front-end edits performed by DCAS prior to order submission. Basic Edits performed against DCAS provided source data include: State Code must equal NY, CT, MA, ME, NH, VT, RI; CLEC Id can not be blank; All Dates and Times must be numeric; Order Type must be '1','2','3','4'; Svc Order Type must be '0', '1' '2'; Flowthru Candidate Ind and Flowthru Indicator must be 'Y' or 'N'; Lines Number must be numeric; Service Order Classification must be '0' or '1'; Confirmation Method must be 'E', 'M' 'W'; Each submission must have a unique key (PON + Ver + CLEC Id + State); Confirmation, Reject and Completion Transactions must have matching Submission record. Any changes to basic edits will be provided via BA Change Control procedures.
BFR	Bona Fide Request Process (BFR): See appendix D, Summary of BFR from P.S.C. No. 916, Section 16.
Collocation Milestones	<p>From P.S.C. 914 Tariff, Section 5:</p> <p><u>Physical Collocation</u></p> <ul style="list-style-type: none"> • Day 1 – CLEC submits completed application • Day 9 – BA notifies CLEC that request can be accommodated and estimates costs. • Day 14 – CLEC notifies BA of intent to proceed and submits 50% payment as set forth in 5.1.5(b) or provides written agreement agreeing to reimburse BA for all costs incurred should the CLEC withdraw its collocation request • Day 76 – BA and CLEC attend Methods and Procedures meeting and BA turns over the multiplexing node to the CLEC <p>BA and the CLEC shall work cooperatively in meeting these milestones and deliverables as determined in the joint planning process. A preliminary schedule will be developed outlining major milestones. In physical collocation, the CLEC and BA control various interim milestones they must meet to meet the overall intervals. The interval clock will stop, and the final due date will be adjusted accordingly, for each milestone the CLEC misses (day for day). Prior to the CLEC beginning the installation of its equipment, the CLEC must sign the BA work completion notice, indicating acceptance of the multiplexing node construction work and providing BA with a security fee, if required, as set forth in Section 5.5.5. Payment is due within 30 days of bill date. The CLEC may not install any equipment of facilities in the multiplexing node(s) until after the receipt by BA of the BA work completion notice and any applicable security fee.</p> <p><u>Virtual Collocation:</u></p> <p>BA and the CLEC shall work cooperatively to jointly plan the implementation milestones. BA and the CLEC shall work cooperatively in meeting those milestones and deliverables as determined during the joint planning process. A preliminary schedule will be developed outlining major milestones including anticipated delivery dates for the CLEC-provided transmission equipment and for training.</p>

Common Final Trunk Blockage:	Common final trunks carry traffic between BA end offices and the BA access tandem, including local traffic to BA customers as well as CLEC customers. (In rare circumstances, it is possible to have a common final trunk group between two end offices.) The percentage of BA common final trunk groups carrying local traffic, exceeding the applicable blocking design standard (either B.01 or B.005) will be reported. All CLEC trunks are engineered at the B.005 level. In all but the Washington Metropolitan area, local common trunks are engineered at the B.005 level. In the Washington Metropolitan area, common trunks are engineered at the B.01 level.
Common Trunks:	<p>(A) <u>High Usage Trunks</u> carry two-way local traffic between two BA end offices. High Usage Common Trunks are designed so that traffic will overflow to final trunk groups. Local trunks are designed such that no more than 0.5% (B.005 standard) of traffic will overflow during the busy hour in all Bell Atlantic – NY geographies.</p> <p>(B) <u>Final Trunks</u>: (All Bell Atlantic except NY LATA) Final Trunks carry two-way local and long distance IXC traffic between an end office and an access tandem switch. Common Final Trunks are designed so that no more than 0.5% (B.005 standard) of traffic will block during the busy hour.</p> <p>(C) <u>Final Trunks - Local</u> (NY LATA 132) Final Trunks carry local two-way traffic between an end office and an access tandem switch. Common Final Trunks are designed so that no more than 0.5% (B.005 standard) of traffic will block during the busy hour.</p> <p>(D) <u>Final Trunks – IXC</u> (NY LATA 132 and Washington Metropolitan Calling Area) Final Trunks carry long distance IXC two-way traffic between an end office and an access tandem switch. Common Final Trunks are designed so that no more than 0.5% (B.005 standard) of traffic will block during the busy hour.</p>
Company Initiated Orders	Provisioning orders processed for administrative purposes and not at customer request.
Company Services	Official Bell Atlantic Lines
Completion Date	The date noted on the service order as the date that all physical work is completed as ordered.
Coordinated Cut over	A coordinated cut-over is the live manual transfer of a BA end user to a CLEC completed with manual coordination by BA and CLEC technicians to minimize disruptions for the end user customer. Also known as a “hot cut”. These all have fixed minimum intervals.
CPE	Customer Premises Equipment
Cut-Over Window	Amount of time from start to completion of physical cut-over of lines: 1 to 9 lines: 1 Hour 10 to 49 lines: 2 Hours 50 to 99 lines: 3 Hours 100 to 199 lines: 4 Hours 200 plus lines: 8 Hours
DCAS	Direct Customer Access System: The system developed initially for the North States (CT, MA, ME, NH, NY, RI and VT) for a CLEC to transact with Bell Atlantic. DCAS supports GUI, EDI and EIF transactions.
Dedicated Final Trunks Blockage:	A dedicated final trunk group does not overflow. Dedicated final trunk groups carry local traffic from a BA Access Tandem to a CLEC switch. All dedicated final trunk groups to the CLECs are engineered at a design-blocking threshold of B.005.



Dedicated Trunks	<p>(E) <u>High Usage Trunks – CLEC Interconnection</u>: carry one-way traffic from a CLEC end office to a Bell Atlantic Tandem Office <u>or</u> carry two-way local traffic between a Bell Atlantic end office and a CLEC end office. High Usage Common Trunks are designed so that traffic will overflow to final trunk groups. Local trunks are designed such that no more than 0.5% (B.005 standard) of traffic will overflow during the busy hour in all Bell Atlantic geographies. These trunks are ordered by the CLEC.</p> <p>(F) <u>Final Trunks – CLEC Interconnection</u>: carry one-way traffic from a CLEC end office to a Bell Atlantic Tandem Office <u>or</u> carry two-way traffic between and end office and a tandem switch. CLECs order these trunks from BA and engineer to their desired blocking design threshold.</p> <p>(G) <u>High Usage Trunks – BA to CLEC Interconnection</u>: carry one-way local traffic from a Bell Atlantic end office to a CLEC end office. High Usage Common Trunks are designed so that traffic will overflow to final trunk groups. Local trunks are designed such that no more than 0.5% (B.005 standard) of traffic will overflow during the busy hour in all Bell Atlantic geographies. BA orders these trunks from CLECs.</p> <p>(H) <u>Final Trunks – BA to CLEC Interconnection</u>: carry one-way traffic from a BA end office or a tandem switch. Final Trunks are designed so that no more than 0.5% (B.005 standard) of traffic will block during the busy hour in all Bell Atlantic geographies. BA orders these trunks from CLECs.</p> <p>(I) <u>High Usage Trunks – IXC Feature Group D</u>: carry two-way traffic between a Bell Atlantic end office and an IXC POP. High Usage Trunks are designed so that traffic will overflow to final trunk groups. IXC trunks are designed such that no more than 0.5% (B.005 standard) of traffic will overflow during the busy hour in all Bell Atlantic geographies. IXCs order these trunks from BA.</p> <p>(J) <u>Final Trunks – IXC Feature Group D</u> carry two-way traffic between and end office and a tandem switch. Common Final Trunks are designed so that no more than 0.5% (B.005 standard) of traffic will block during the busy hour in all Bell Atlantic geographies. IXCs order these trunks from BA.</p>
Dispatched Orders:	An order requiring the dispatch of a Bell Atlantic Field technician outside of a Bell Atlantic Central Office. Intervals differ by line size. In all areas, for orders greater than or equal to 10 lines, a facility check is required and the interval negotiated. In many, but not all areas, a facility records check (in Engineering) is also performed for orders with between 6 to 9 lines.
Dispatched Troubles:	Loop or Drop Wire Troubles reports found to be in drop wire or outside plant. Disposition codes 03 or 04.
Disposition Codes	The code assigned by the field technician upon closure of trouble. This code identifies the plant type/location in the network where the trouble was found.
DUF	Daily Usage Feed:
FOC	Firm Order Confirmation
Front End Close-Out	A trouble report closed with the customer on the line usually within 10 minutes of taking trouble. These include cancellations by the customer or CLEC. Disposition Codes: 0741(RE<10), 0747, 0706(CP=291).
LIDT	<u>Left in Dial tone Orders</u> . These are orders used after a customer has moved out of a residence dwelling and the line has been disconnected for billing – to leave in reserve Office Equipment (OE) assigned to the cable pair in the central office Once another customer moves back into the location a second order is

	written to remove the LIDT status to enable the customer order to process. These are not customer requested orders.
Loop Qualification	<u>Loop</u> qualification is the manual step whereby it is determined if the loop facility meets or can be made to meet specifications necessary for ISDN services. It must be provided on non-loaded facilities with less than 1300 OHMs of resistance and not more than 6 kft of bridge tap.
LSR	Local Service Request
LSRC	Local Service Request Confirmation
Mechanized Flow-Through:	Orders received electronically through the ordering interface (DCAS) and requiring no manual intervention to be entered into the SOP.
Missed Appointment Codes	Bell Atlantic Missed Appointment Codes: CB = Business Office, CC = Common Cause, CE = Equipment, CF = Facility, CL = Load (lack of work forces), CS = Switching/programming, CO = Company Other Customer Missed Appointment Codes: SA = Customer Access, SR = Customer Not Ready, SO = Customer Other, SL = Customer requested later due date
Network Troubles	Troubles with a disposition code of 03 (drop), 04 (loop), or 05 (central office). Excludes Subsequent reports (additional customer calls while the trouble is pending), Customer Premises Equipment (CPE) troubles, troubles reported but not found on dispatch (Found OK and Test OK), and troubles closed due to customer action.
Non-Mechanized:	Orders that require some manual processing. Includes orders received electronically that are not processed directly into the legacy provisioning systems, and are manually entered by a BA representative into the BA Service Order Processor (SOP) system. For orders not received electronically (such as faxed or courier orders), 24 hours are added to all intervals.
No-Dispatch Troubles:	Troubles reports found to be in central office, including frame wiring and translation troubles. Disposition codes 05.
No-Dispatch Orders:	Orders completed without a dispatch outside a Bell Atlantic Central Office. Includes orders with translation changes and dispatches inside a Bell Atlantic Central Office.
Orders with ≥ 10 lines:	In some geographic areas, a facility check is completed on orders greater than 5 lines. In all geographic areas, orders with 10 or greater lines require a facility check prior to order confirmation and due date commitment.
OSS	Operations Support Systems
POTS Services	<u>Plain Old Telephone Services</u> include all non-designed lines/circuits that originate at a customer's premise and terminate on an OE (switch Office Equipment). POTS includes Centrex, Basic ISDN and PBX trunks.
PON	<u>Purchase Order Number</u> : Unique purchase order provided by CLEC to BA placed on LSRC or ASR as an identifier of a unique order.
Projects	<u>Projects</u> are designated by CLECs. For Trunks, any request for a new trunk group, augment for more than 384 trunks, complex (E911 or DA) or request out of the ordinary requiring special coordination, such as rearrangements is considered a project.
Reject	An order is rejected when there are omissions or errors in required information. Rejects also include queries where notification is provided to a CLEC for clarification on submitted orders. The order is considered rejected and order processing is suspended while a request is returned or queried.
Run Clock	A measure of duration time where no time is excluded. Duration time is calculated comparing the date and time that a trouble is cleared to the date and time that the trouble was reported.
Segment	Segments are parts of whole orders. [NVL SEGMENT, 0=<1] A segment is used to apportion a longer order to meet limitations of record lengths. Similar to a separate page or section on the same order.
SOP	Service Order Processor

Special Services	Any service or element involving circuit design. Any service or element with four wires. Any DS0, DS1 and DS3, no access service. Excludes trunks. IOF and EEL are separately reported for provisioning.
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Stop Clock	A measure of duration time where some time is excluded. The clock is stopped when testing is occurring, BA is awaiting carrier acceptance, or BA is denied access.
Suspend/Restore Orders	Orders completed by BA to suspend for non-payment or restore for payment subject to NY PSC Collections guidelines. [SNPRES_IND.IS NOT NULL]
Test Orders	Orders processed for "fictional" CLECs for BA to test new services, attestation of services etc. Includes the following CLEC AECN's: 'DPC', 'DPCL', 'NYNX', 'ZKPM', 'ZPSC', 'ZTKP', 'ZTPS', 'ZJIM'.
Two wire digital ISDN Loop	2 wire unbundled digital loop (previously called Two Wire Digital Loop) that is compatible with ISDN Basic Rate service. It is capable of supporting simultaneous transmission of 2 B channels and One D channel. It must be provided on non-loaded facilities with less than 1300 OHMs of resistance and not more than 6 kft of bridge tap. This service provides a digital 2-wire enhanced channel. It is equivalent to a 2-wire loop less than 18,000 feet from the NID at the end user's premises to the main distributing frame (which is connected to the CLEC's collocation arrangement), in Bell Atlantic's central office where the end user is served. The 2-wire digital – ISDN BRI loop, currently offered by Bell Atlantic, is designed to support the Integrated Services Digital Network (ISDN) Basic Rate Service which operates digital signals at 160 kilobytes per second (kbps). The 2-wire digital – ISDN BRI loop is only available to the CLEC for use in conjunction with the provision of local exchange service and exchange access to its end users.

Product identification descriptions:

Retail	Major Customer Name/Number entered on Provisioning order first 4 characters does not contain the values "RSID" which indicates resold or "AECN" which indicates unbundled.
Resale	Major Customer Name/Number entered on Provisioning order-first 4 characters does contain the value "RSID" the 6th through 10th indicate reseller id. RSID except test and training RSID orders <u>Ordering:</u> ORDER-TYPE of ORDERING-MASTER-REC = ' 1'
UNE	Major Customer Name/Number entered on provisioning order- first 4 characters contains the values "AECN" which indicates unbundled. Characters 6 through 10 indicate the Telecommunications carrier id. <u>Ordering:</u> ORDER-TYPE of ORDERING-MASTER-REC = '2' or '3'
POTS - Total	Two wire analog service with a telephone number and POTS class of service. Includes analog loop (SVGAL). <u>Ordering:</u> <ul style="list-style-type: none"> • Service order classification of ordering master rec = 0 <u>Provisioning:</u> <ul style="list-style-type: none"> • POTS Orders are defined as not having a circuit layout (CL_FID IS NULL) or are not for ISDN service (SCM_2 IS NULL) <u>Maintenance:</u> <ul style="list-style-type: none"> • Class Service = 04/05/06/07/08/09/10/13/19/20/21
Complex: ISDN	<u>Provisioning:</u> <ul style="list-style-type: none"> • ISDN Basic Rate: Secondary Service Code Modifier (SCM_2) is not blank • ISDN Primary: Service Code Modifier (SCM) begins with "IB"

Special Services	<p><u>Special Services</u> ("Specials") are services that require engineering design intervention. These include such services as: high capacity services (DS1 or DS3), Primary rate ISDN, digital services and private lines or foreign served services (a line physically in one exchange, served by another through a circuit).</p> <p>Ordering:</p> <ul style="list-style-type: none"> • Service order classification of ordering master rec = 1 <p>Provisioning:</p> <ul style="list-style-type: none"> • CL_FID is not NULL <p>Maintenance:</p> <ul style="list-style-type: none"> • Criteria for inclusion is Circuit format (cfmt) is 's','t','2','3' as defined by Bellcore standard, report category (rpt_cat) is "CR" indicating a Customer Reported trouble, circuit format does not indicate (fourth character of circuit id for a length of 2) "TK","IB","DI","DO" because these are considered POTS, 7th character of circuit id does not indicate official Bell Atlantic line as defined by Bellcore standard practice, trouble code (trbl_cd) is either "FAC" or "CO" indicating the trouble was found in the Facility-cable (from Central Office to customers location) or in the Central Office (the trouble was found within the Bell Atlantic central office), Maintenance center (MCTR) is not training or blank which excludes troubles entered for employee training purposes, Subsequent calls on the same trouble are not included in these metrics, Troubles are excluded where circuit id (cktid character 4 for a length of 2) indicates access tariff filing.
For Trunks:	<p>For Maintenance: Criteria for inclusion is Circuit format (cfmt) is 'M' as defined by Bellcore standard, report category (rpt_cat) is "CR" indicating a Customer Reported trouble, trouble code (trbl_cd) is either "FAC" or "CO" indicating the trouble was found in the Facility-cable (from Central Office to customers location) or in the Central Office (the trouble was found within the Bell Atlantic central office), Maintenance center (MCTR) is not training or blank which excludes troubles entered for employee training purposes, Subsequent calls on the same trouble are not included in these metrics.</p>