

OSS-80

Exhibit to the Rebuttal Testimony of Ron Pate  
Public Service Commission of Kentucky  
Case No. 2001-105  
JULY 30, 2001

**BEFORE THE**  
**LOUISIANA PUBLIC SERVICE COMMISSION**

**LOUISIANA PUBLIC SERVICE COMMISSION,**  
**ex parte**

**DOCKET NO. U-22252-E**

**In re: Consideration and review of BellSouth Telecommunication, Inc.'s pre-application compliance with Section 271 of the Telecommunications Act of 1996, including but not limited to, the fourteen requirements set forth in Section 271(c)(2)(B) in order to verify compliance with Section 271 and provide a recommendation to the Federal Communications Commission regarding BellSouth Telecommunications, Inc.'s application to provide interLATA services originating in-region.**

**KPMG CONSULTING, INC.'S MOTION FOR LEAVE TO ARTICULATE BASIS FOR STATISTICAL ANALYSIS IN THE GEORGIA 271 TEST FINAL REPORTS**

1. **NOW COMES** KPMG Consulting, Inc. ("KPMG Consulting") and files this Motion for Leave to Articulate The Basis for Statistical Analysis in the Georgia 271 Test Final Reports (the "Georgia 271 Final Reports"). KPMG Consulting files this motion for the limited purpose of addressing the statistical methods used in the Georgia 271 Test Final Reports, upon suggesting as follows:
2. KPMG Consulting was retained by BellSouth Telecommunication, Inc. and the Georgia Public Service Commission to conduct an independent third party audit of the access BellSouth provides competitive local exchange companies ("CLECs") to BellSouth's operational support systems ("OSS") pursuant to its obligations under the Telecommunications Act of 1996. KPMG Consulting issued its Final and Supplemental Reports to the Georgia Public Service Commission on March 20, 2001.

3. KPMG Consulting understands that the Louisiana Public Service Commission (the "Commission") initiated this proceeding in response to BellSouth Telecommunications, Inc.'s Notice of Intent to File Section 271 Application with the Federal Communications Commission, which was filed with the Commission on April 20, 2001 and published in the Commission's Official Bulletin dated April 27, 2001.

4. Pursuant to the procedural schedule adopted by the Commission Staff in this matter, intervenors were to file reply comments and affidavits to BellSouth's comments and affidavits by June 8, 2001, subsequently amended to June 11, 2001. On or about June 8, 2001, AT&T Communications of the South Central States, Inc. ("AT&T") filed comments and affidavits in response to BellSouth's filing.

5. In its responsive filings, particularly in the Affidavit filed by Robert M. Bell, Ph.D., AT&T comments on the statistical analysis, among other things, used in the third party audit conducted by KPMG Consulting in Georgia. As an independent third party evaluator, KPMG Consulting is not a traditional intervenor in this proceeding and functions neither as a utility nor a public interest group. Instead, KPMG Consulting files this motion for the limited purpose of assisting the Commission in understanding the basis for KPMG Consulting's use of statistical analysis in the Georgia 271 Test Final Reports. Accordingly, KPMG Consulting does not file this motion to respond to the specifics of AT&T's affidavit, but only to address the statistical methods used in the Georgia 271 Test Final Reports.

6. As the author of the Georgia 271 Test Final Reports, no other party can adequately represent and articulate the basis for KPMG Consulting's use of statistical analysis in such reports. Rule 10 of the LPSC's Rules of Practice and Procedure allows any party

with a justiciable or administratively cognizable interest to appear in any proceeding before the Commission.

## **I. General OSS Test Design Considerations**

The Georgia 271 OSS test was designed and implemented to cover a wide range of products and services. In total, well over 1,000 test points were reported in the eight major test categories: Pre-Ordering, Ordering and Provisioning, Billing, Maintenance and Repair, Capacity Management, Change Management, Metrics, and Flow-Through Evaluation.

In many cases, the measures related to these test points were quantitative, and statistical testing was performed. However, the sample sizes for each specific service or transaction type were not designed for statistical precision. Instead, the timeliness and accuracy issues were generally evaluated at an aggregate level, while functionality was evaluated at the specific level. Functionality tests, for example, do not determine how quickly or how accurately the system is performing a particular service or transaction type. Instead, functionality tests determine whether the system has the capability of performing the required service.

When statistical tests were used, the purpose was to *inform* KPMG Consulting's professional judgment, rather than to *determine* KPMG Consulting's professional judgment. The statistical test informed KPMG Consulting whether an observed difference could have been the result of random variation, or whether that difference was statistically significant. KPMG Consulting used professional judgment to determine, when a difference was statistically significant, if that difference was substantial enough to have an adverse impact on competition. Thus, the statistical test result, while often a key

component in the Satisfied/Not Satisfied decision, was not the only consideration in that decision.

The purpose of the Georgia 271 OSS test was not to determine, for the specific data created by KPMG Consulting, whether standards were being met. The purpose of ongoing monitoring efforts is to determine whether BellSouth is performing below a standard for a specific set of data. The Georgia 271 OSS test sought to determine whether the test outcomes were consistent with an OSS that is generally operating at or above an acceptable level, in order to provide CLECs with non-discriminatory service or a meaningful opportunity to compete. As such, random variation in test outcomes were necessarily considered, via statistical testing, during the OSS test, regardless of whether the appropriate standards were benchmarks or parity measures.

## **II. Statistical Analysis of Results Measured Against Commission-Established Benchmarks**

In all of KPMG Consulting's tests to date, KPMG Consulting has established the Type I error (defined as the chance of concluding BellSouth is missing the standard when, in fact, they are not) at no more than 5%. When no statistical standards are applied to benchmark tests, the Type I error is as high as 50%. This error does not fall with sample size and KPMG Consulting deems such rate of error unacceptable. Type II error, is controlled through sample size, but in the Georgia 271 Test Final Reports, KPMG Consulting felt that the sample sizes were sufficient to control for Type II error, and thus no further analysis was needed. In order to form its judgments about the service provided by BellSouth to the CLECs, KPMG Consulting tested whether BellSouth's process, in general, was operating at the benchmark. The goal of ongoing monitoring may be to

determine whether, for a particular month and for a particular set of orders, the process operated at the benchmark. KPMG Consulting's test clearly called for a statistical test. In the case of ongoing monitoring, a statistical test may or may not be necessary. For the foregoing reasons, the test of the OSS needs to be distinguished from ongoing monitoring of the OSS through the reporting of monthly service quality measures.

### **III. Thoroughness of the Statistical Analysis Of Results**

The Null Hypothesis for statistical testing was that BellSouth was meeting or exceeding the standard. This Null Hypothesis is consistent both with KPMG Consulting's previous methodologies, and with standard statistical practice. Therefore, a two-sided 90% confidence interval, if implemented, would have resulted in exactly the same statistical conclusions as KPMG Consulting made in the Georgia 271 Test Final Reports.

### **IV. Disaggregation**

KPMG Consulting tested an extremely broad array of products and services for functionality. A functionality test addresses whether a particular aspect of the OSS is functioning. Statistical analysis tests are primarily used in areas where timeliness and accuracy are an issue. For that part of the test, rolling up the data to an aggregate level is appropriate, because the system operating on the data is not substantively different for every disaggregation. On this basis, KPMG Consulting did not believe that every disaggregation needed to be subject to statistical analysis.

### **V. Blindness**

Absolute "Blindness" cannot be achieved in an OSS test. This is true for a variety of reasons. First, in all cases the ILEC is aware of the identity of the trading partner that submits an order through an electronic interface. All orders contain a data value that

identifies the source of the order so that responses can be returned to the correct trading partner. Second, by design, the wide variety of transaction types submitted by the pseudo-CLEC during the tests is much broader than the relatively narrow scope of order types submitted currently by real CLECs. This diversity would have been highly unusual, and easily spotted by BellSouth. During KPMG Consulting's test in Georgia, steps were taken to determine whether the same software, running on the same computing complexes, processed real and test orders. Further, no evidence has been produced to date, in any OSS test, that an ILEC purposely programmed its systems to correctly process pseudo-CLEC orders, and to incorrectly process orders for real CLECs. On the contrary, all evidence collected to date suggests that the interfaces provide the same functionality to all CLECs. Finally, in many cases (e.g. LNP orders) the transactions evaluated for the OSS test were live orders submitted by real CLECs. For non-transaction tests, such as process evaluations (e.g. hot cuts), it is not possible to make "blind" observations. In any event, in all important performance measures, regulators can monitor BellSouth's actual wholesale performance on an ongoing basis.

## **VI. Military Style Testing**

In some cases in the Georgia test the retest sample sizes were smaller than the sample sizes of the initial tests. Retests were generally targeted to specific issues in specific testing domains; for example, to test confirmation timeliness. The size of the retest was established to test for this single purpose, and thus the sample size was typically smaller. KPMG Consulting notes that the initial sample sizes generally served the dual purpose of testing a particular part of the OSS, and preparing orders to test a downstream part of the OSS. For example, the initial data on measures related to order confirmation timeliness

included orders that were later provisioned as part of the test. The reason KPMG Consulting sent through so many orders was not only to test order confirmation timeliness, but also to create the necessary components for the provisioning portion of the test. Finally, the fact that changes were made to the systems, documentation, methods, and/or procedures as a result of an Exception means that the revised test object was not the same as that originally tested. Typically, because it is more focused, the retest is more powerful than the original test.

#### **VII. Use of Professional Judgment to Overrule Observed Data**

KPMG Consulting believes it is appropriate to express its professional judgment with respect to passing or failing, when its judgment is different from what the performance standard states. This was the case for the SAQ pre-order time. KPMG Consulting stated in hearings before the Georgia Public Service Commissions that, technically, BellSouth failed this requirement, but that KPMG Consulting did not believe this failure is service-affecting in any way. Therefore, KPMG Consulting issued a "Satisfied" for that criterion. As stated above, the statistical result states whether the difference was statistically significant, but does not tell whether the difference was substantial enough to matter. KPMG Consulting used its professional judgment to determine whether any of the observed statistical differences would have an adverse impact on competition, in accordance with the mandate of Section 271 of the Telecommunications Act of 1996.



Accordingly, for the reasons set forth above, KPMG Consulting respectfully requests that the Commission grant KPMG Consulting's Motion to Articulate The Basis for Statistical Analysis and consider the foregoing analysis in the Commission's review in this proceeding of the Georgia Section 271 Test Final Reports.

Respectfully submitted,



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