II. Executive Summary

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A.   Introduction

1.0   Background

The Florida Public Service Commission (FPSC) will be considering the matter of BellSouth's compliance with the requirements of Section 271 of the Telecommunications Act of 1996 (TA-96) in the manner specified in the FPSC's Docket No. 960786-TL.

Specifically, the FPSC has used this docket to consider whether BellSouth has met the 14-point checklist in Section 271. The Telecommunications Act of 1996, together with the Federal Communications Commission (FCC) interpretations, requires BellSouth to:

♦   Provide non-discriminatory access to its Operations Support Systems (OSS) on appropriate terms and conditions;

♦   Provide the documentation and support necessary for Alternative Local Exchange Carriers (ALEC) to access and use these systems; and

♦   Demonstrate that its systems are operationally ready and provide an appropriate level of performance.

Compliance with these requirements is intended to allow competitors to obtain pre-ordering information; execute service orders for resale services, Unbundled Network Elements (UNE), and UNE-Platform (UNE-P); manage trouble reports; and obtain billing information in a way deemed non-discriminatory when compared with BellSouth's retail operations.

On August 8, 1999 the FPSC implemented Phase I of third party testing of BellSouth for the state of Florida in Order No. PSC-99-1568-PAA TP. Phase I required KPMG Consulting to develop the State of Florida Public Service Commission, BellSouth Telecommunications, Inc. OSS Evaluation Project Master Test Plan (MTP) to identify specific testing activities necessary to demonstrate non-discriminatory access and parity of BellSouth systems and processes.

On January 11, 2000 the FPSC approved the MTP and selected KPMG Consulting as the Phase II Test Manager in Order No. PSC-00-0104-PAA-TP. Phase II required KPMG Consulting to conduct an independent third-party test, as defined by the Master Test Plan, of the readiness of BellSouth's OSSs, interfaces, documentation, and processes to support local market entry by the ALECs.

The following report reflects the findings of the evaluation.

2.0   Objective

The objectives of this Executive Summary are to provide the following:

♦   A high-level description of the process KPMG Consulting followed to evaluate BellSouth's policies, procedures, documentation, interfaces, and systems; and

♦   A summary of the results of testing activities.

3.0   Audience

KPMG Consulting anticipates the audience for this document will fall into two main categories:

♦   Readers who will use this document during an evaluation process (i.e., the FPSC, FCC, and U.S. Department of Justice (DOJ)); and

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♦   Other interested entities who have some stake in the result of BellSouth's OSS evaluation and wish to have insight into the test results (e.g., BellSouth, ALECs, and other ILECs).

While many of the above entities have stated an interest in the test and its results, only the FPSC, KPMG Consulting and BellSouth are actual parties to the contract for this evaluation. Third-party reliance on this report is not intended and is explicitly prohibited. It is expected that the FPSC will review this report in forming its own assessment of BellSouth's compliance with the requirements of the Telecommunications Act of 1996.

4.0   Scope

The scope of the test is documented in the State of Florida Public Service Commission, BellSouth Telecommunications, Inc. OSS Evaluation Project – MTP dated December 2, 1999.

The initial MTP was developed by KPMG Consulting and submitted to the FPSC on December 2, 1999. Significant input from the FPSC, BellSouth, and various ALECs was solicited, received, and considered during the MTP development period. BellSouth and ALEC business plans and projections were also reviewed during construction of the MTP.

In determining the breadth of the test, all stages of the ALEC/ILEC relationship were considered, including the following:

♦   Establishing the relationship;

♦   Performing daily operations; and

♦   Maintaining the relationship.

Furthermore, the current service delivery methods (i.e. resale, UNE, and UNE-P) were included in the scope of the test (see Section 6.0, Limitations below).

KPMG Consulting tested different interface types for transactions including: the application-to-application; the terminal-type, web-based graphical user interface (GUI) and manual submission (i.e., facsimile (fax) or electronic mail (email)). Specific interfaces included in the OSS Test included: Trouble Analysis Facilitation Interface (TAFI), Electronic Communication Trouble Administration (ECTA), Local Exchange Navigation System (LENS), Telecommunications Access Gateway (TAG)[1], Electronic Data Interchange (EDI), Optional Daily Usage File (ODUF), Access Daily Usage File (ADUF) and Billing Output Specification Bill Data Tape (BOS-BDT).

Non-transaction testing included evaluations of policies, procedures, guidelines, training, documentation, and work center activities associated with the ALEC/ILEC relationship management process. When required by the MTP, these non-transaction tests included assessments of whether parity exists between wholesale and similar retail processes to the extent retail analogs are available.

Finally, the test included procedures designed to evaluate BellSouth's ability to accommodate increased ALEC business volumes based on demand projections determined at the start of the test.

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[1] As of April 3, 2002, the FPSC removed RoboTAG from the Florida OSS test (Order # PSC-02-0450-PCO-TP) because BellSouth no longer supports the application.

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The FPSC's Project Manager revised the scope of the MTP on several occasions. The FPSC's Project Manager made these changes in response to evolution in the industry, experience gained in preceding state tests or regulatory emphasis by the DOJ and FCC. For example, the scope of the MTP was expanded to include tests related to Line Sharing and Line Loss Reporting.

5.0   Approach

The test approach is described below.

5.1   Test Families/Domains

To organize and facilitate testing, the MTP was divided into the following three test families:

♦   Policies and Procedures Review (PPR);

♦   Transaction Validation and Verification (TVV); and

♦   Performance Metrics Reporting (PMR).

These three tests families were useful in organizing the areas to be tested and the specific tests to be conducted. The first test family, PPR, included KPMG Consulting's review of BellSouth's wholesale business rules and management practices. The transaction-based tests conducted through KPMG Consulting's pseudo ALEC comprised the TVV test family. ALECs operating in Florida were also solicited to provide transaction-based facilities that could not be created in the pseudo ALEC environment (e.g. Local Number Portability). The PMR test included review of the metrics business rules and review of the data collection and reporting functions performed by BellSouth to measure the performance of their wholesale operations in comparison to retail operations or other benchmarks.

Tests in the PPR and TVV test families were divided into the following five functional domains:

♦   Relationship Management and Infrastructure (RMI);

♦   Pre-Order and Ordering;

♦   Provisioning;

♦   Maintenance and Repair (M&R); and

♦   Billing.

Within each test family and domain, evaluation criteria were applied to evaluate BellSouth's performance for specific test targets.

5.2   Test Types

In formulating the approach to testing, KPMG Consulting solicited input from both the FPSC and ALECs. It was important to understand the types of activities that had either previously presented problems or were currently of concern. KPMG Consulting combined this input with its own experience and included it in two fundamental types of tests: transaction-driven and operational. The TVV tests are in the transaction-driven test category and the PPR and PMR tests are in the operational test category.

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5.2.1   Transaction-driven Tests

One of the goals of transaction-driven testing was to gain first-hand knowledge of the ALEC experience. To accomplish this goal, a pseudo ALEC was established to build and submit both pre-order and order transactions using BellSouth's electronic interfaces, much like a real ALEC would do. Transaction-driven system testing was used extensively in the Pre-Order and Order, Provisioning, M&R, and Billing domains. Results of the pseudo ALEC transactions and activities formed the basis for most of the observations and exceptions that were identified by the test.

KPMG Consulting's role was that of an ALEC operations group, which included understanding business rules, creating and tracking orders, monitoring BellSouth performance, logging trouble tickets, and evaluating carrier-to-carrier bills. KPMG Consulting also had the role of the ALEC Information Technology group, which included establishing connectivity and transaction capability with BellSouth for the following interfaces: EDI, TAG, LENS, ECTA, TAFI, and ConnectDirect for receipt of ODUF, ADUF and BOS/BDT files. The Information Technology group provided translations between business and EDI rule formats and aided KPMG Consulting in resolving problems with missing orders and responses.

Most of the Pre-Order and Order, Provisioning, and many of the Billing transaction-driven tests used the EDI and TAG interfaces that were built by KPMG Consulting based on publicly available BellSouth specifications. LENS was also used to submit selected transactions. Manual orders were submitted via fax or email. M&R trouble tickets were submitted using either ECTA or TAFI. Billing information was exchanged using ConnectDirect for receipt of the ODUF, ADUF and BOS-BDT files.

Live ALEC test cases provided an alternative test method for transactions that were not practical in the test environment (see Section 6.0, Limitations below). Moreover, live ALEC test cases facilitated a different perspective on actual production. Live ALEC production was also monitored during the test period to assess the performance and service levels experienced by ALECs during the test.

Different scenarios were used to structure transaction testing of BellSouth's OSS and related support services. An example of a scenario includes migration as-is of a single line residence customer from BellSouth to the pseudo-ALEC. Some scenarios were specific to a particular domain, while others spanned multiple domains providing an end-to-end test of BellSouth's systems and processes. Variations of each scenario were executed to test a range of feature/function combinations, and to reach desired transaction volume levels.

5.2.2   Operational Tests

Operational tests focused on the form, structure, and content of the business process under evaluation. This test method was used to evaluate BellSouth's day-to-day operations and operational management practices, including policy development, procedural development, and procedural change management.

In many cases, operational analysis methods were used to evaluate the results of a process to determine if the process was followed and functioned in accordance with documentation and expectations. KPMG Consulting also reviewed management practices and operating procedures, comparing the results against legal, statutory, and other written requirements.

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5.3   Military-style Test Philosophy

This test was conducted with a military-style test philosophy. The concept was to report problems discovered during the test, providing BellSouth an opportunity to correct those problems and, where feasible, for KPMG Consulting to conduct a retest or follow-on assessment. Two channels for reporting those problems were observations and exceptions. The observation and exception process is defined below.

♦   If a problem was encountered during the test, KPMG Consulting informed the FPSC and BellSouth by creating written observations or exceptions describing the problem and providing an assessment.

♦   An observation was created if KPMG Consulting determined that a test revealed a deficiency, defect or error in one of BellSouth's practices, policies, or systems characteristics and might result in a negative finding in the final report.

♦   An exception was created if KPMG Consulting determined that a test revealed one of BellSouth's practices, policies, or systems characteristics was not expected to satisfy one or more of the evaluation criteria without corrective action and would result in a negative finding in the final report.

♦   The FPSC, KPMG Consulting, and BellSouth discussed observation and exception status weekly. ALECs were invited to monitor the calls as observers, as well as ask clarifying questions.

♦   ALECs were able to view observations and exceptions on the FPSC website as well as provide input informally to the FPSC.

♦   Some observations were escalated to exceptions. Not all exceptions were initially identified as observations.

♦   BellSouth responded to both observations and exceptions in writing. These responses described either a clarification of the issue or BellSouth's intended fix(es) to the problem(s). The FPSC posted BellSouth's responses to its website.

♦   KPMG Consulting was responsible for determining if an exception was resolved. If in responding to an exception, BellSouth made a change to a process, system, or document, KPMG Consulting retested as appropriate. With the approval of the FPSC staff, resolved exceptions were closed.

♦   If an exception was not resolved, the cycle continued to: i) iterate until closure was reached; ii) indicate that no further action was warranted; or iii) dispose if the FPSC specifically exempted the exception from further testing.

Military-style testing completed at the sole discretion of the FPSC.

Because of the extended time involved in these activities, it was not always possible or practical to retest all activities within the scope of this test. During the course of testing, KPMG Consulting submitted 172 exceptions and 207 observations. At the conclusion of this test, 22 exceptions and 13 observations remained open. The FPSC considered the disposition of such items during the course of its 271 proceeding.

Where retesting was conducted, the results in this report include the outcome of retesting activity.

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5.4   Blindness

As previously stated, one of the objectives of the test was for KPMG Consulting to gain first hand knowledge of the ALEC experience. Yet it is impossible for any ALEC to totally avoid being recognized by BellSouth. For example, transactions arrive on dedicated telephone circuits, the owners of which are known by BellSouth. Each ALEC has a unique set of IDs assigned by the National Exchange Carrier Association (NECA) that must be included in every transaction.

To partially offset this, KPMG Consulting instituted certain procedures to help ensure that KPMG Consulting would not receive treatment from BellSouth that was different from that received by a real ALEC. For example, KPMG Consulting required that all operational documents be generally available to all ALECs. In addition, the timing and detailed nature of transactions and test calls were not announced in advance to BellSouth. When visits to BellSouth facilities were required, minimal notice was given. Problems were reported using the same Help Desk mechanisms used by the ALECs.

As a further measure, the FPSC monitored telephone calls and attended meetings between KPMG Consulting and BellSouth. A weekly conference call, which included the ALECs, the FPSC, BellSouth and KPMG Consulting, was established to allow the ALECs to obtain information concerning test progress and for them to communicate issues of concern about the test.

5.5   Evaluation Criteria

Measures and their corresponding evaluation criteria provided the basis for conducting tests. Evaluation criteria were the norms, benchmarks, standards, and guidelines used to evaluate measures identified for testing. Evaluation criteria provided a framework for identification of the scope of tests, the types of measures that must be made during testing, and the approach necessary to analyze results.

In many cases, the test results were compared against measures and criteria identified by the FPSC, such as the Service Quality Measurements (SQMs) reports, or as outlined in the MTP. In other cases, results were evaluated using the professional judgment of KPMG Consulting. Each evaluation criterion was analyzed individually and has its own associated result and comment. The results fell into the following categories:

♦   Satisfied – the evaluation criterion was satisfied.

♦   Not Satisfied – the evaluation criterion was not satisfied. Some issues were identified that would have a significant business impact to ALECs. Observations and exceptions may have been raised regarding these issues.

♦   Testing in Progress – the evaluation criterion is still open with testing on going. This category applies to Performance Metrics only due to the recent upgrade of the Performance Measurement Analysis Platform (PMAP) 4.0 system used to collect, store and process metrics related data.

5.6   Test Bed

In order to accomplish the transaction testing, BellSouth provisioned a test bed of initial accounts that represented BellSouth retail accounts or other ALEC accounts that would be lost or gained by the pseudo ALEC and, in some cases, modified to affect customer products and/or services. The test accounts were created in BellSouth's production systems, in actual central offices across

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Florida, as opposed to a separate simulated test system. KPMG Consulting, the FPSC, and BellSouth cooperated to define the test bed.

6.0   Limitations

The test, representative of an entire ALEC marketplace, was much broader than that likely to be experienced in the near future by any single ALEC. The test was not intended to be exhaustive because it is neither feasible nor desirable to test all possible permutations and combinations of all features and functions across all offered products.

In some cases it was not practical to simulate certain order types, troubles, and processes in a test situation. Examples include orders with very long interval periods; provisioning of large volumes of test transactions that would exceed the manual capacity of BellSouth's work centers; or, the complex, time consuming, network design process. In these cases, KPMG Consulting attempted alternative test procedures such as conducting interviews with BellSouth and ALEC personnel; inspection of live orders in process; review of historical performance or operational reports; or another method that captured the performance of BellSouth with respect to the order types and processes in question.

It was neither practical nor desirable to execute certain live tests that would disrupt actual service to BellSouth or ALEC customers. An example is a Maintenance and Repair test that requires an equipment failure. BellSouth performance for these test cases was evaluated by other means. The test reports in each domain section identify the tests that were executed using KPMG Consulting transactions and those that were executed by other means.

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B.   High-level Test Results

1.0   General

The following general observations span several domains and have been collected here for brevity.

1.1   Results Summary

KPMG Consulting evaluated 1,026 evaluation criteria during the testing period. There were 484 evaluation criteria for the Pre-Order and Order, Provisioning, M&R, Billing and Relationship Management Infrastructure domains. Four hundred seventy (470) or 97% of the evaluation criteria for these domains were satisfied. Fourteen (14) or 3% of the evaluation criteria were not satisfied. In addition, as a result of the passage of time since data collection, KPMG Consulting is unable to assess the current performance of the underlying systems/or processes for 52 test points.

Additionally, there were 542 evaluation criteria related to performance measure testing where testing is still in progress due to recent implementation of Performance Measurement Analysis Platform (PMAP) 4.0. There are four additional evaluation criteria, in the performance measure area, that are not applicable and are not included in the above count[2].

1.2   Service Quality

KPMG Consulting believes that the quality of the service received during the test was comparable to that generally received by ALECs.

1.3   New Entrant Certification

BellSouth has a separate systems environment for new entrant certification called the CLEC Test Environment (CTE), which is used during the new entrant certification process. In addition, the CLEC Application Verification Environment (CAVE) test environment is used to test new software releases for ALECs that have completed certification testing and are already in production with BellSouth. As part of KPMG Consulting's new release testing, quality assurance (QA) and systems readiness test (SRT) processes, the CTE and CAVE environments were evaluated for functionality and compliance with published documentation and procedures. KPMG Consulting tested business rule releases for LSOG4 pre-order and order. Each new release required that KPMG Consulting update its test scripts and orders to reflect the new business rules and interfaces.

2.0   Relationship Management and Infrastructure

The RMI domain evaluated BellSouth's processes that support establishing and maintaining relationships between BellSouth and ALECs. The test examined change management, account establishment and management, help desks, ALEC training, interface development, and forecasting. RMI consisted of five tests, all of which were process-oriented. KPMG Consulting evaluated 74 evaluation criteria. Sixty-eight evaluation criteria were satisfied. Six evaluation

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[2] Four Trunk Group Performance metrics in the Metrics Calculation Verification and Validation Review (PMR5) could not be tested in the pseudo ALEC environment because pseudo ALEC trunk groups did not exist.

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criteria were not satisfied. The evaluation criteria that are not satisfied are primarily in the areas of change management and release management.

3.0   Pre-Ordering and Ordering

The Pre-Order and Order domain evaluation was developed to test the systems, processes, and other operational elements associated with BellSouth's support for Pre-Order and Order activities for wholesale operations. The test examined functionality, compliance with measurement agreements, and comparable systems supporting BellSouth retail operations. Pre-Order and Order consisted of five tests, of which three were transaction-oriented and two were process-oriented. KPMG Consulting evaluated 110 evaluation criteria. One hundred six evaluation criteria were satisfied. Four evaluation criteria were not satisfied. The evaluation criteria that are not satisfied are primarily in the areas of flow-through performance and accuracy of responses.

4.0   Provisioning

The Provisioning domain evaluation was designed to review the systems, processes, and other operational elements associated with BellSouth's provisioning activities used for wholesale markets. The test examined functionality, compliance with measurement agreements, and comparable systems supporting BellSouth retail operations. Provisioning consisted of three tests, of which one was transaction-oriented and two were process-oriented. KPMG Consulting evaluated 113 evaluation criteria. One hundred nine evaluation criteria were satisfied. Four evaluation criteria were not satisfied. The evaluation criteria that are not satisfied are in the areas of directory listing, switch translation and CSR updates.

5.0   Maintenance and Repair

The primary objective of the M&R domain test was to determine whether adequate procedures, documentation and systems exist to allow an ALEC to identify, report, manage, and resolve troubles encountered with BellSouth supplied network elements. M&R consisted of eight tests, of which five were transaction-oriented and three were process-oriented. KPMG Consulting evaluated 100 evaluation criteria. All 100 evaluation criteria were satisfied at the time of data collection. However, as a result to the passage of time since data collection, KPMG Consulting is unable to assess the current performance of the underlying systems/or processes associated with 52 evaluation criteria.

6.0   Billing

The Billing domain included tests of both billing procedures and actual bills generated by the Customer Record Information System (CRIS), Carrier Access Billing System (CABS), and Integrated Billing Solution (Tapestry/IBS) systems. Billing consisted of five tests, of which two were transaction-oriented and three were process-oriented. KPMG Consulting evaluated 87 evaluation criteria. All 87 evaluation criteria were satisfied.

7.0   Performance Metrics Reporting

The PMR test family evaluated the processes and systems used to capture BellSouth retail and wholesale performance metrics for all domains, including Pre-Order, Order, Provisioning, Maintenance and Repair, Billing, Operator Services, and General. These tests also included a review of the metrics change management and notification processes.

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PMR relied on operational and statistical analyses to facilitate a structured review of BellSouth's information processing, metric calculation and reporting procedures. BellSouth introduced an upgrade of the PMAP system during testing. At the time of this report, PMAP 4.0 had just become publicly available. KPMG Consulting is conducting additional testing in the PMAP 4.0 environment.

PMR consisted of five tests, which contained 542 evaluation criteria. All 542 evaluation criteria remain testing in progress. An addendum to the Final Report will be issued once testing completes.

In the PMAP 2.6 environment, 369 of the 542 (68%) of the evaluation criteria had been satisfied prior to the release of PMAP 4.0.

C. Document Structure

This section describes the structure of the document and includes a list of each section number along with a brief description.

Table II-1: Document Overview

Section Number	Section	Content
I	Document Control	Identifies document distribution and necessary approvals.
II	Executive Summary	Describes the test and provides an overview of the results.
III	Relationship Management and Infrastructure Domain Results and Analysis Section	Describes the relationship management and infrastructure test domain. Provides the detailed test reports related to RMI.
IV	Pre-Order/Order Domain Results and Analysis Section	Describes the pre-ordering and ordering domain. Provides the detailed test reports related to the pre-ordering and ordering.
V	Provisioning Domain Results and Analysis Section	Describes the provisioning domain. Provides the detailed test reports related to provisioning.
VI	Maintenance and Repair Domain Results and Analysis Section	Describes the maintenance and repair domain. Provides the detailed test reports related to M&R.
VII	Billing Domain Results and Analysis Section	Describes the billing domain. Provides the detailed test reports related to billing.
VIII	Performance Metrics Domain Results and Analysis Section	Describes the process performance test section. Provides the detailed test reports related to Metrics.
Appendix A	Statistical Analysis	Statistical analysis for Performance Metrics.
Appendix B	Glossary	Provides a list of terms and definitions used in the report.
Appendix C	Acronym Dictionary	Provides a list of acronyms used in the report.

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Section Number	Section	Content
Appendix D	Exceptions	Provides additional information regarding exceptions issued during the life of the test.
Appendix E	Observations	Provides additional information regarding observations issued during the life of the test.
Appendix F	Summary of Final Report Updates	Matrix summarizing the updates during the period from the June 21, 2002, Version 1.0 release to the July 30, 2002, Version 2.0 release.
Appendix G	Commercial Data Study	Provides information regarding the Commercial Data Study.

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