M E M O R A N D U M

November 3, 2000

TO: DIVISION OF RECORDS AND REPORTING

FROM: DIVISION OF LEGAL SERVICES (VACCARO)

RE: DOCKET NO. 000121-TP - INVESTIGATION INTO THE ESTABLISHMENT OF OPERATIONS SUPPORT SYSTEMS PERMANENT PERFORMANCE MEASURES FOR INCUMBENT LOCAL EXCHANGE TELECOMMUNICATIONS COMPANIES.

Attached are copies of the Performance Assessment Plan in the above-referenced docket for distribution to all parties of record and interested persons. Please place one copy in the docket file. Thank you.

TV/sa
Attachment

Florida Public Service Commission
Performance Assessment Plan
Docket 000121-TP

DRAFT

1. Scope

1.1 This document defines the Florida Public Service Commission Staff Proposal for (a) BellSouth Service Quality Measures (SQM), (b) the Enforcement Measurements, (c) Benchmarks and Analogs, (d) statistical methodology, and (e) the enforcement plan for purposes of Docket 000121-TP.

1.2 KPMG Consulting LLC is currently conducting an adequacy review of the BellSouth SQM in conjunction with the Florida Operational Support System (OSS) test in Docket 981834-TP and Docket 960786-TL. The SQM measures, enforcement measures and the benchmarks and analogs recommended here will be readdressed at the conclusion of the Florida OSS test to incorporate any changes or modifications recommended by KPMG.

2. Measurement Reporting

2.1 BellSouth will report its performance to individual CLECs and to the Florida Public Service Commission in accordance with the list of SQM which are contained in **Exhibit A**.

2.2 BellSouth will report its performance to individual CLECs and the Florida Public Service Commission and in accordance with Enforcement Measurements, which are contained in **Exhibit B**.

2.3 BellSouth will make performance data and reports available to individual CLECs on a monthly basis. The reports will contain information collected in each performance category and will be available to CLECs via the BellSouth Interconnection web-site. BellSouth will also provide electronic access to the raw data underlying the performance measurements. BellSouth will provide on the web-site detailed instructions regarding access to the reports and to the raw data, as well as the nature of the format of the data provided. Monthly reports and data will be posted to the web-site by the 15th calendar day of the following month.

2.4 Section 364.285(1), Florida Statutes, provides that the Florida Public Service Commission shall have the power to impose upon any entity subject to its jurisdiction under Chapter 364, Florida Statutes, which is found to have refused to comply with or to have willfully violated any lawful rule or order of the Commission or any provision of Chapter 364, Florida Statutes, a penalty for each offense of not more than $25,000. Each

day that such refusal or violation continues constitutes a separate offense. Collected penalties shall be deposited in the State General Revenue Fund.

2.5 If performance data and associated reports are not published on the BellSouth web-site by the 15th calendar day of each month, each day past the due date shall constitute an admission of a violation of the Commission Order implementing this enforcement plan pursuant to Section 364.285, Florida Statutes, and a penalty of $2000 will be deemed assessed. BellSouth will be required to pay the penalty within 15 days of the actual publication date, to the Florida Public Service Commission, for deposit in the State General Revenue Fund.

2.6 If performance data and reports published on the BellSouth web-site by the 15th calendar day of each month are incomplete, or if previously reported data are revised, each day past the due date shall constitute an admission of a violation of the Commission Order implementing this enforcement plan pursuant to Section 364.285, Florida Statutes, and a penalty of $400 will be deemed assessed. BellSouth will be required to pay the penalty within 15 days of the final publication date or the report revision date, to the Florida Public Service Commission, for deposit in the State General Revenue Fund.

3. **Modifications to Measurements**

3.1 During the first two years of implementation, BellSouth will participate in six-month review cycles starting six months after the date of the Florida Public Service Commission order. A collaborative work group, which will include BellSouth, interested CLECs and the Florida Public Service Commission, will review the Performance Assessment Plan for additions, deletions or other modifications. After two years from the date of the order, the review cycle may, at the discretion of the Florida Public Service Commission, be reduced to an annual review.

3.2 BellSouth and the CLECs shall file any proposed revisions to the Performance Assessment Plan one month prior to the beginning of each review period.

3.3 BellSouth may, from time-to-time, be ordered by the Florida Public Service Commission to modify or amend the Service Quality Measurements or Enforcement Measures. Nothing will preclude either party from participating in any proceeding involving BellSouth's Service Quality Measurements or Enforcement Measures or from advocating that those measurements be modified.

3.4 In the event a dispute arises regarding the ordered modification or amendment to the Service Quality Measurements or Enforcement Measurements, the parties will refer the dispute to the Florida Public Service Commission.

4. Enforcement Mechanisms

4.1 Purpose

This section establishes enforcement mechanisms used to verify and maintain parity performance between BellSouth and an individual CLEC's operations as well as to maintain access to Operational Support System functions.

4.2 Effective Date

The Enforcement Mechanisms shall become effective 90 days after the Florida Public Service Commission issues a final order in this case. This time will allow BellSouth to put statistical methods and plans into production.

4.3 Definitions

4.3.1 <u>Enforcement Measurement</u> means the performance measurements listed in **Exhibit B**. Enforcement Measurements are a subset of the Service Quality Measures used to evaluate BellSouth's performance.

4.3.2 <u>Enforcement Measurement Benchmarks</u> means a competitive level of performance used to compare the performance of BellSouth and an individual CLEC where no analogous process, product or service is feasible. Benchmarks are listed in **Exhibit C**.

4.3.3 <u>Enforcement Measurement Analog</u> means comparing performance levels provided to BellSouth retail customers with performance levels provided by BellSouth to the CLEC customer, as set forth in **Exhibit C**.

4.3.4 <u>Test Statistic and Balancing Critical Value</u> is the means by which enforcement will be determined using statistically valid equations. See **Exhibit D**. CLEC performance will be compared to BellSouth performance using a truncated Z-test. Balancing the critical value balances the probability of Type I and Type II errors. See **Exhibit E** for statistical methodology.

4.3.5 <u>Cell</u> is the point at which like-to-like comparisons are made. For example, all BellSouth retail POTS services, for residential customers, requiring a dispatch in a particular wire center, at a particular point in time, will be compared directly to a CLEC's resold services for residential customers, requiring a dispatch, in the same wire center, at a particular point in time. When determining compliance, these cells can have a positive or negative value and are compared to the critical value. See **Exhibit D**.

4.3.6 Parity Gap refers to the incremental departure from a compliant-level of service. See **Exhibit D**. It is calculated by using a truncated Z-test methodology and comparing the Z-test statistic for the cell to the balancing critical value. The difference is the parity gap.

4.3.7 Affected Volume means that proportion of the total impacted individual CLEC volume or CLEC aggregate volume for which remedies will be paid.

4.3.8 Delta Parameter Value is used to develop the balancing critical value to measure the size of the violation. The difference between the balancing critical value and the Z-test statistic determines whether or not the metric passed or failed. The delta value also impacts the amount of the remedies that would be paid assuming failures. A delta value of .5 for individual CLEC calculations and .35 for aggregated calculations will be used.

4.3.9 Tier 1 Enforcement Mechanism means self-executing penalties paid directly by BellSouth to an individual CLEC when BellSouth delivers noncompliant performance of any one of the Enforcement Measurements for any month.

4.3.10 Tier 2 Enforcement Mechanism means assessments paid directly by BellSouth to the Florida Public Service Commission for deposit in the General Revenue Fund pursuant to terms set forth in Section 4.4. Tier 2 Enforcement Mechanisms are triggered by three consecutive monthly failures in which BellSouth performance is out of compliance or does not meet the benchmarks for the aggregate of all CLEC data for a particular Enforcement Measurement.

4.3.11 Tier 3 Enforcement Mechanism means the voluntary suspension of marketing and sales of interLATA long distance services, post 271 approval, triggered by excessive repeat failures of those specific measures defined in **Exhibit B**.

4.4 Application

4.4.1 If BellSouth fails to achieve the Enforcement Analogs or Benchmarks specified in this Performance Assessment Plan, each failure shall constitute an admission of a separate violation of the Commission Order implementing this enforcement plan.

4.4.2 Section 364.285(1), Florida Statutes, provides that the Florida Public Service Commission shall have the power to impose upon any entity subject to its jurisdiction under Chapter 364, Florida Statutes, which is found to have refused to comply with or to have willfully violated any lawful rule or order of the Commission or any provision of Chapter 364, Florida Statutes, a penalty for each offense of not more than $25,000. Each day that such refusal or violation

continues constitutes a separate offense. Collected penalties shall be deposited in the State General Revenue Fund.

4.4.3. Pursuant to Section 364.285, Florida Statutes, Tier 2 violations will require payment of the associated penalties set forth in Section 4.5.7. to the Florida Public Service Commission for deposit in the State General Revenue Fund.

4.4.4 If a measure fails twice in three consecutive months, BellSouth must perform a "root cause analysis" and file with the Florida Public Service Commission a corrective action plan within 30 days after the end of the second failed month.

4.4.5 The application of the Tier 1, Tier 2, Tier 3 Enforcement Mechanisms does not foreclose other legal and regulatory claims and remedies available to CLECs.

4.5 Methodology

Tier 1 Methodology

4.5.1 Tier 1 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve Enforcement Measurement Analogs or Benchmarks for an individual CLEC for a given Enforcement Measurement in a given month based upon a test statistic and balancing critical value calculated by BellSouth utilizing BellSouth generated data. The method of calculation for both analogs and benchmarks is included in **Exhibit D**.

4.5.2 Tier 1 Enforcement Mechanisms apply on a per transaction basis for the affected volume in each negative cell and will escalate based upon the number of consecutive months that BellSouth has reported noncompliance.

4.5.3 Fee Schedule for Tier 1 Enforcement Mechanisms is shown below. Failures beyond Month 6 will be subject to the fees listed in Month 6.

PAYMENTS FOR TIER 1 MEASURES

PER AFFECTED ITEM						
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
Ordering	$40	$50	$60	$70	$80	$90
Provisioning	$100	$125	$175	$250	$325	$500
Provisioning UNE (Coordinated Customer Conversions)	$400	$450	$500	$550	$650	$800
Maintenance and Repair	$100	$125	$175	$250	$325	$500
Maintenance and Repair UNE	$400	$450	$500	$550	$650	$800

PER AFFECTED ITEM						
	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
LNP	$150	$250	$500	$600	$700	$800
IC Trunks	$100	$125	$175	$250	$325	$500
Collocation	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000

Tier 2 Methodology

4.5.4 Tier 2 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve Enforcement Measurement Analogs and Benchmarks for given Enforcement Measurements for three consecutive months on a rolling basis using a statistically valid equation calculated by BellSouth, utilizing BellSouth generated data. The method of calculation is included in **Exhibit D**.

4.5.6 Tier 2 Enforcement Mechanisms apply for an aggregate of all Florida CLEC data, on a per transaction basis, for each negative cell, for a particular Enforcement Measurement.

4.5.7 Fee Schedule for Tier 2 Enforcement Mechanisms is shown below:

PAYMENTS FOR TIER 2 MEASURES

	Per Affected Item
OSS Pre-Ordering	$20
Ordering	$60
Provisioning	$300
UNE Provisioning (Coordinated Customer Conversions)	$875
Maintenance and Repair	$300
UNE Maintenance and Repair	$875
Billing	$1
LNP	$500
IC Trunks	$500
Collocation	$15,000

Tier 3 Methodology

4.5.8 Tier 3 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve Enforcement Measurement Analogs or Benchmarks for a given Enforcement Measurement for three consecutive months on a rolling basis. The method of calculation for specified measures is identical to the method of

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calculation for Tier 2 Enforcement Mechanisms as described above. The specific measures for triggering a Tier 3 Enforcement Mechanism are listed in **Exhibit B**.

4.5.9 Tier 3 contains 26 measures. When any 12 or more of the 26 experience failures for three consecutive months, Tier 3 is triggered. For a Tier 3 failure occurring after 271 approval, BellSouth may reinstate interLATA long distance marketing and sales when all of the failed measures show favorable results for three consecutive months.

4.6   Payment of Tier 1 and Tier 2 Amounts

4.6.1 If BellSouth performance triggers an obligation to pay Tier 1 Enforcement Mechanism penalties to a CLEC or an obligation to remit Tier 2 Enforcement Mechanism penalties to the Florida Public Service Commission, BellSouth shall make payment in the required amount on or before the thirtieth (30th) day following the due date of the performance measurement report for the month in which the obligation arose.

4.6.2 For each day after the due date that BellSouth fails to pay a CLEC the required amount, BellSouth will pay the CLEC six (6) percent simple interest per annum.

4.6.3 Each day after the due date that BellSouth fails to pay penalties under the Tier 2 Enforcement Mechanism shall constitute a separate violation of the Commission Order implementing this enforcement plan, pursuant to Section 364.285, Florida Statutes. BellSouth will pay the Florida Public Service Commission an additional $1,000 per day for deposit with the State General Revenue Fund.

4.6.4 If a CLEC disputes the amount paid to the CLEC under Tier 1 Enforcement Mechanisms, the CLEC shall submit a written claim to BellSouth within sixty (60) days after the date of the performance measurement report for which the obligation arose. BellSouth shall investigate all claims and provide the CLEC written findings within thirty (30) days after receipt of the claim. If BellSouth determines the CLEC is owed additional amounts, BellSouth shall pay the CLEC such additional amounts within thirty (30) days after its findings along with six (6) percent simple interest per annum.

4.6.5 At the end of each calendar year, BellSouth will have its independent auditing and accounting firm certify that all penalties under Tier 1 and Tier 2 Enforcement Mechanisms were paid and accounted for in accordance with Generally Accepted Accounting Principles (GAAP).

4.7 Limitations of Liability

4.7.1 BellSouth will not be responsible for a CLEC's acts or omissions that cause performance measures to be missed or failed, including but not limited to, accumulation and submission of orders at unreasonable quantities or times or failure to submit accurate orders or inquiries. BellSouth shall provide the CLEC with reasonable notice of such acts or omissions and provide the CLEC any such supporting documentation.

4.7.2 BellSouth shall not be obligated for penalties under Tier 1, Tier 2 or Tier 3 Enforcement Mechanisms for noncompliance with a performance measure if such noncompliance was the result of an act or omission by the CLEC that is in bad faith.

4.7.3 BellSouth shall not be obligated for penalties under Tier 1, Tier 2 or Tier 3 Enforcement Mechanisms for noncompliance with a performance measurement if such noncompliance was the result of any of the following: a Force Majeure event, an act or omission by a CLEC that is contrary to any of its obligations under its Interconnection Agreement with BellSouth; an act or omission by a CLEC that is contrary to any of its obligations under the Act, Commission rule, or state law; or an act or omission associated with third-party systems or equipment.

4.8 Enforcement Mechanism Caps

4.8.1 BellSouth's total liability for payments under Tier 1 and Tier 2 Enforcement Mechanisms shall be procedurally capped at 39 percent of net revenues for the state or approximately $337 million.

4.8.2 Within 30 days of exceeding the cap, BellSouth must file a petition with the Florida Public Service Commission for an expedited hearing showing why it should not be required to pay remedies in excess of the procedural cap.

4.8.3 The cap should apply on a rolling twelve-month period. To the extent that a procedural cap is exceeded, BellSouth must make payments up to the procedural cap and put the amount in excess of the cap in an escrow account.

4.9 Dispute Resolution

4.9.1 Notwithstanding any other provision of this Agreement, any dispute regarding BellSouth's performance or obligations shall be resolved by the Florida Public Service Commission.

5.0   Market Penetration Adjustment

BellSouth should implement a market penetration adjustment for new and advanced services based upon statewide aggregate performance as follows:

5.1   In order to ensure parity and benchmark performance where CLECs order low volumes of advanced and nascent services, BellSouth will make additional voluntary payments to the Florida Public Service Commission. These additional payments will only apply when there are more than 10 and less than 100 observations for those measures listed in 5.2 on an average statewide basis for a three-month period, subject to the conditions specified in sections 5.3, 5.4 and 5.5 below.

5.2   The measures applicable to the market penetration adjustment are:

- Percent Missed Installation Appointments
- Average Completion Interval
- Missed Repair Appointments
- Maintenance Average Duration
- Average Response Time for Loop Make-Up Information

Each of these measures will be disaggregated as follows:
- UNE Loop and Port Combo
- UNE xDSL
- UNE Line Sharing

5.3   The additional payments referenced above will be made if BellSouth fails to provide the requisite parity or benchmark service for the above measurements as determined by the use of the Truncated Z-test and the balancing critical value for three consecutive months. Each failure shall constitute an admission of a violation of the Commission Order implementing this enforcement plan pursuant to Section 364.285, Florida Statutes, and will require payment of the associated penalties set forth in Section 5.4 to the Florida Public Service Commission for deposit in the State General Revenue Fund.

5.4   Each month, a three-month rolling average will be calculated. If during the three month period used to calculate the rolling average, there were 100 observations or more on average for the sub-metric, then no additional voluntary payments will be made to the Florida Public Service Commission. However, if during the same time frame there is an average of more than 10 but less than 100 observations for a sub-metric on a statewide basis, then BellSouth shall calculate the additional payments to the Florida Public Service Commission by first applying the normal Tier 2 assessment calculation methodology to that qualifying measurement and then trebling that amount.

5.5 Any payments made are subject to the cap ordered by the Florida Public Service Commission.

6.0 **Auditing Measurement Data**

6.1 If requested by the Florida Public Service Commission or by a CLEC exercising contractual audit rights, BellSouth will agree to undergo a comprehensive audit of the aggregate level reports for both BellSouth and the CLEC(s) for each of the next five (5) years (2001 – 2006), to be conducted by an independent third party. The results of that audit will be made available to all the parties subject to proper safeguards to protect proprietary information.

6.2 The cost shall be borne 50 percent by BellSouth and 50 percent by the CLEC(s).

6.3 The independent third-party auditor shall be selected with input from BellSouth, the Florida Public Service Commission, if applicable, and the CLEC(s).

6.4 BellSouth, the Florida Public Service Commission and the CLEC(s) shall jointly determine the scope of the audit.

EXHIBIT A

SERVICE QUALITY MEASURES

CATEGORY	MEASUREMENT DESCRIPTION
(OSS) Operations Support Systems	OSS-1. Average Response Time and Response Interval (Pre-Ordering/Ordering) OSS-2. Interface Availability (Pre-Ordering) OSS-3. Interface Availability (Maintenance & Repair) OSS-4. Response Interval (Maintenance & Repair)
(O) Ordering	O-1. Percent Flow-through Service Requests (Summary) O-2. Percent Flow-through Service Requests (Detail) O-3. Flow-through Error Analysis O-4. CLEC LSR Information LSR Flow-Through Matrix O-5. Percent Rejected Service Requests O-6. Reject Interval O-7. Firm Order Confirmation Timeliness O-8. Speed of Answer in Ordering Center O-9. LNP-Percent Rejected Service Request O-10. LNP-Reject Interval Distribution & Average Reject Internal O-11. LNP-Firm Order Confirmation Timeliness Interval Distribution & Firm Order Confirmation Average Interval O-12. Acknowledgement Timeliness O-13 Acknowledgement Completeness O-14 Loop Make Up Information Timeliness
(P) Provisioning	P-1. Mean Held Order Interval & Distribution Intervals P-2. Average Jeopardy Notice Interval & Percentage of Orders Given Jeopardy Notices P-3. Percent Missed Installation Appointments P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution P-5. Average Completion Notice Interval P-6. Coordinated Customer Conversions Interval P-6A. Coordinated Customer Conversions Hot Cut Timeliness % within Interval and Average Interval P-7. % Provisioning Troubles w/i 30 days of Service Order Completion P-8. Total Service Order Cycle Time (TSOCT) P-9. LNP –Percent Missed Installation Appointments P-10. LNP-Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution P-11. LNP-Total Service Order Cycle Time
(M&R) Maintenance & Repair	M&R-1. Missed Repair Appointments M&R-2. Customer Trouble Report Rate M&R-3. Maintenance Average Duration M&R-4. Percent Repeat Troubles w/i 30 days M&R-5. Out of Service > 24 Hours M&R-6. Average Answer Time - Repair Centers
(B) Billing	B-1. Invoice Accuracy B-2. Mean Time to Deliver Invoices B-3. Usage Data Delivery Accuracy B-4. Usage Data Delivery Completeness B-5. Usage Data Delivery Timeliness B-6. Mean Time to Deliver Usage

EXHIBIT A
BellSouth Telecommunications
Florida Service Quality Measures

CATEGORY	MEASUREMENT DESCRIPTION
(OS) (DA) Operator Services Toll & Directory Assistance	OS-1. Speed to Answer Performance/Average Speed to Answer (Toll) OS-2. Speed to Answer Performance/Percent Answered within "X" Seconds (Toll) DA-1. Speed to Answer Performance/Average Speed to Answer (DA) DA-2. Speed to Answer Performance/Percent Answered within "X" Seconds (DA)
(E) E911	E-1. Timeliness E-2. Accuracy E-3. Mean Interval
(TGP) Trunk Group Performance	TGP-1. Trunk Group Performance-Aggregate TGP-2. Trunk Group Performance-CLEC Specific TGP-3. Trunk Group Service Report TGP-4. Trunk Group Service Detail
(C) Collocation	C-1. Average Response Time C-2. Average Arrangement Time C-3. % of Due Dates Missed
(CM) Change Management	CM-1 Timeliness of Change Management Notices CM-2 Average Delay Days for Change Management Notices CM-3 Timeliness of Documents Associated with Change CM-4 Average Delay Days for Documentation

Note: The detailed business rules for these SQM's will be consistent with those adopted by the Florida Public Service Commission as Interim metrics for the purpose of OSS testing.

Additional Measurements Under Consideration
KPMG is currently conducting an adequacy review of the BellSouth SQM's as part of the Florida OSS test. As a part of that evaluation KPMG Consulting LLC is determining the need for any of the additional measures listed below.

1. Percent Service Loss from Early and Late Cuts
2. Percent of Hot Cuts Not Working When Initially Provisioned
3. Percent Completions or Attempts without Notice or with less than 24 hours Notice
4. Percent Order Accuracy
5. Percent of Orders Canceled or Supplemented at the Request of BellSouth
6. Percent and Timeliness of EDI and TAG LSR acknowledgements
7. Provisioning Troubles prior to Loop Acceptance
8. Percent Orders Canceled after Missed Due Date
9. Percent Found OK/test OK/CPE
10. ALEC Center Call Abandonment Rate
11. Average Notification of Interface / OSS Outage
12. Percent of Change Management Notices and Documentation Sent on Time
13. Percent of Software Certification Failures and Software Problem Resolution
14. Percent Billing Errors Corrected in X Days
15. Loop Make Up Information Timeliness
16. Provisioning Trouble Reports Prior to Service Order Completion
17. Coordinated Customer Conversions as Percentage on Time

Note that KPMG is also evaluating the appropriateness of levels of disaggregation. Additionally they will conduct a special study of end-to-end timing of several transactions, including Average OSS Response Time, Reject Interval, and Firm Order Commitment Timeliness

EXHIBIT B

ENFORCEMENT MEASURES

BellSouth Telecommunications
Florida Enforcement Measures
TIER 1 and 2

CATEGORY	MEASUREMENT DESCRIPTION
(OSS) Operations Support Systems	OSS-1. Average Response Time and Response Interval (Pre-Ordering/Ordering) **(Exclude from Tier 1 Measures)** OSS-2. Interface Availability (Pre-Ordering) **(Exclude from Tier 1 Measures)**
(O) Ordering	O-1. Percent Flow-through Service Requests (Summary) *(Residential, Business, UNE, LNP)* O-2. Percent Flow-through Service Requests (Detail) *(Residential, Business, UNE, LNP)* O-6. Reject Interval *(Mechanized, Partially Mechanized, Non-mechanized)* O-7. Firm Order Confirmation Timeliness *(Mechanized, Partially Mechanized, Non-mechanized)* O-14 Loop Make Up Information Timeliness *(Mechanized, Partially Mechanized, Non-mechanized)*
(P) Provisioning	P-3. Percent Missed Installation Appointments* P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution * P-6. Coordinated Customer Conversions Interval P-6A. Coordinated Customer Conversions Hot Cut Timeliness % within Interval and Average Interval P-7. Percent Provisioning Troubles w/i 30 days of Service Order Completion* P-9. LNP –Percent Missed Installation Appointments P-10. LNP-Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution
(M&R) Maintenance & Repair	M&R-1. Missed Repair Appointments • M&R-2. Customer Trouble Report Rate * M&R-3. Maintenance Average Duration * M&R-4. Percent Repeat Troubles w/i 30 days) *
(B) Billing	B-1. Invoice Accuracy B-2. Mean Time to Deliver Invoices B-3. Usage Data Delivery Accuracy
(TGP) Trunk Group Performance	TGP-1. Trunk Group Performance-Aggregate **(Exclude from Tier 1 Measures)** TGP-2. Trunk Group Performance-CLEC Specific **(Exclude from Tier 2 Measures)**
(C) Collocation	C-3. % of Due Dates Missed
(CM) Change Management	CM-1 Timeliness of Change Management Notices

*   The level of disaggregation for these measures should be:

a)   Resale POTS
b)   Resale Design
c)   UNE Loop and Port Combo
d)   UNE Loops
e)   UNE xDSL
f)   UNE Line Sharing
g)   Interconnection Trunks

EXHIBIT B
BellSouth Telecommunications
Florida Enforcement Measures
TIER 3

CATEGORY	MEASUREMENT DESCRIPTION
(P) Provisioning	P-3. Percent Missed Installation Appointments* P-4. Average Completion Interval (OCI) & Order Completion Interval Distribution *
(M&R) Maintenance & Repair	M&R-1. Missed Repair Appointments *
(B) Billing	B-1. Invoice Accuracy B-2. Mean Time to Deliver Invoices
(TGP) Trunk Group Performance	TGP-1. Trunk Group Performance-Aggregate
(C) Collocation	C-3. Percent of Due Dates Missed
(CM) Change Management	CM-1 Timeliness of Change Management Notices

*   The level of disaggregation for these measures should be:

a)   Resale POTS
b)   Resale Design
c)   UNE Loop and Port Combo
d)   UNE Loops
e)   UNE xDSL
f)   UNE Line Sharing
g)   Interconnection Trunks

EXHIBIT C

ANALOGS AND BENCHMARKS

Exhibit C
Florida Enforcement Analogs and Benchmarks

	MEASURES AND SUB-METRICS	RETAIL ANALOG RESALE AND UNES	BENCHMARK
Pre-Ordering	Average Response Time	Parity with Retail	
	OSS Interface Availability		$\geq 99.5\%$
Ordering	Percent Flow-Through Service Request Residential Business UNE LNP		$\geq 90\%$ $\geq 80\%$ $\geq 80\%$ $\geq 80\%$
	Firm Order Confirmation Timeliness Mechanized Partially Mechanized Non-Mechanized		$95\% \leq 3$ hrs $85\% \leq 10$ hrs $85\% \leq 36$ hrs
	Reject Interval Mechanized Partially Mechanized Non-Mechanized		$97\% \leq 1$ hr $85\% \leq 10$ hrs $85\% \leq 24$ hrs
Provisioning	Order Completion Interval – Resale POTS	Parity with Retail POTS	
	Order Completion Interval – Resale Design	Parity with Retail Design	
	Order Completion Interval – UNE Loop & Port Combos	Retail Residence and Business [1]	
	Order Completion Interval – UNE Loops	Design: Retail Design Dispatch 'w' Orders [1] Non-Design: Retail Residence and Business POTS	
	Order Completion Interval – UNE xDSL		7 days w/o conditioning 14 days w/conditioning
	Order Completion Interval – UNE Line Sharing	ADSL Provide to Retail	
	Order Completion Interval – IC Trunks	Parity with Retail	
	Percent Missed Installation Appointments – Resale POTS	Parity with Retail POTS	
	Percent Missed Installation Appointments – Resale Design	Parity with Retail Design	
	Percent Missed Installation Appointments – UNE Loop and Port Combos	Retail Residence and Business [1]	
	Percent Missed Installation Appointments – UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Percent Missed Installation Appointments – UNE xDSL	Parity with Retail Design	
	Percent Missed Installation Appointments – UNE Line Sharing	ADSL Provide to Retail	

	MEASURES AND SUB-METRICS	RETAIL ANALOG RESALE AND UNES	BENCHMARK
Provisioning Con't	Percent Missed Installation Appointments – IC Trunks	Parity with Retail	
	Percent Provisioning Troubles within 30 Days - Resale POTS	Parity with Retail POTS	
	Percent Provisioning Troubles within 30 Days - Resale Design	Parity with Retail Design	
	Percent Provisioning Troubles within 30 Days - UNE Loop and Port Combos	Retail Residence and Business [1]	
	Percent Provisioning Troubles within 30 Days - UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Percent Provisioning Troubles within 30 Days – UNE xDSL	Parity with Retail Design	
	Percent Provisioning Troubles within 30 Days – UNE Line Sharing	ADSL Provide to Retail	
	Percent Provisioning Troubles within 30 Days – IC Trunks	Parity with Retail	
Maintenance	Customer Trouble Report Rate – Resale POTS	Parity with Retail POTS	
	Customer Trouble Report Rate – Resale Design	Parity with Retail Design	
	Customer Trouble Report Rate – UNE Loop and Port Combos	Retail Residence and Business [1]	
	Customer Trouble Report Rate - UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Customer Trouble Report Rate – UNE xDSL	Parity with Retail Design	
	Customer Trouble Report Rate – UNE Line Sharing	ADSL Provide to Retail	
	Customer Trouble Report Rate – IC Trunks	Parity with Retail	
	Percent Missed Repair Appointments – Resale POTS	Parity with Retail POTS	
	Percent Missed Repair Appointments – Resale Design	Parity with Retail Design	
	Percent Missed Repair Appointments – UNE Loop and Port Combos	Retail Residence and Business [1]	
	Percent Missed Repair Appointments – UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Percent Missed Repair Appointments – UNE xDSL	Parity with Retail Design	
	Percent Missed Repair Appointments – UNE Line Sharing	ADSL Provide to Retail	
	Percent Missed Repair Appointments – IC Trunks	Parity with Retail	
	Maintenance Average Duration – Resale POTS	Parity with Retail POTS	
	Maintenance Average Duration – Resale Design	Parity with Retail Design	
	Maintenance Average Duration - UNE Loop and Port Combos	Retail Residence and Business [1]	
	Maintenance Average Duration - UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Maintenance Average Duration – UNE xDSL	Parity with Retail Design	
	Maintenance Average Duration – UNE Line Sharing	ADSL Provide to Retail	
	Maintenance Average Duration – UNE IC Trunks	Parity with Retail	
	Percent Repeat Troubles within 30 Days – Resale POTS	Parity with Retail POTS	

	MEASURES AND SUB-METRICS	RETAIL ANALOG RESALE AND UNES	BENCHMARK
Maintenance Con't	Percent Repeat Troubles within 30 Days – Resale Design	Parity with Retail Design	
	Percent Repeat Troubles within 30 Days - UNE Loop and Port Combos	Retail Residence and Business [1]	
	Percent Repeat Troubles within 30 Days - UNE Loops	Design: Retail Design [1] Non-Design: Retail Res, Bus [1]	
	Percent Repeat Troubles within 30 Days – UNE xDSL	Parity with Retail Design	
	Percent Repeat Troubles within 30 Days – UNE Line Sharing	ADSL Provide to Retail	
	Percent Repeat Troubles within 30 Days - IC Trunks	Parity with Retail	
Billing	Invoice Accuracy	Parity with Retail	
	Mean Time To Deliver Invoices	Parity with Retail	
	Usage Data Delivery Accuracy	Parity with Retail	
Trunk Performance	Trunk Group Performance – Aggregate	Retail Trunk Group Category #9	
	Trunk Group Performance – CLEC Specific	Retail Trunk Group Category #9	
Collocation	% of Due Dates Missed		≤ 5%
Change Management	Timeliness of Change Management Notices		98% on time

NOTES: [1] The retail analog for UNE Non-Design is the average of all dispatch retail residence and dispatch retail business transactions for the particular month. The retail analog for UNE Design is calculated similarly using dispatch retail design results.

EXHIBIT D

CALCULATION PROCEDURES

Exhibit D
CALCULATION PROCEDURE

TIER 1 CALCULATION FOR RETAIL ANALOGUES

1. Calculate the overall test statistic for each CLEC; z^T_{CLEC1} (See Exhibit E)

2. Calculate the balancing critical value($^C B_{CLEC1}$) that is associated with the alternative hypothesis (for fixed parameters δ, ψ or ε). (See Exhibit E)

3. If the overall test statistic is equal to or above the balancing critical value, stop here. That is, if $^C B_{CLEC1} < z^T_{CLEC1}$, stop here. Otherwise, go to step 4.

4. Calculate the Parity Gap by subtracting the value of step 2. from that of step 1.;
   $z^T_{CLEC1} - {^C B_{CLEC1}}$

5. Calculate the Volume Proportion using a linear distribution with slope of ¼. This can be accomplished by taking the absolute value of the Parity Gap from step 4. Divided by 4; $ABS((z^T_{CLEC1} - {^C B_{CLEC1}}) / 4)$. All parity gaps equal or greater to 4 will result in a volume proportion of 100%.

6. Calculate the Affected Volume by multiplying the Volume Proportion from step 5. by the Total Impacted $CLEC_1$ Volume (I_c) in the negatively affected cell; where the cell value is negative. (See Exhibit E)

7. Calculate the payment to the CLEC by multiplying the result of step 6. by the appropriate dollar amount from the fee schedule.

> So, CLEC payment = Affected Volume$_{CLEC1}$ * $$ from Fee Schedule

Example: CLEC-1 Missed Installation Appointments (MIA) for Resale POTS

	n_I	n_c	I_c	MIA_i	MIA_c	Z^T_{CLEC1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	96	9%	16%	-1.92	-0.21	**1.71**	0.4275	
Cell						Z_{CLEC1}				
1		150	17	0.091	0.113	-1.994				8
2		75	8	0.176	0.107	0.734				
3		10	4	0.128	0.400	-2.619				2
4		50	17	0.158	0.340	-2.878				8
5		15	2	0.245	0.133	1.345				
6		200	26	0.156	0.130	0.021				
7		30	7	0.166	0.233	-0.600				3
8		20	3	0.106	0.150	-0.065				2
9		40	9	0.193	0.225	-0.918				4
10		10	3	0.160	0.300	-0.660				<u>2</u>
										<u>29</u>

where n_I = ILEC observations and n_c = CLEC-1 observations

Payout for CLEC-1 is (29 units) * ($100/unit) = $2,900

Example: CLEC-1 Order Completion Interval (OCI) for Resale POTS

	n_I	n_c	I_c	OCI_I	OCI_c	Z^T_{CLEC1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	600	5days	7days	-1.92	-0.21	**1.71**	0.4275	
Cell						Z_{CLEC1}				
1		150	150	5	7	-1.994				64
2		75	75	5	4	0.734				
3		10	10	2	3.8	-2.619				4
4		50	50	5	7	-2.878				21
5		15	15	4	2.6	1.345				
6		200	200	3.8	2.7	0.021				
7		30	30	6	7.2	-0.600				13
8		20	20	5.5	6	-0.065				9
9		40	40	8	10	-0.918				17
10		10	10	6	7.3	-0.660				4
										133

where n_I = ILEC observations and n_c = CLEC-1 observations

Payout for CLEC-1 is (133 units) * ($100/unit) = $13,300

TIER 2 CALCULATION for RETAIL ANALOGUES:

1. Tier 2 is triggered by three consecutive monthly failures of any VSEEM submetric.

2. Therefore, calculate monthly statistical results and affected volumes as outlined in steps 2. through 6. for the CLEC Aggregate performance.

3. Calculate the payment to State Designated Agency by sum totaling each months affected volume and multiplying the result by the appropriate dollar amount from the Tier 2 fee schedule.

   So, State Designated Agency payment
   = Σ (Affected Volume$_{CLECA}$ for previous three months) * $$ from Fee Schedule

Example: CLEC-A Missed Installation Appointments (MIA) for Resale POTS

State	n_i	n_c	I_c	MIA_i	MIA_c	Z^T_{CLECA}	C_B	Parity Gap	Volume Proportion	Affected Volume
Month1	180000	2100	336	9%	16%	-1.92	-0.21	**1.71**	0.4275	
Cell						Z_{CLECA}				
1		500	56	0.091	0.112	-1.994				24
2		300	30	0.176	0.100	0.734				
3		80	27	0.128	0.338	-2.619				12
4		205	60	0.158	0.293	-2.878				26
5		45	4	0.245	0.089	1.345				
6		605	79	0.156	0.131	0.021				
7		80	19	0.166	0.238	-0.600				9
8		40	6	0.106	0.150	-0.065				3
9		165	36	0.193	0.218	-0.918				16
10		80	19	0.160	0.238	-0.660				9
										99

where n_i = ILEC observations and n_c = CLEC-A observations

Payout for CLEC-A is (99 units) * ($300/unit) = $29,700

If the above example represented performance for each of months 1 through 3, then

Example: CLEC-A Missed Installation Appointments for 1Q00

State	Miss	Remedy Dollars
Month 1	x	$29,700
Month 2	x	$29,700
Month 3	x	$29,700
1Q00		$89,100

TIER 3 CALCULATION

Tier 3 uses the monthly CLEC Aggregate results in a given State. Tier 3 is triggered when 12 of the 26 Tier 3 sub-metrics experience consecutive failures in a consecutive three month period. The table below displays a situation that would trigger a Tier 3 failure, and one that would not.

Tier 3 is effective immediately after results, and can only be lifted when all 12 of the 26 failed sub-metrics show compliance for three consecutive months.

All tiers standalone, such that triggering Tier 3 will not cease payout of any Tier 1 or Tier 2 failures.

Process	Measures	TIER-3 FAILURE X = Miss			NOT A TIER-3 FAILURE X = Miss		
		Jan	Feb	Mar	Jan	Feb	Mar
Percent Missed Installation Appointments	Resale POTS	X	X	X	X		
	Resale Design	X			X	X	X
	UNE Loop & Port Combo		X				
	UNE Loops	X	X	X			
Percent Missed Repair Appointments	Resale POTS	X	X	X	X		X
	Resale Design		X	X		X	
	UNE Loop & Port Combo					X	X
	UNE Loops				X		
Billing	Billing Accuracy	X	X	X			
	Billing Timeliness				X	X	X
Trunk Blockage	Percent Trunk Blockage	X	X	X			
Collocation	Percent Missed Collocation Due Dates						

TIER 1 CALCULATION FOR BENCHMARKS:

1. For each CLEC, with five or more observations, calculate monthly performance results for the State.

2. CLECs having observations (sample sizes) between 5 and 30 will use Table I below. The only exception will be for Collocation Percent Missed Due Dates.

Table I   **Small Sample Size Table**
(95% Confidence)

Sample Size	Equivalent 90% Benchmark	Equivalent 95% Benchmark	Sample Size	Equivalent 90% Benchmark	Equivalent 95% Benchmark
5	60.00%	80.00%	16	75.00%	87.50%
6	66.67%	83.33%	17	76.47%	82.35%
7	71.43%	85.71%	18	77.78%	83.33%
8	75.00%	75.00%	19	78.95%	84.21%
9	66.67%	77.78%	20	80.00%	85.00%
10	70.00%	80.00%	21	76.19%	85.71%
11	72.73%	81.82%	22	77.27%	86.36%
12	75.00%	83.33%	23	78.26%	86.96%
13	76.92%	84.62%	24	79.17%	87.50%
14	78.57%	85.71%	25	80.00%	88.00%
15	73.33%	86.67%	26	80.77%	88.46%
			27	81.48%	88.89%
			28	78.57%	89.29%
			29	79.31%	86.21%
			30	80.00%	86.67%

3. If the percentage (or equivalent percentage for small samples) meets the benchmark standard, stop here.   Otherwise, go to step 4.

4. Determine the Volume Proportion by taking the difference between the benchmark and the actual performance result.

5. Calculate the Affected Volume by multiplying the Volume Proportion from step 4. by the Total Impacted $CLEC_1$ Volume.

6. Calculate the payment to the CLEC by multiplying the result of step 5. by the appropriate dollar amount from the fee schedule.

So, CLEC payment = Affected $Volume_{CLEC1}$ * $$ from Fee Schedule

Example: CLEC-1 Percent Missed Due Dates for Collocations

	n_c	Benchmark	MIA_c	Volume Proportion	Affected Volume
State	600	10%	13%	.03	18

Payout for CLEC-1 is (18 units) * ($5000/unit) = $90,000

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TIER 1 CALCULATION FOR BENCHMARKS

1. For each, with five or more observations, CLEC calculate monthly performance results for the State.

2. CLECs having observations (sample sizes) between 5 and 30 will use Table I above.   •

3. Calculate the interval distribution based on the same data set used in step 1.

4. If the 'percent within' (or equivalent percentage for small samples) meets the benchmark standard, stop here. Otherwise, go to step 5.

5. Determine the Volume Proportion by taking the difference between benchmark and the actual performance result.

6. Calculate the Affected Volume by multiplying the Volume Proportion from step 5. by the Total $CLEC_1$ Volume.

7. Calculate the payment to the CLEC by multiplying the result of step 6. by the appropriate dollar amount from the fee schedule.

$$\text{So, CLEC payment} = \text{Affected Volume}_{CLEC1} * \text{\$\$ from Fee Schedule}$$

Example: CLEC-1 Reject Timeliness

	n_c	Benchmark	Reject Timeliness$_c$	Volume Proportion	Affected Volume
State	600	95% within 1 hour	93% within 1 hour	.02	12

Payout for CLEC-1 is (12 units) * ($100/unit) = $1,200

TIER 2 CALCULATIONS for BENCHMARKS:

Tier 2 calculations for benchmark measures are the same as the Tier 1 benchmark calculations except the CLEC Aggregate data having failed for a consecutive three month period is being assessed.

EXHIBIT E

STATISTICAL METHODOLOGY

EXHIBIT E
Statistical Methods for Performance Measure Analysis

I. Necessary Properties for a Test Methodology

The statistical process for testing if competing local exchange carriers (CLECs) customers are being treat equally with BellSouth (BST) customers involves more than just a mathematical formula. Three key elements need to be considered before an appropriate decision process can be developed. These are

- the type of data,
- the type of comparison, and
- the type of performance measure.

Once these elements are determined a test methodology should be developed that complies with the following properties.

- Like-to-Like Comparisons. When possible, data should be compared at appropriate levels, e.g. wire center, time of month, dispatched, residential, new orders. The testing process should:
    - Identify variables that may affect the performance measure.
    - Record these important confounding covariates.
    - Adjust for the observed covariates in order to remove potential biases and to make the CLEC and the ILEC units as comparable as possible.

- Aggregate Level Test Statistic. Each performance measure of interest should be summarized by one overall test statistic giving the decision maker a rule that determines whether a statistically significant difference exists. The test statistic should have the following properties.
    - The method should provide a single overall index, on a standard scale.
    - If entries in comparison cells are exactly proportional over a covariate, the aggregated index should be very nearly the same as if comparisons on the covariate had not been done.
    - The contribution of each comparison cell should depend on the number of observations in the cell.
    - Cancellation between comparison cells should be limited.
    - The index should be a continuous function of the observations.

- Production Mode Process. The decision system must be developed so that it does not require intermediate manual intervention, i.e. the process must be a "black box."
    - Calculations are well defined for possible eventualities.
    - The decision process is an algorithm that needs no manual intervention.
    - Results should be arrived at in a timely manner.
    - The system must recognize that resources are needed for other performance measure-related processes that also must be run in a timely manner.
    - The system should be auditable, and adjustable over time.

- Balancing. The testing methodology should balance Type I and Type II Error probabilities.
    - P(Type I Error) = P(Type II Error) for well defined null and alternative hypotheses.
    - The formula for a test's balancing critical value should be simple enough to calculate using standard mathematical functions, i.e. one should avoid methods that require computationally intensive techniques.

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        – Little to no information beyond the null hypothesis, the alternative hypothesis, and the number of observations should be required for calculating the balancing critical value.

- **Trimming.** Trimming of extreme observations from BellSouth and CLEC distributions is needed in order to ensure that a fair comparison is made between performance measures. Three conditions are needed to accomplish this goal. These are:

  - Trimming should be based on a general rule that can be used in a production setting.

  - Trimmed observations should not simply be discarded; they need to be examined and possibly used in the final decision making process.

  - Trimming should only be used on performance measures that are sensitive to "outliers."

<u>Measurement Types</u>

The performance measures that will undergo testing are of four types:
1) means
2) proportions,
3) rates, and
4) ratio

While all four have similar characteristics, proportions and rates are derived from count data while means and ratios are derived from interval measurements. Table 2 classifies the performance measures by the type of measurement.

II. Testing Methodology – The Truncated Z

Many covariates are chosen in order to provide deep comparison levels. In each comparison cell, a Z statistic is calculated. The form of the Z statistic may vary depending on the performance measure, but it should be distributed approximately as a standard normal, with mean zero and variance equal to one. Assuming that the test statistic is derived so that it is negative when the performance for the CLEC is worse than for the ILEC, a positive truncation is done – i.e. if the result is negative it is left alone, if the result is positive it is changed to zero. A weighted average of the truncated statistics is calculated where a cell weight depends on the volume of BST and CLEC orders in the cell. The weighted average is re-centered by the theoretical mean of a truncated distribution, and this is divided by the standard error of the weighted average. The standard error is computed assuming a fixed effects model.

Proportion Measures

For performance measures that are calculated as a proportion, in each adjustment cell, the truncated Z and the moments for the truncated Z can be calculated in a direct manner. In adjustment cells where proportions are not close to zero or one, and where the sample sizes are reasonably large, a normal approximation can be used. In this case, the moments for the truncated Z come directly from properties of the standard normal distribution. If the normal approximation is not appropriate, then the Z statistic is calculated from the hypergeometric distribution. In this case, the moments of the truncated Z are calculated exactly using the hypergeometric probabilities.

Rate Measures

The truncated Z methodology for rate measures has the same general structure for calculating the Z in each cell as proportion measures. For a rate measure, there are a fixed number of circuits or units for the CLEC, n_{2j} and a fixed number of units for BST, n_{1j}. Suppose that the performance measure is a "trouble rate." The modeling assumption is that the occurrence of a trouble is independent between units and the number of troubles in n circuits follows a Poisson distribution with mean λn where λ is the probability of a trouble in 1 circuit and n is the number of circuits.

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In an adjustment cell, if the number of CLEC troubles is greater than 15 and the number of BST troubles is greater than 15, then the Z test is calculated using the normal approximation to the Poisson. In this case, the moments of the truncated Z come directly from properties of the standard normal distribution. Otherwise, if there are very few troubles, the number of CLEC troubles can be modeled using a binomial distribution with n equal to the total number of troubles (CLEC plus BST troubles.) In this case, the moments for the truncated Z are calculated explicitly using the binomial distribution.

Mean Measures

For mean measures, an adjusted t statistic is calculated for each like-to-like cell which has at least 7 BST and 7 CLEC transactions. A permutation test is used when one or both of the BST and CLEC sample sizes is less than 6. Both the adjusted t statistic and the permutation calculation are described in the technical appendix.

Ratio Measures

Rules will be given for computing a cell test statistic for a ratio measure, however, the current plan for measures in this category, namely billing accuracy, does not call for the use of a Z parity statistic.