

Kentucky SEEM Administrative Plan

Self-Effectuating Enforcement Mechanism (SEEM)

Version 3.0

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1: Administrative Plan

1.1 Scope

This Administrative Plan (Plan) includes Service Quality Measurements (SQM) with corresponding Self Effectuating Enforcement Mechanisms (SEEM) to be implemented by BellSouth pursuant to the Order dated May 11, 2004, issued by the Kentucky Public Service Commission in Order No. 2001-00105.

1.2 Reporting

In providing services pursuant to the Interconnection Agreements between BellSouth and each CLEC, BellSouth will report its performance to each CLEC in accordance with BellSouth's SQMs and pay penalties in accordance with the applicable SEEMs, which are posted on the Performance Measurement Reports website.

BellSouth will make performance reports available to each CLEC on a monthly basis. The reports will contain information collected in each performance category and will be available to each CLEC via the Performance Measurements Reports website. BellSouth will also provide electronic access to the raw data underlying the SQMs.

Final validated SQM reports will be posted no later than the last day of the month following the data month in which the activity is incurred, or the first business day thereafter. Final validated SQM reports not posted by this time will be considered late.

Final validated SEEM reports will be posted on the Performance Measurements Reports website on the 15th of the month following the posting of final validated SQM reports for that data month or the first business day thereafter.

BellSouth shall pay penalties to the Commission, in the aggregate, for all late SQM reports in the amount of \$2000 per day. Such payment shall be made to the Commission for deposit into the state General Revenue Fund within fifteen (15) calendar days of the end of the reporting month in which the late publication of the report occurs.

BellSouth shall pay penalties to the Commission, in the aggregate, for all reposted SQM reports in the amount of \$400 per day. The circumstances which may necessitate a reposting of SQM reports are detailed in Appendix G, Reposting of Performance Data and Recalculation of SEEM Payments. Such payments shall be made to the Commission for deposit into the state General Revenue Fund within fifteen (15) calendar days of the final publication date of the report or the report revision date.

Tier II SEEMS payments and Administrative fines and penalties for late and reposted reports will be sent via Federal Express to the Commission. Checks and the accompanying transmittal letter will be postmarked on or before the 15th of the month or the first business day thereafter.

BellSouth shall retain the performance measurement raw data files for a period of 18 months and further retain the monthly reports produced in PMAP for a period of three years.

1.3 Review of Measurements and Enforcement Mechanisms

BellSouth will participate in annual review cycles starting one year from the date of the Commission order. A collaborative work group, which will include BellSouth, interested CLECs and the Commission will review the Performance Assessment Plan for additions, deletions or other modifications.

In the event a dispute arises regarding the ordered modification or amendment to the SQMs or SEEMs, the parties will refer the dispute to the Kentucky Public Service Commission.

1.4 Enforcement Mechanisms

1.4.1 Definitions

Enforcement Measurement Elements –performance measurements identified as SEEM measurements in this Plan.

Enforcement Measurement Benchmark– level of performance used to evaluate the performance of BellSouth for CLECs where no analogous retail process, product or service is feasible.

Enforcement Measurement Retail Analog Compliance – comparing performance levels provided to BellSouth retail customers with performance levels provided by BellSouth to the CLEC customer for measures where retail analogs apply.

Test Statistic and Balancing Critical Value –means by which enforcement will be determined using statistically valid equations. The Test Statistic and Balancing Critical Value are set forth in Appendix D, Statistical Formulas and Technical Description.

Cell –grouping of transactions 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 CLEC resold services for residential customers, requiring a dispatch, in the same wire center, at a similar point in time. When determining compliance, these cells can have a positive or negative Test Statistic. See Appendix D, Statistical Formulas and Technical Description.

Affected Volume – that proportion of the total impacted CLEC volume or CLEC Aggregate volume for which remedies will be paid.

Delta – a measure of the meaningful difference between BellSouth performance and CLEC performance. For individual CLECs the Delta value shall be 1.0 and for the CLEC aggregate the Delta value shall be 0.50.

Parity Gap – refers to the incremental departure from a compliant level of service. This is also referred to as “diff” in Appendix D, Statistical Formulas and Technical Description.

Tier-1 Enforcement Mechanisms – self-executing liquidated damages paid directly to a CLEC when BellSouth delivers non-compliant performance of any one of the Tier-1 Enforcement Measurement Elements for any two consecutive months as calculated by BellSouth.

Tier-2 Enforcement Mechanisms – assessments paid directly to the Kentucky Public Service Commission or its designee. 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 as calculated by BellSouth for a particular Tier-2 Enforcement Measurement Element.

1.4.2 Application

The application of the Tier-1 and Tier-2 Enforcement Mechanisms does not foreclose other legal and regulatory claims and remedies available to each CLEC.

Payment of any Tier-1 or Tier-2 Enforcement Mechanisms shall not be considered as an admission against interest or an admission of liability or culpability in any legal, regulatory or other proceeding relating to BellSouth's performance. The payment of any Tier-1 Enforcement Mechanism to a CLEC shall be credited against any liability associated with or related to BellSouth's service performance.

It is not the intent of the Parties that BellSouth be liable for both Tier-2 Enforcement Mechanisms and any other assessments or sanctions imposed by the Commission. CLECs will not oppose any effort by BellSouth to set off Tier-2 Enforcement Mechanisms from any assessment imposed by the Commission.

The Enforcement Mechanisms contained in this Plan have been provided by BellSouth on a voluntary basis in order to maintain compliance between BellSouth and each CLEC. As a result, CLECs may not use the existence of this section or any payments of any Tier-1 or Tier-2 Enforcement Mechanisms under this section as evidence that BellSouth has not complied with or has violated any state or federal law or regulation.

1.4.3 Methodology

Tier-1 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for each CLEC for the State of Kentucky for a given Enforcement Measurement Element for two (2) consecutive months. Liquidated damages will be applicable to each of the two months of failure. Enforcement Measurement Compliance is based upon a Test Statistic and Balancing

Critical Value calculated by BellSouth utilizing BellSouth generated data. The method of calculation is set forth in Appendix D, Statistical Formulas and Technical Description.

Tier-1 Enforcement Mechanisms apply on a per transaction basis for each Enforcement Mechanism Element for which BellSouth has reported non-compliance. All transactions for individual CLECs will be consolidated for purposes of calculating Tier-1 Enforcement Mechanisms.

When a measurement has five or more transactions for the CLEC, calculations will be performed to determine remedies according to the methodology described in the remainder of this document.

The Standard and Low Performance Fee Schedules for Tier-1 Enforcement Mechanisms are shown in “Table 1: Liquidated Damages For Tier-1 Measures”. Standard Fee Schedule amounts are used when BellSouth’s overall performance in a given month remains within three standard deviations of a baseline performance level. This baseline level is the average of the percent of submetrics met during each of the 12 consecutive months ending prior to the month a Commission order adopting the plan goes into effect. These averages will be taken from across all reporting domains. These domains are: OSS/Pre-ordering, Ordering, Provisioning, Maintenance and Repair, LNP, Billing, Interconnection Trunks, Collocation, and Service Order Accuracy. Failures beyond Month 2 will be subject to Month 2 fees.

Should BellSouth’s performance as measured by the percent of submetrics met in the current data month fall below three standard deviations from the established baseline level of performance, the Tier 1 Low Performance Fee Schedule fees will be utilized for that month. If BellSouth’s performance in the current month should exceed the baseline level by three standard deviations, no Tier 1 payment will apply for any CLEC in that month. Additionally, if BellSouth’s performance for a given month triggers the Tier-1 Low Performance Fee Schedule, for the following Tier-2 measures, Tier 1 penalties would also apply: Firm Order Confirmation and Reject Response Completeness, LNP-Percent Out of Service <60 Minutes, LNP-Percent of Time BellSouth Applies the 10-digit Trigger Prior to the LNP Order Due Date, LNP-Disconnect Timeliness (Non-Trigger), Acknowledgment Message Completeness, and Percent Flow-through Service Request.

Tier-2 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for the State of Kentucky for given Enforcement Measurement Elements for three consecutive months. The method of calculation is set forth in Appendix D, Statistical Formulas and Technical Description.

Tier- 2 Enforcement Mechanisms apply, for an aggregate of all CLEC data generated by BellSouth, on a per transaction basis for each Enforcement Mechanism Element for which BellSouth has reported non-compliance.

The Standard and Low Performance Fee Schedules for Tier-2 Enforcement Mechanisms are shown in “Table 2: Liquidated Damages For Tier-2 Measures”. Standard Fee Schedule amounts are used when BellSouth’s overall performance in a given month remains within three

standard deviations of a baseline performance level. The baseline performance level which Tier 2 performance will compare against shall be the same as that utilized for Tier 1. Three consecutive months of failure are necessary to trigger a Tier 2 payment. The percent submetrics met for the average of the three month period compared against the established baseline will be used to determine which Fee Schedule applies when calculating a Tier 2 payment.

Should BellSouth's performance, as measured by the average percent of submetrics met for the three months used to determine whether Tier 2 applies in the current data month, fall below three standard deviations from the established baseline level of performance, the Tier 2 Low Performance Fee Schedule will be utilized. If BellSouth's performance, as measured by the average percent of submetrics met for the three months used to determine whether Tier 2 applies in the current data month, exceeds the baseline performance by three standard deviations, no Tier 2 payment will apply in the current data month.

1.4.4 Payment of Tier-1 and Tier-2 Amounts

If BellSouth performance triggers an obligation to pay Tier-1 Enforcement Mechanisms to a CLEC or an obligation to remit Tier-2 Enforcement Mechanisms to the Commission or its designee, BellSouth shall make payment in the required amount on the day upon which the final validated SEEM reports are posted on the Performance Measurements Reports website as set forth in Section 1.2 above.

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

For each day after the due date that BellSouth fails to pay the Tier-2 Enforcement Mechanisms, BellSouth will pay the Commission an additional \$1,000 per day.

If a CLEC disputes the amount paid for 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 6% simple interest per annum.

For Tier-2 Enforcement Mechanisms, if the Commission requests clarification of an amount paid, a written claim shall be submitted 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 Commission written findings within thirty (30) days after receipt of the claim. If BellSouth determines the Commission is owed additional amounts, BellSouth shall pay such additional amounts within thirty (30) days after its findings along with 6% simple interest per annum.

BellSouth may set off any SEEMs payment to a CLEC against undisputed amounts owed by a CLEC to BellSouth pursuant to the Interconnection Agreement between the parties which have

not been paid to BellSouth within ninety (90) days past the Bill Due Date as set forth in the Billing Attachment of the Interconnection Agreement.

Any adjustments for underpayment or overpayment of calculated Tier 1 and Tier 2 remedies will be made consistent with the terms of BellSouth's Policy On Reposting Of Performance Data and Recalculation of SEEM Payments, as set forth in Appendix G of this document.

Any adjustments for underpayments will be made in the next month's payment cycle after the recalculation is made. The final current month PARIS reports will reflect the final paid dollars, including adjustments for prior months where applicable. Questions regarding the adjustments should be made in accordance with the normal process used to address CLEC questions related to SEEM payments.

1.4.5 Limitations of Liability

BellSouth will not be obligated to pay Tier-1 or Tier-2 Enforcement Mechanisms for non-compliance with a performance measure if such non-compliance results from CLEC acts or omissions that cause or contribute towards failed or missed performance measures. These acts or omissions include but are not limited to, accumulation and submission of orders at unreasonable quantities or times, failure to follow established and documented procedures, or failure to submit accurate orders or inquiries. BellSouth shall provide each CLEC with reasonable notice of such acts or omissions and provide each CLEC any such supporting documentation.

BellSouth shall not be obligated to pay Tier-1 or Tier-2 Enforcement Mechanisms for non-compliance with a performance measurement if such non-compliance was the result of any of the following: a Force Majeure event (as defined in the most recent version of BellSouth's Standard Interconnection Agreement); 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.

In addition to these specific limitations of liability, BellSouth may petition the Commission to consider a waiver based upon other circumstances.

1.4.6 Change of Law

Upon a particular Commission's issuance of an Order pertaining to Performance Measurements or Remedy Plans in a proceeding expressly applicable to all CLECs, BellSouth shall implement such performance measures and remedy plans covering its performance for the CLECs, as well as any changes to those plans ordered by the Commission, on the date specified by the Commission. If a change of law relieves BellSouth of the obligation to provide any UNE or UNE combination pursuant to Section 251 of the Act, then upon providing the Commission with 30 days written notice, Bellsouth may cease reporting data or paying remedies in accordance with the change of law. Performance Measurements and remedy plans that have been ordered by the Commission can currently be accessed via the Internet at <http://pmap.bellsouth.com>. Should there be any difference between the performance measure and remedy plans on BellSouth's

website and the plans the Commission has approved as filed in compliance with its orders, the Commission-approved compliance plan will supersede as of its effective date.

1.4.7 Enforcement Mechanism Cap

BellSouth's total liability for the payment of Tier-1 and Tier-2 Enforcement Mechanisms shall be collectively and absolutely capped at 36 percent of net revenues in Kentucky, based upon the most recently reported ARMIS data.

If projected payments exceed the state cap, a proportional payment will be made to the respective parties.

If BellSouth's payment of Tier-1 and Tier-2 Enforcement Mechanisms would have exceeded the cap referenced in this plan, a CLEC may commence a proceeding with the Commission to demonstrate why BellSouth should pay any amount in excess of the cap. The CLEC shall have the burden of proof to demonstrate why, under the circumstances, BellSouth should have additional liability.

1.4.8 Audits

BellSouth currently provides many CLECs with certain audit rights as a part of their individual interconnection agreements. However, it is not reasonable for BellSouth to undergo an audit of SEEM for every CLEC with which it has a contract. If requested by a Public Service Commission or by a CLEC exercising contractual audit rights, BellSouth will agree to undergo an audit of its Performance Metrics Quality Assurance Plan (PMQAP) every other year for the next five (5) years (2005-2010) to be conducted by an independent third party. The results of audits will be made available to all the parties subject to proper safeguards to protect proprietary information. This aggregate level audit includes the following specifications:

1. The cost shall be borne 50% by BellSouth and 50% by the CLEC or CLECs expressing their contractual rights. If no party is sharing the costs of this audit, BellSouth may utilize its internal auditing organization to conduct the audit.
2. Should an independent third party auditor be required, it shall be selected by BellSouth, with input from the PSC, if applicable, and the other parties bearing the cost of the audit.
3. Due to the regional nature of the processes used to generate performance metric data, BellSouth will agree to no more than one regional third party audit within its region per year.

These audits are intended to provide the basis for the PSCs and CLECs to determine that SEEM produces accurate data that reflects each State's Order for performance measurements.

BellSouth reserves the right to make changes to this audit policy as growth and changes in the industry dictate.

1.4.9 Dispute Resolution

Notwithstanding any other provision of the Interconnection Agreement between BellSouth and each CLEC, any dispute regarding BellSouth's performance or obligations pursuant to this Plan shall be resolved by the Commission.

1.5 Regional and State Coefficients

Some metrics are calculated for the entire BellSouth region, rather than by state.

- A regional coefficient is calculated to split Tier 1 payments for regional metrics among CLECs by submetric depending on the volume of certain activities in each OCN for the current month.
- A state coefficient is calculated to split Tier 2 payments for regional metrics among states by submetric.

All measures using regional (Tier 1) or state (Tier 2) coefficients are benchmark measures. The following metrics require calculation of a coefficient:

- Acknowledgement Completeness
- Timeliness of Change Management - Notices
- Timeliness of Documents Associated with Change - Documents
- Percent of Software Errors Corrected in X (10, 30, 45) Business Days – Errors Corrected
- Percent Change Requests Accepted or Rejected in 10 Days – Requests Accepted or Rejected
- Percent of Change Request Implemented Within 60 Weeks of Prioritization – Type 4 Requests Implemented
- Percent of Change Request Implemented Within 60 Weeks of Prioritization - Type 5 Requests Implemented
- Interface Availability – Pre-Ordering/Ordering
- Interface Availability – Maintenance & Repair

The methodology for calculating coefficients is detailed in Appendix E.

A: Fee Schedule

Table 1: Liquidated Damages For Tier-1 Measures

Performance Measurement	Standard Performance		Low Performance	
	Per Affected Item Month 1	Per Affected Item Month 2	Per Affected Item Month 1	Per Affected Item Month 2
OSS/Pre-Ordering	\$10	\$13	\$20	\$30
Ordering	\$20	\$25	\$40	\$50
Provisioning - Resale	\$45	\$56	\$100	\$125
Provisioning UNE	\$95	\$119	\$400	\$450
Provisioning - UNEP	\$40	\$50	\$400	\$450
Maintenance and Repair - Resale	\$45	\$56	\$100	\$125
Maintenance and Repair UNE	\$35	\$44	\$400	\$450
Maintenance and Repair - UNEP	\$25	\$31	\$400	\$450
LNP	\$95	\$119	\$150	\$250
Billing – BIA	\$0.02*	\$0.025*	\$1.00	\$1.00
Billing – BIT	\$5	\$7	\$10	\$14
IC Trunks	\$25	\$31	\$100	\$125
Collocation	\$3,640	\$4,550	\$5000	\$5000
Service Order Accuracy	\$20	\$25	\$40	\$50

*Reflects percent interest to be paid on adjusted amounts.

Table 2: Liquidated Damages For Tier-2 Measures

Performance Measurement	Standard Performance	Low Performance
	Per Affected Item	Per Affected Item
OSS/Pre-Ordering	\$15	\$20
Ordering	\$30	\$60
Provisioning - Resale	\$68	\$300
Provisioning - UNE	\$143	\$875
Provisioning - UNEP	\$60	\$875
Maintenance and Repair - Resale	\$68	\$300
Maintenance and Repair – UNE	\$53	\$875
Maintenance and Repair - UNEP	\$38	\$875
Billing – BIA	\$0.03*	\$1.00
Billing – BIT	\$8	\$16
LNP	\$143	\$500
IC Trunks	\$38	\$500
Collocation	\$5460	\$15,000
Change Management	\$1000	\$1000
Service Order Accuracy	\$30	\$50

*Reflects percent interest to be paid on adjusted amounts.

B: SEEM Submetrics

B.1 Tier 1 Submetrics

Item No.	SQM Ref	Submetric
1	ERT	Loop Makeup - Response Time – Electronic
2	RI	Reject Interval - Fully Mechanized
3	PIAM	Percent Installation Appointments Met- Resale (POTS)
4	PIAM	Percent Installation Appointments Met - Resale Design
5	PIAM	Percent Installation Appointments Met - LNP (Standalone)
6	PIAM	Percent Installation Appointments Met - UNE Loops
7	PIAM	Percent Installation Appointments Met - UNE Loop and Port Combinations
8	PIAM	Percent Installation Appointments Met - UNE xDSL
9	PIAM	Percent Installation Appointments Met - UNE Line Splitting
10	PIAM	Percent Installation Appointments Met - Local Interconnection Trunks
11	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Resale (POTS)
12	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Resale Design
13	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - LNP (Standalone)
14	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Loops
15	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Loop and Port Combinations
16	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE xDSL - With Conditioning
17	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE xDSL - Without Conditioning
18	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Line Splitting - With Conditioning
19	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Line Splitting - Without Conditioning
20	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Local Interconnection Trunks
21	CCCI	Coordinated Customer Conversions Interval - UNE Loops
22	CNDD	Non-Coordinated Customer Conversions - % Completed and Notified on Due Date

SEEM Retail Analogs and Benchmark Thresholds

Item No.	SQM Ref	Submetric
23	HCT	Coordinated Customer Conversions - Hot Cut Timeliness Percent Within Interval and Average Interval – UNE Loops
24	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Resale (POTS)
25	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Resale Design
26	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Loops
27	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Loop and Port Combinations
28	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE xDSL
29	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Line Splitting
30	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Local Interconnection Trunks
31	SOAC	Service Order Accuracy - Resale
32	SOAC	Service Order Accuracy - UNE
33	SOAC	Service Order Accuracy - UNE/P
34	PRAM	Repair Appointments Met - Resale (POTS)
35	PRAM	Repair Appointments Met - Resale Design
36	PRAM	Repair Appointments Met - UNE Loops
37	PRAM	Repair Appointments Met - UNE Loop and Port Combinations
38	PRAM	Repair Appointments Met - UNE xDSL
39	PRAM	Repair Appointments Met - UNE Line Splitting
40	PRAM	Repair Appointments Met - Local Interconnection Trunks
41	MAD	Maintenance Average Duration- Resale (POTS)
42	MAD	Maintenance Average Duration - Resale Design
43	MAD	Maintenance Average Duration - UNE Loops
44	MAD	Maintenance Average Duration - UNE Loop and Port Combinations
45	MAD	Maintenance Average Duration - UNE xDSL
46	MAD	Maintenance Average Duration - UNE Line Splitting
47	MAD	Maintenance Average Duration - Local Interconnection Trunks
48	PRT	Percent Repeat Customer Troubles within 30 days - Resale (POTS)
49	PRT	Percent Repeat Customer Troubles Within 30 Days - Resale Design
50	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE Loops
51	PRT	Percent Repeat Customer Troubles Within 30 days - UNE Loop and Port Combinations
52	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE xDSL
53	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE Line Splitting
54	PRT	Percent Repeat Customer Troubles Within 30 Days - Local Interconnection Trunks
55	BIA	Invoice Accuracy

SEEM Retail Analogs and Benchmark Thresholds

Item No.	SQM Ref	Submetric
56	BIT	Mean Time to Deliver Invoices - CRIS
57	BIT	Mean Time to Deliver Invoices - CABS
58	TGPS	Trunk Group Performance – CLEC Specific
59	PMDD	Collocation Percent of Due Dates Missed

B.2 Tier 2 Submetrics

Item No	SQM Ref	Submetric
1	IA	Interface Availability - Pre-Ordering/Ordering
2	MRIA	Interface Availability - Maintenance & Repair
3	ERT	Loop Makeup - Response Time - Electronic
4	AKC	Acknowledgement Message Completeness - Acknowledgements
5	PFT	Percent Flow-through Service Requests – Resale
6	PFT	Percent Flow-through Service Requests – UNE
7	PFT	Percent Flow-through Service Requests - LNP
8	RI	Reject Interval - Fully Mechanized
9	FOCRC	Firm Order Confirmation and Reject Response Completeness – Fully Mechanized
10	PIAM	Percent Installation Appointments Met - Resale (POTS)
11	PIAM	Percent Installation Appointments Met - Resale Design
12	PIAM	Percent Installation Appointments Met - LNP (Standalone)
13	PIAM	Percent Installation Appointments Met - UNE Loops
14	PIAM	Percent Installation Appointments Met - UNE Loop and Port Combinations
15	PIAM	Percent Installation Appointments Met - UNE xDSL
16	PIAM	Percent Installation Appointments Met - UNE Line Splitting
17	PIAM	Percent Installation Appointments Met - Local Interconnection Trunks
18	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Resale (POTS)
19	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Resale Design
20	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - LNP (Standalone)
21	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Loops
22	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Loop and Port Combinations
23	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) – xDSL - with conditioning
24	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) – xDSL - without conditioning
25	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Line Splitting - With Conditioning
26	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - UNE Line Splitting - Without Conditioning

SEEM Retail Analogs and Benchmark Thresholds

Item No	SQM Ref	Submetric
27	FOCI	Firm Order Confirmation Interval (FOCI) Plus Average Order Completion Interval (OCI) - Local Interconnection Trunks
28	CCCI	Coordinated Customer Conversions Interval - UNE Loops
29	CNDD	Non-Coordinated Customer Conversions - % Completed and Notified on Due Date
30	HCT	Coordinated Customer Conversions - Hot Cut Timeliness Percent Within Interval and Average Interval –UNE Loops
31	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Resale (POTS)
32	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Resale Design
33	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Loops
34	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Loop and Port Combinations
35	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE xDSL
36	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - UNE Line Splitting
37	PPT	Percent Provisioning Troubles within 5 days of Service Order Completion - Local Interconnection Trunks
38	SOAC	Service Order Accuracy - Resale
39	SOAC	Service Order Accuracy - UNE
40	SOAC	Service Order Accuracy - UNE/P
41	LAT	LNP - Percent of Time BellSouth Applies the 10-Digit Trigger Prior to the LNP Order Due Date
42	LOOS	LNP - Percent Out of Service <60 Minutes
43	DTNT	LNP - Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution (Non-Trigger)
44	PRAM	Repair Appointments Met – Resale (POTS)
45	PRAM	Repair Appointments Met - Resale Design
46	PRAM	Repair Appointments Met - UNE Loops
47	PRAM	Repair Appointments Met - UNE Loop and Port Combinations
48	PRAM	Repair Appointments Met - UNE xDSL
49	PRAM	Repair Appointments Met - UNE Line Splitting
50	PRAM	Repair Appointments Met - Local Interconnection Trunks
51	MAD	Maintenance Average Duration - Resale (POTS)
52	MAD	Maintenance Average Duration - Resale Design
53	MAD	Maintenance Average Duration - UNE Loops
54	MAD	Maintenance Average Duration - UNE Loop and Port Combinations
55	MAD	Maintenance Average Duration - UNE xDSL

SEEM Retail Analogs and Benchmark Thresholds

Item No	SQM Ref	Submetric
56	MAD	Maintenance Average Duration - UNE Line Splitting
57	MAD	Maintenance Average Duration - Local Interconnection Trunks
58	PRT	Percent Repeat Customer Troubles within 30 days - Resale (POTS)
59	PRT	Percent Repeat Customer Troubles Within 30 Days - Resale Design
60	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE Loops
61	PRT	Percent Repeat Customer Troubles Within 30 days - UNE Loop and Port Combinations
62	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE xDSL
63	PRT	Percent Repeat Customer Troubles Within 30 Days - UNE Line Splitting
64	PRT	Percent Repeat Customer Troubles Within 30 Days - Local Interconnection Trunks
65	BIA	Invoice Accuracy
66	BIT	Mean Time to Deliver Invoices- CRIS
67	BIT	Mean Time to Deliver Invoices- CABS
68	TGPA	Trunk Group Performance - CLEC Aggregate
69	PMDD	Collocation Percent of Due Dates Missed
70	CMN	Timeliness of Change Management Notices – Region
71	CMD	Timeliness of Documents Associated with Change – Region
72	PSEC	Percent of Software Errors Corrected in X (10, 30, 45) Business Days – Region
73	PCRAR	Percent of Change Requests Accepted or Rejected Within 10 Days – Region
74	PCRIP	Percent of Change Requests Implemented Within 60 Weeks of Prioritization–Region

B.3 SEEM Retail Analogs

Retail Analogs - Provisioning Measures

SEEM Disaggregation	SEEM Analog
Resale POTS	Retail Residence and Business POTS
Resale Design	Retail Design
UNE Loop & Port Combinations	Retail Residence and Business
UNE Loops	Retail Residence and Business Dispatch
UNE xDSL	ADSL Provided to Retail
UNE xDSL with conditioning*	6 Days*
UNE xDSL without conditioning*	12 days*
UNE Line Splitting	ADSL Provided to Retail
UNE Line Splitting with conditioning*	12 days*
UNE Line Splitting without conditioning*	ADSL Provided to Retail
LNP (Standalone)	Retail Residence and Business POTS
Local Interconnection Trunks	Local Interconnection Trunks

*Applies to the measure Firm Order Confirmation Interval Plus Average Order Completion Interval only. Additionally, for this measure 10 days shall be added to the Local Interconnection Trunk retail analog duration for non-mechanized orders, and the following durations will be added to the retail analog intervals for all other disaggregations: .5 days for fully mechanized, 1.0 days for partially mechanized, and 2.5 days for non-mechanized.

Retail Analogs – Maintenance and Repair Measures

SEEM Disaggregation	SEEM Analog
Resale POTS	Retail Residence and Business POTS
Resale Design	Retail Design
UNE Loop & Port Combinations	Retail Residence and Business
UNE Loops	Retail Residence and Business Dispatch
UNE xDSL	ADSL Provided to Retail
UNE Line Splitting	ADSL Provided to Retail
Local Interconnection Trunks	Local Interconnection Trunks

B.4 SEEM Benchmark Thresholds

SQM Ref	Submetric	Analog / Benchmark
AKC	Acknowledgement Message Completeness - Acknowledgements	99.5%
BIA	Invoice Accuracy	Parity With Retail
BIT	Mean Time to Deliver Invoices - CRIS	Parity With Retail
BIT	Mean Time to Deliver Invoices - CABS	Parity With Retail
CCCI	Coordinated Customer Conversions Interval - UNE Loops	95% <= 20 Minutes
CMD	Timeliness of Documents Associated with Change – Region	95% >=30 Days if New Feature Coding required; 95%>=5 days for documentation defects, corrections, or clarifications
CMN	Timeliness of Change Management Notices – Region	98% on time
CNDD	Non-Coordinated Customer Conversions - % Completed and Notified on Due Date	95% Completed on Due Date with CLEC Notification
DTNT	LNP - Average Disconnect Timeliness Interval & Disconnect Timeliness Interval Distribution (Non-Trigger)	95% Within 12 Hours
ERT	Loop Makeup - Response Time - Electronic	95% <= 1 Minute
FOCRC	Firm Order Confirmation and Reject Response Completeness – Fully Mechanized	95% Returned
HCT	Coordinated Customer Conversions - Hot Cut Timeliness Percent Within Interval and Average Interval – UNE Loops	SL1 – Time Specific: 95% Within +/- 15 Min. of Scheduled Start Time SL1 IDLC: 95% Within +/- 2 hours of Scheduled Start Time
IA	Interface Availability - Pre-Ordering/Ordering	>= 99.5%
LAT	LNP - Percent of Time BellSouth Applies the 10-Digit Trigger Prior to the LNP Order Due Date	>95%
LOOS	LNP - Percent Out of Service <60 Minutes	>= 95%
MRIA	Interface Availability - Maintenance & Repair	>= 99.5%
PCRAR	Percent of Change Requests Accepted or Rejected Within 10 Days – Region	95% Within Interval
PCRIP	Percent of Change Requests Implemented Within 60 Weeks of Prioritization – Region	95% Within Interval
PFT	Percent Flow-through Service Requests – Resale	90%
PFT	Percent Flow-through Service Requests – UNE	85%
PFT	Percent Flow-through Service Requests - LNP	85%
PMDD	Collocation Percent of Due Dates Missed	>=95% On Time
PSEC	Percent of Software Errors Corrected in X (10, 30, 45) Business Days – Region	95% Within Interval
RI	Reject Interval - Fully Mechanized	97% <= 1 hour
SOAC	Service Order Accuracy - Resale	95% Correct
SOAC	Service Order Accuracy - UNE	95% Correct
SOAC	Service Order Accuracy - UNE/P	95% Correct
TGPA	Trunk Group Performance - CLEC Aggregate	Any 2 consecutive hours in a 24 hour period where CLEC blockage exceeds BellSouth blockage by more than 0.5% using trunk groups 1,3,4,5,10 (where applicable), and 16 for CLECs and 1,9,10 (where applicable), and 16 for BellSouth
TGPS	Trunk Group Performance – CLEC Specific	Any 2 consecutive hours in a 24 hour period where CLEC blockage exceeds BellSouth blockage by more than 0.5% using trunk groups 1,3,4,5,10 (where applicable), and 16 for CLECs and 1,9,10 (where applicable), and 16 for BellSouth

C: Statistical Properties and Definitions

The statistical process for testing whether BellSouth's (BST) wholesale customers (alternative local exchange carriers or CLECs) are being treated equally with BST's retail customers involves more than a simple mathematical formula. Three key elements need to be considered before an appropriate decision process can be developed. These are the type of:

- data
- comparison
- performance

This section describes the properties of a test methodology and the truncated Z statistic for two types of measures.

C.1 Necessary Properties for a Test Methodology

Once the key elements are determined, a test methodology should be developed that complies with the following properties:

- Like-to-Like Comparisons
- Aggregate Level Test Statistic
- Production Mode Process
- Balancing

C.1.1 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

C.1.2 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.

C.1.3 Production Mode Process

The decision system must be developed so that it does not require intermediate manual intervention, i.e., the process must be mechanized to the extent possible.

- 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.

C.1.4 Balancing

The testing methodology should balance Type I and Type II Error probabilities.

- $P(\text{Type I Error}) = P(\text{Type II Error})$ 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.
- 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.

C.1.5 Measurement Types

The performance measurements that will undergo testing are of two types: mean and proportion. Both have similar characteristics. Different types of data are used to calculate them. Table C-1 shows the type of data that is used to derive each measurement type.

Table C-1: Measurements Types and Data

Measurement Type	Data Used to Derive Measure
Mean	Interval measurements
Proportion	Counts

C.2 Testing Methodology – The Truncated Z

In summary, many covariates are chosen in order to provide meaningful comparison levels below the submetric level chosen for the parity comparison. This includes such factors as wire center and time of month, as well as order type for provisioning measures. 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's weight depends on the volume of BST and CLEC orders in the cell. The weighted average is standardized by subtracting the theoretical mean of the truncated distribution, and this is divided by the standard error of the weighted average. Summaries based on measurement type are given for the calculation of the cell Z statistic.

C.2.1 Mean Measures

For mean measures, an adjusted, asymmetric t statistic is calculated for each like-to-like cell that has at least seven BST and seven CLEC transactions. A permutation test is used when one or both of the BST and CLEC sample sizes is less than seven. The adjusted, asymmetric t statistic and the permutation calculation are described in Appendix D, Statistical Formulas and Technical Description.

C.2.2 Proportion Measures

For performance measures that are calculated as a proportion, in each adjustment cell, the cell Z and the moments for the truncated cell 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 ($n_{ij}p_{ij}(1-p_{ij}) > 9$), 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.

D: Statistical Formulas and Technical Description

We start by assuming that the data are disaggregated so that comparisons are made within appropriate classes or adjustment cells that define “like” observations.

D.1 Notation and Exact Testing Distributions

Below, we have detailed the basic notation for the construction of the truncated z statistic. In what follows the word “cell” should be taken to mean a like-to-like comparison cell that has both one (or more) ILEC observation and one (or more) CLEC observation.

- L = the total number of occupied cells
- j = 1, ,L; an index for the cells
- n_{1j} = the number of ILEC transactions in cell j
- n_{2j} = the number of CLEC transactions in cell j
- n_j = the total number transactions in cell j; $n_{1j} + n_{2j}$
- X_{1jk} = individual ILEC transactions in cell j; $k = 1, , n_{1j}$
- X_{2jk} = individual CLEC transactions in cell j; $k = 1, , n_{2j}$
- Y_{jk} = individual transaction (both ILEC and CLEC) in cell j
- $= \begin{cases} X_{1jk} & k = 1, \dots, n_{1j} \\ X_{2jk} & k = n_{1j} + 1, \dots, n_j \end{cases}$
- $\Phi^{-1}(\cdot)$ = the inverse of the cumulative standard normal distribution function

For Mean Performance Measures the following additional notation is needed.

- \bar{X}_{1j} = The ILEC sample mean of cell j
- \bar{X}_{2j} = The CLEC sample mean of cell j
- S_{1j}^2 = The ILEC sample variance in cell j
- S_{2j}^2 = The CLEC sample variance in cell j
- $\{y_{jk}\}$ = a random sample of size n_{2j} from the set of Y_{j1}, \dots, Y_{jn_j} ; $k = 1, \dots, n_{2j}$
- M_j = The total number of distinct pairs of samples of size n_{1j} and n_{2j} ;

$$= \binom{n_j}{n_{1j}}$$

The exact parity test is the permutation test based on the “modified Z” statistic. For large samples, we can avoid permutation calculations since this statistic will be normal (or Student's t) to a good approximation. For small samples, where we cannot avoid permutation calculations, we have found that the difference between “modified Z” and the textbook “pooled Z” is negligible. We therefore propose to use the permutation test based on pooled Z for small samples. This decision speeds up the permutation computations considerably, because for each permutation we need only compute the sum of the CLEC sample values, and not the pooled statistic itself.

A permutation probability mass function distribution for cell j, based on the “pooled Z” can be written as

$$PM(t) = P\left(\sum_k y_{jk} = t\right) = \frac{\text{the number of samples that sum to } t}{M_j}$$

and the corresponding cumulative permutation distribution is

$$CPM(t) = P\left(\sum_k y_{jk} \leq t\right) = \frac{\text{the number of samples with sum } \leq t}{M_j}$$

For Proportion Performance Measures the following notation is defined

- a_{1j} = The number of ILEC cases possessing an attribute of interest in cell j
- a_{2j} = The number of CLEC cases possessing an attribute of interest in cell j
- a_j = The number of cases possessing an attribute of interest in cell j; $a_{1j} + a_{2j}$

The exact distribution for a parity test is the hypergeometric distribution. The hypergeometric probability mass function distribution for cell j is

$$HG(h) = P(H = h) = \begin{cases} \frac{\binom{n_{1j}}{h} \binom{n_{2j}}{a_j - h}}{\binom{n_j}{a_j}}, & \max(0, a_j - n_{2j}) \leq h \leq \min(a_j, n_{1j}) \\ 0 & \text{otherwise} \end{cases}$$

and the cumulative hypergeometric distribution is

$$CHG(x) = P(H \leq x) = \begin{cases} 0 & x < \max(0, a_j - n_{2j}) \\ \sum_{h=\max(0, a_j - n_{2j})}^x HG(h), & \max(0, a_j - n_{2j}) \leq x \leq \min(a_j, n_{1j}) \\ 1 & x > \min(a_j, n_{1j}) \end{cases}$$

D.2 Calculating the Truncated Z

The general methodology for calculating an aggregate level test statistic is outlined below.

D.2.1 Calculate Cell Weights (W_j)

A weight based on the number of transactions is used so that a cell, which has a larger number of transactions, has a larger weight. The actual weight formulae will depend on the type of measure.

Mean Measure

$$W_j = \sqrt{\frac{n_{1j}n_{2j}}{n_j}}$$

Proportion Measure

$$W_j = \sqrt{\frac{n_{2j}n_{1j}}{n_j} \cdot \frac{a_j}{n_j} \cdot \left(1 - \frac{a_j}{n_j}\right)}$$

D.2.2 Calculate a Z Value (Z_j) for each Cell

A Z statistic with mean 0 and variance 1 is needed for each cell.

- If $W_j = 0$, set $Z_j = 0$.
- Otherwise, the actual Z statistic calculation depends on the type of performance measure.

Mean Measure

$$Z_j = \Phi^{-1}(\alpha)$$

where α is determined by the following algorithm.

If $\min(n_{1j}, n_{2j}) > 6$, then determine α as

$$\alpha = P(t_{n_j-1} \leq T_j)$$

that is, α is the probability that a t random variable with $n_j - 1$ degrees of freedom, is less than

$$T_j = \begin{cases} t_j + \frac{g}{6} \left(\frac{n_{1j} + 2n_{2j}}{\sqrt{n_{1j} n_{2j} (n_{1j} + n_{2j})}} \right) \left(t_j^2 + \frac{n_{2j} - n_{1j}}{n_{1j} + 2n_{2j}} \right) & t_j \geq t_{\min j} \\ t_j + \frac{g}{6} \left(\frac{n_{1j} + 2n_{2j}}{\sqrt{n_{1j} n_{2j} (n_{1j} + n_{2j})}} \right) \left(t_{\min j}^2 + \frac{n_{2j} - n_{1j}}{n_{1j} + 2n_{2j}} \right) & \text{otherwise} \end{cases}$$

where

$$t_j = \frac{\bar{X}_{1j} - \bar{X}_{2j}}{s_{1j} \sqrt{\frac{1}{n_{1j}} + \frac{1}{n_{2j}}}}$$

$$t_{\min j} = \frac{-3\sqrt{n_{1j}n_{2j}n_j}}{g(n_{1j} + 2n_{2j})}$$

and g is the median value of all values of

$$\gamma_{1j} = \frac{n_{1j}}{(n_{1j} - 1)(n_{1j} - 2)} \sum_k \left(\frac{X_{1jk} - \bar{X}_{1j}}{s_{1j}} \right)^3$$

with $n_{1j} > n_{3q}$ for all values of j . n_{3q} is the 3 quartile of all values of n_{1j}

Note, that t_j is the “modified Z” statistic. The statistic T_j is a “modified Z” corrected for the skewness of the ILEC data.

If $\min(n_{1j}, n_{2j}) \leq 6$, and

- $M_j \leq 1,000$ (the total number of distinct pairs of samples of size n_{1j} and n_{2j} is 1,000 or less)
 - Calculate the sample sum for all possible samples of size n_{2j} .
 - Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.
 - Let R_0 be the rank of the observed sample sum with respect all the sample sums.

$$\alpha = 1 - \frac{R_0 - 0.5}{M_j}$$

- $M_j > 1,000$
 - Draw a random sample of 1,000 sample sums from the permutation distribution.
 - Add the observed sample sum to the list. There are a total of 1001 sample sums. Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.
 - Let R_0 be the rank of the observed sample sum with respect all the sample sums.

$$\alpha = 1 - \frac{R_0 - 0.5}{1001}$$

Proportion Measure

$$Z_j = \frac{n_j a_{1j} - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}$$

D.2.3 Obtain a Truncated Z Value for each Cell (Z^*_j)

To limit the amount of cancellation that takes place between cell results during aggregation, cells whose results suggest possible favoritism are left alone. Otherwise the cell statistic is set to

zero. This means that positive equivalent Z values are set to 0, and negative values are left alone. Mathematically, this is written as

$$Z_j^* = \min(0, Z_j)$$

D.2.4 Calculate the Theoretical Mean and Variance

Calculate the theoretical mean and variance of the truncated statistic under the null hypothesis of parity, $E(Z_j^* | H_0)$ and $\text{Var}(Z_j^* | H_0)$. To compensate for the truncation in step 3, an aggregated, weighted sum of the Z_j^* will need to be centered and scaled properly so that the final aggregate statistic follows a standard normal distribution.

- If $W_j = 0$, then no evidence of favoritism is contained in the cell. The formulae for calculating $E(Z_j^* | H_0)$ and $\text{Var}(Z_j^* | H_0)$ cannot be used. Set both equal to 0.
- If $\min(n_{1j}, n_{2j}) > 6$ for a mean measure, or $\min\left\{a_{1j}\left(1 - \frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1 - \frac{a_{2j}}{n_{2j}}\right)\right\} > 9$ for a proportion measure, then

$$E(Z_j^* | H_0) = -\frac{1}{\sqrt{2\pi}}$$

and

$$\text{Var}(Z_j^* | H_0) = \frac{1}{2} - \frac{1}{2\pi}$$

- Otherwise, determine the total number of values for Z_j^* . Let z_{ji} and θ_{ji} , denote the values of Z_j^* and the probabilities of observing each value, respectively.

$$E(Z_j^* | H_0) = \sum_i \theta_{ji} z_{ji}$$

and

$$\text{Var}(Z_j^* | H_0) = \sum_i \theta_{ji} z_{ji}^2 - [E(Z_j^* | H_0)]^2$$

The actual values of the z 's and θ 's depends on the type of measure.

Mean Measure

$$N_j = \min(M_j, 1,000), \quad i = 1, \dots, N_j$$

$$z_{ji} = \min\left\{0, \Phi^{-1}\left(1 - \frac{R_i - 0.5}{N_j}\right)\right\} \quad \text{where } R_i \text{ is the rank of sample sum } i$$

$$\theta_j = \frac{1}{N_j}$$

Proportion Measure

$$z_{ji} = \min \left\{ 0, \frac{n_j i - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}} \right\}, \quad i = \max(0, a_j - n_{2j}), \dots, \min(a_j, n_{1j})$$

$$\theta_{ji} = \text{HG}(i)$$

D.2.5 Calculate the Aggregate Test Statistic (Z^T)

$$Z^T = \frac{\sum_j W_j Z_j^* - \sum_j W_j E(Z_j^* | H_0)}{\sqrt{\sum_j W_j^2 \text{Var}(Z_j^* | H_0)}}$$

The Balancing Critical Value

There are four key elements of the statistical testing process:

- the null hypothesis, H_0 , that parity exists between ILEC and CLEC services
- the alternative hypothesis, H_a , that the ILEC is giving better service to its own customers
- the Truncated Z test statistic, Z^T , and
- a critical value, c

The decision rule¹ is

- If $Z^T < c$ then accept H_a .
- If $Z^T \geq c$ then accept H_0 .

There are two types of error possible when using such a decision rule:

- **Type I Error:**Deciding favoritism exists when there is, in fact, no favoritism.
- **Type II Error:**Deciding parity exists when there is, in fact, favoritism.

The probabilities of each type of each are:

- **Type I Error:** $\alpha = P(Z^T < c | H_0)$
- **Type II Error:** $\beta = P(Z^T \geq c | H_a)$

We want a balancing critical value, c_B , so that $\alpha = \beta$.

¹ This decision rule assumes that a negative test statistic indicates poor service for the CLEC customer. If the opposite is true, then reverse the decision rule.

It can be shown that.

$$c_B = \frac{\sum_j W_j M(m_j, se_j) - \sum_j W_j \frac{-1}{\sqrt{2\pi}}}{\sqrt{\sum_j W_j^2 V(m_j, se_j)} + \sqrt{\sum_j W_j^2 \left(\frac{1}{2} - \frac{1}{2\pi}\right)}}$$

where

$$M(\mu, \sigma) = \mu \Phi\left(\frac{-\mu}{\sigma}\right) - \sigma \phi\left(\frac{-\mu}{\sigma}\right)$$

$$V(\mu, \sigma) = (\mu^2 + \sigma^2) \Phi\left(\frac{-\mu}{\sigma}\right) - \mu \sigma \phi\left(\frac{-\mu}{\sigma}\right) - M(\mu, \sigma)^2$$

$\Phi(\cdot)$ is the cumulative standard normal distribution function, and $\phi(\cdot)$ is the standard normal density function.

This formula assumes that Z_j is approximately normally distributed within cell j . When the cell sample sizes, n_{1j} and n_{2j} , are small this may not be true. It is possible to determine the cell mean and variance under the null hypothesis when the cell sample sizes are small. It is much more difficult to determine these values under the alternative hypothesis. Since the cell weight, W_j will also be small (see calculate weights section above) for a cell with small volume, the cell mean and variance will not contribute much to the weighted sum. Therefore, the above formula provides a reasonable approximation to the balancing critical value.

The values of m_j and se_j will depend on the type of performance measure.

Mean Measure

For mean measures, one is concerned with two parameters in each cell, namely, the mean and variance. A possible lack of parity may be due to a difference in cell means, and/or a difference in cell variances. One possible set of hypotheses that capture this notion, and take into account the assumption that transaction are identically distributed within cells is:

$$H_0: \mu_{1j} = \mu_{2j}, \sigma_{1j}^2 = \sigma_{2j}^2$$

$$H_a: \mu_{2j} = \mu_{1j} + \delta_j \sigma_{1j}, \sigma_{2j}^2 = \lambda_j \sigma_{1j}^2 \quad \delta_j > 0, \lambda_j \geq 1 \text{ and } j = 1, \dots, L.$$

Under this form of alternative hypothesis, the cell test statistic Z_j has mean and standard error given by

$$m_j = \frac{-\delta_j}{\sqrt{\frac{1}{n_{1j}} + \frac{1}{n_{2j}}}}$$

and

$$se_j = \sqrt{\frac{\lambda_j n_{1j} + n_{2j}}{n_{1j} + n_{2j}}}$$

Proportion Measure

For a proportion measure there is only one parameter of interest in each cell, the proportion of transaction possessing an attribute of interest. A possible lack of parity may be due to a difference in cell proportions. A set of hypotheses that take into account the assumption that transaction are identically distributed within cells while allowing for an analytically tractable solution is:

$$H_0: \frac{p_{2j}(1 - p_{1j})}{(1 - p_{2j})p_{1j}} = 1$$

$$H_a: \frac{p_{2j}(1 - p_{1j})}{(1 - p_{2j})p_{1j}} = \psi_j \quad \psi_j > 1 \text{ and } j = 1, \dots, L.$$

These hypotheses are based on the “odds ratio.” If the transaction attribute of interest is a missed trouble repair, then an interpretation of the alternative hypothesis is that a CLEC trouble repair appointment is ψ_j times more likely to be missed than an ILEC trouble.

Under this form of alternative hypothesis, the within cell asymptotic mean and variance of a_{1j} are given by¹

$$E(a_{1j}) = n_j \pi_j^{(1)}$$

$$\text{var}(a_{1j}) = \frac{n_j}{\frac{1}{\pi_j^{(1)}} + \frac{1}{\pi_j^{(2)}} + \frac{1}{\pi_j^{(3)}} + \frac{1}{\pi_j^{(4)}}}$$

where

¹ Stevens, W. L. (1951) Mean and Variance of an entry in a Contingency Table. *Biometrika*, 38, 468-470.

$$\begin{aligned} \pi_j^{(1)} &= f_j^{(1)} \left(n_j^2 + f_j^{(2)} + f_j^{(3)} - f_j^{(4)} \right) \\ \pi_j^{(2)} &= f_j^{(1)} \left(-n_j^2 - f_j^{(2)} + f_j^{(3)} + f_j^{(4)} \right) \\ \pi_j^{(3)} &= f_j^{(1)} \left(-n_j^2 + f_j^{(2)} - f_j^{(3)} + f_j^{(4)} \right) \\ \pi_j^{(4)} &= f_j^{(1)} \left(n_j^2 \left(\frac{2}{\psi_j} - 1 \right) - f_j^{(2)} - f_j^{(3)} - f_j^{(4)} \right) \\ f_j^{(1)} &= \frac{1}{2n_j^2 \left(\frac{1}{\psi_j} - 1 \right)} \\ f_j^{(2)} &= n_j n_{1j} \left(\frac{1}{\psi_j} - 1 \right) \\ f_j^{(3)} &= n_j a_j \left(\frac{1}{\psi_j} - 1 \right) \\ f_j^{(4)} &= \sqrt{n_j^2 \left[4n_{1j} (n_j - a_j) \left(\frac{1}{\psi_j} - 1 \right) + \left(n_j + (a_j - n_{1j}) \left(\frac{1}{\psi_j} - 1 \right) \right)^2 \right]} \end{aligned}$$

Recall that the cell test statistic is given by

$$Z_j = \frac{n_j a_{1j} - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}$$

Using the equations above, we see that Z_j has mean and standard error given by

$$m_j = \frac{n_j^2 \pi_j^{(1)} - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}$$

and

$$se_j = \sqrt{\frac{n_j^3 (n_j - 1)}{n_{1j} n_{2j} a_j (n_j - a_j) \left(\frac{1}{\pi_j^{(1)}} + \frac{1}{\pi_j^{(2)}} + \frac{1}{\pi_j^{(3)}} + \frac{1}{\pi_j^{(4)}} \right)}}$$

D.2.6 Determining the Parameters of the Alternative Hypothesis

In this section we have indexed the alternative hypothesis of mean measures by two sets of parameters, λ_j and δ_j . Proportion measures are indexed by parameter ψ_j . A major difficulty with this approach is that more than one alternative will be of interest; for example we may consider one alternative in which all the δ_j are set to a common non-zero value, and another set of alternatives in each of which just one δ_j is non-zero, while all the rest are zero. There are very many other possibilities. Each possibility leads to a single value for the balancing critical value;

and each possible critical value corresponds to many sets of alternative hypotheses, for each of which it constitutes the correct balancing value.

The formulas we have presented can be used to evaluate the impact of different choices of the overall critical value. For each putative choice, we can evaluate the set of alternatives for which this is the correct balancing value. While statistical science can be used to evaluate the impact of different choices of these parameters, there is not much that an appeal to statistical principles can offer in directing specific choices. Specific choices are best left to telephony experts. Still, it is possible to comment on some aspects of these choices:

Parameter Choices for λ_j – The set of parameters λ_j index alternatives to the null hypothesis that arise because there might be greater unpredictability or variability in the delivery of service to a CLEC customer over that which would be achieved for an otherwise comparable ILEC customer. While concerns about differences in the variability of service are important, it turns out that the truncated Z testing which is being recommended here is relatively insensitive to all but very large values of the λ_j . Put another way, reasonable differences in the values chosen here could make very little difference in the balancing points chosen.

Parameter Choices for δ_j – The set of parameters δ_j are much more important in the choice of the balancing point than was true for the λ_j . The reason for this is that they directly index differences in average service. The truncated Z test is very sensitive to any such differences; hence, even small disagreements among experts in the choice of the δ_j could be very important. Sample size matters here too. For example, setting all the δ_j to a single value – $\delta_j = \delta <$ might be fine for tests across individual CLECs where currently in Kentucky the CLEC customer bases are not too different. Using the same value of δ for the overall state testing does not seem sensible. At the state level we are aggregating over CLECs, so using the same δ as for an individual CLEC would be saying that a “meaningful” degree of disparity is one where the violation is the same (δ) for each CLEC. But the detection of disparity for any component CLEC is important, so the relevant “overall” δ should be smaller.

Parameter Choices for ψ_j or ε_j – The set of parameters ψ_j or ε_j are also important in the choice of the balancing point for tests of their respective measures. The reason for this is that they directly index increases in the proportion of service performance. The truncated Z test is sensitive to such increases; but not as sensitive as the case of δ for mean measures. Sample size matters here too. As with mean measures, using the same value of ψ or ε for the overall state testing does not seem sensible.

The three parameters are related however. If a decision is made on the value of δ , it is possible to determine equivalent values of ψ and ε . The following equations, in conjunction with the definitions of ψ and ε , show the relationship with delta.

$$\delta = 2 \cdot \arcsin(\sqrt{\hat{p}_2}) - 2 \cdot \arcsin(\sqrt{\hat{p}_1})$$

$$\delta = 2\sqrt{\hat{r}_2} - 2\sqrt{\hat{r}_1}$$

The bottom line here is that beyond a few general considerations, like those given above, a principled approach to the choice of the alternative hypotheses to guard against must come from elsewhere.

D.2.7 Decision Process

Once Z^T has been calculated, it is compared to the balancing critical value to determine if the ILEC is favoring its own customers over a CLEC's customers.

This critical value changes as the ILEC and CLEC transaction volume change. One way to make this transparent to the decision-maker, is to report the difference between the test statistic and the critical value, $diff = Z^T - c_B$. If favoritism is concluded when $Z^T < c_B$, then the $diff < 0$ indicates favoritism.

This makes it very easy to determine favoritism: a positive $diff$ suggests no favoritism, and a negative $diff$ suggests favoritism.

E: BST SEEM Remedy Calculation Procedures

E.1 BST SEEM Remedy Procedure

E.1.1 Tier-1 Calculation For Retail Analogs

1. Tier 1 is triggered by two consecutive monthly failures of any Tier 1 Remedy Plan submetric.
2. Calculate the overall test statistic for each CLEC; Example, z^T_{CLEC1} (Per Statistical Methodology)
3. Calculate the balancing critical value (Example, ${}^cB_{CLEC1}$) that is associated with the alternative hypothesis (for fixed parameters δ, Ψ , or ϵ)
4. If the overall test statistic is equal to or above the balancing critical value, stop here. That is, if ${}^cB_{CLEC1} \leq z^T_{CLEC1}$, stop here. Otherwise, go to step 5.
5. Select the cell with the greatest z-value (let $i=1, \dots, I$ with $i=1$ having the z-value, $i=2$ having next greatest z-value, etc. and with $i=I$ when the criterion in step 8 is fulfilled.) and set its z-value to zero ($z_{CLEC1,i} = 0$).
6. Calculate the overall test statistic for each CLEC with the altered data; Example, $z^T_{CLEC1}^*$ (Per Statistical Methodology)
7. Calculate the balancing critical value (Example, ${}^cB_{CLEC1}$) that is associated with the alternative hypothesis (for fixed parameters δ, Ψ , or ϵ)
8. If the new overall test statistic is equal to or above the balancing critical value, stop here. That is, if ${}^cB_{CLEC1} \leq z^T_{CLEC1}^*$, go to step 9. Otherwise, repeat steps 6 – 8.
9. Calculate the Affected Volume (TAV) by summing the Total Impacted Volumes (TIV) of each cell whose z-value was reset to zero except the last cell changed ($TAV_{CLEC1} = TIV_{CLEC1,1} + TIV_{CLEC1,2} + \dots + TIV_{CLEC1,I-1}$).
The affected volume for the last cell changed should be interpolated by $(z^T_{CLEC1,I} - {}^cB_{CLEC1}) / (z^T_{CLEC1,I} - z^T_{CLEC1,I-1}) * TIV_{CLEC1,I}$ and added to TAV_{CLEC1} .
10. Calculate the payment to CLEC1 by multiplying the result of step 9 by the appropriate dollar amount from the fee schedule.
11. Then, $CLEC1 \text{ payment} = TAV_{CLEC1} * \text{\$\$from Fee Schedule}$. For the example that follows, fee amounts are from the default Standard Performance fee schedule.
12. If this calculation is being performed for the second consecutive month of failure, repeat steps 5 - 11 for the first (1st) month of failure. For the third and subsequent months of failure this calculation will only be performed for the current data month.

E.1.2 Example: CLEC1 Percent Repeat Customer Troubles Within 30 Days (PRT) for Resale (DSGN)

	n_i	n_c	l_c	z_{CLEC1}^T	$C_{B_{CLEC1}}$		Order Zeroed Out	TAV
State	312	27	18	-4.10	-1.22			
Cell				$z_{CLEC1,i}$	RANK	z_{CLEC1}^{T*}		
1		1	0	0.75				
2		4	<u>2</u>	-0.69	8			
3		3	<u>3</u>	-1.76	3	-0.65 ^Δ	3	2 ^o
4		1	0	0.67				
5		4	<u>3</u>	-1.45	5			
6		3	<u>3</u>	-3.45	1	-2.46	1	3
7		2	<u>2</u>	-1.81	2	-1.60	2	2
8		3	<u>2</u>	-1.09	6			
9		1	<u>1</u>	-1.65	4			
10		2	<u>1</u>	-0.84	7			
11		1	0	0.62				
12		2	<u>1</u>	-0.40	9			
Total			<u>18</u>					<u>7</u>

Δ Note that after making $z_{CLEC1,i} = 0$, the overall $z_{CLEC1}^{T*} = -0.65$ is less than the balancing critical value $C_{B_{CLEC1}} = -1.22$.

oFor cell#3 the TAV would be calculated with $((-1.60) - (-1.22))/((-1.60) - (-0.65)) \times 3 = 1.2$ which is rounded up to 2 transactions.

Assuming this is at least the second consecutive month of failure, payout for CLEC1 is (7 units) * (\$56/unit) = **\$392** under standard performance criteria and (7 units) * (\$125/unit) = **\$875** under low performance criteria, plus the previous failed month's calculated amount.

E.2 Tier-2 Calculation For Retail Analogs

1. Tier-2 is triggered by three consecutive monthly failures of any Tier 2 Remedy Plan sub-metric.
2. Therefore, calculate monthly statistical results and affected volumes for the CLEC Aggregate performance for each of the three consecutive months as outlined in steps 2 through 9 of section E.1.1. Determine average monthly affected volume for the rolling 3-month period.

BST SEEM Remedy Calculation Procedures

3. Calculate the payment to State Designated Agency by multiplying average monthly volume by the appropriate dollar amount from the Tier-2 fee schedule.
4. Therefore, State Designated Agency payment = Average monthly volume * \$\$ from Fee Schedule.

E.2.1 Example: STATE-A Percent Provisioning Troubles within 5 Days-UNE Loops

Month 1	n_i	n_c	l_c	z_{CLEC1}^T	CB_{CLEC1}		Order Zeroed Out	TAV
State	155	37	8	-5.11	-0.35			
Cell				$z_{CLEC1,i}$	RANK	$z_{CLEC1}^T *$		
1		3	<u>1</u>	-1.53	5			
2		1	0	0.31				
3		2	<u>1</u>	-2.18	3	-1.21	3	1
4		1	<u>1</u>	-4.52	2	-2.39	2	1
5		1	0	0.28				
6		18	<u>1</u>	-0.24	8			
7		5	<u>1</u>	-0.45	7			
8		1	<u>1</u>	-5.39	1	-3.74	1	1
9		4	<u>1</u>	-0.50	6			
10		1	<u>1</u>	-2.14	4	-0.04 ^Δ	4	1 ^o
Total			<u>8</u>					<u>4</u>

Δ Note that after making $z_{CLEC1,i} = 0$, the overall $z_{CLEC1}^T * = -0.04$ is greater than the balancing critical value $CB_{CLEC1} = -0.35$.

oFor cell#10 the TAV would not be interpolated given that the impacted volume for that cell is only 1.

TAV for month 1 is 4 units

Month 2	n_i	n_c	l_c	z_{CLEC1}^T	CB_{CLEC1}		Order Zeroed Out	TAV
State	175	13	3	-0.94	-0.39			
Cell				$z_{CLEC1,i}$	RANK	$z_{CLEC1}^T *$		
1		2	<u>1</u>	-1.58	2			
2		1	0	1.00				

BST SEEM Remedy Calculation Procedures

Month 2	n_i	n_c	l_c	z_{CLEC1}^T	CB_{CLEC1}		Order Zeroed Out	TAV
3		1	0	0.25				
4		1	0	0.26				
5		2	0	0.46				
6		1	0	0.20				
7		2	<u>1</u>	-0.71	3			
8		1	<u>1</u>	-4.12	1	0.28 ^Δ	1	1 ^o
9		1	0	0.35				
10		1	0	0.50				
Total			<u>3</u>					<u>1</u>

Δ Note that after making $z_{CLEC1,I} = 0$, the overall $z_{CLEC1}^* = 0.28$ is greater than the balancing critical value $CB_{CLEC1} = -0.39$.

oFor cell#8 the TAV would not be interpolated given that the impacted volume for that cell is only 1.

TAV for month 2 is 1 unit

BST SEEM Remedy Calculation Procedures

Month 3	n_i	n_c	l_c	z_{CLEC1}^T	CB_{CLEC1}		Order Zeroed Out	TAV
State	196	33	8	-4.76	-0.49			
Cell				$z_{CLEC1,i}$	RANK	z_{CLEC1}^*		
1		2	0	0.48				
2		4	<u>1</u>	-2.55	6			
3		2	0	0.57				
4		1	<u>1</u>	-3.00	4	-0.81	4	1
5		1	<u>1</u>	-3.16	2	-2.78	2	1
6		1	0	0.20				
7		1	<u>1</u>	-3.32	1	-3.76	1	1
8		2	<u>1</u>	-3.00	3	-1.78	3	1
9		1	<u>1</u>	-2.92	5	0.18 ^Δ	5	1 ^o
10		6	<u>1</u>	-0.41	7			
11		10	<u>1</u>	-0.32	8			
12		1	0	0.24				
13		1	0	0.28				
Total			8					5

Δ Note that after making $z_{CLEC1,i} = 0$, the overall $z_{CLEC1}^* = 0.18$ is less than the balancing critical value $CB_{CLEC1} = -0.49$.

oFor cell#9 the TAV would not be interpolated given that the impacted volume for that cell is only 1.

TAV for month 3 is 5 units.

If the above examples represent performance for each of months 1 through 3, then

E.2.2 Example: STATE-A Percent Provisioning Troubles within 5 Days-UNE Loops

State	TAV	Remedy Dollars – Standard Performance	Remedy Dollars – Low Performance
Month 1	4		
Month 2	1		
Month 3	5		
Payment – Average TAV for rolling 3 mo. period * fee schedule	3.33	\$200	\$2,914

For Standard Performance the \$\$from Fee Schedule is \$60/unit.

Fro Low Performance the \$\$from Fee Schedule is \$875/unit.

E.3 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%	18	77.78%	83.33%
6	66.67%	83.33%	19	78.95%	84.21%
7	71.43%	85.71%	20	80.00%	85.00%
8	75.00%	75.00%	21	76.19%	85.71%
9	66.67%	77.78%	22	77.27%	86.36%
10	70.00%	80.00%	23	78.26%	86.96%
11	72.73%	81.82%	24	79.17%	87.50%
12	75.00%	83.33%	25	80.00%	88.00%
13	76.92%	84.62%	26	80.77%	88.46%
14	78.57%	85.71%	27	81.48%	88.89%
15	73.33%	86.67%	28	78.57%	89.29%
16	75.00%	87.50%	29	79.31%	86.21%
17	76.47%	82.35%	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 CLEC-1 by multiplying the result of step 5 by the appropriate dollar amount from the fee schedule.
7. Repeat steps 3-6 for the second month of failure.
8. $\text{CLEC-1 payment} = (\text{Affected Volume}_{\text{CLEC-1}(\text{month 1})} * \$\$ \text{from Fee Schedule}) + (\text{Affected Volume}_{\text{CLEC-1}(\text{month 2})} * \$\$ \text{from Fee Schedule})$. For the purpose of this example, fee amounts are from the default Standard Performance fee schedule.

E.3.1 Example: CLEC-1 Percent Missed Due Dates for Collocations

	n_c	Benchmark	PMDD _c	Volume Proportion	Affected Volume
State	600	>=95% on time	92%	.03	18

Payout for CLEC-1 is (18 units) * (\$3640/unit) = \$65,520

E.4 Tier-1 Calculation For Benchmarks (In The Form Of A Target)

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 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 CLEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule. $\text{CLEC-1 payment} = \text{Affected Volume}_{\text{CLEC1}} * \$ \text{from Fee Schedule}$. For this example, fee amounts are from the default Standard Performance fee schedule.

E.4.1 Example: CLEC-1 Reject Interval – Fully Mechanized

	n_c	Benchmark	Reject Interval	Volume Proportion	Affected Volume
State	600	97% <= 1 hour	95% <= 1 hour	.02	12

Assuming two consecutive months of failure, payout for CLEC-1 is (12 units) * (\$20/unit) = \$240 plus the previous failed month’s calculated amount.

E.5 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 will have failed for three (3) consecutive months.

E.6 Regional and State Coefficients

This section describes the method of calculating regional and state coefficients.

E.6.1 AKC

- Acknowledgement Completeness

Regional Coefficient Formula (Tier 1 – for Low Performance)

Coefficient = $(A+B) / (C+D)$ where:

- A= number of valid FOC transactions of the CLEC in the state (fully & partially mechanized)
- B = number of valid RI transactions of the CLEC in the state (fully & partially mechanized)
- C = total valid FOC transactions of the CLEC in the region (fully & partially mechanized)
- D = total valid RI transactions of the CLEC in the region (fully & partially mechanized)

State Coefficient Formula (Tier 2)

State Coefficient = $(A+B) / (C+D)$ where:

- A= number of valid FOC transactions for all CLECs in the state (fully & partially mechanized)
- B = number of valid RI transactions for all CLECs in the state (fully & partially mechanized)
- C = total valid FOC transactions in the region (fully & partially mechanized)
- D = total valid RI transactions in the region (fully & partially mechanized)

E.6.2 CMN, PSEC, PCRAR, PCRIP

- Timeliness of Change Management (CMN)
- Percent of Software Errors Corrected in X (10, 30, 45) Business Days - Region (PSEC)
- Percent Change Requests Accepted or Rejected in 10 Days - Region (PCRAR)
- Percent of Change Request Implemented Within 60 Weeks of Prioritization - Region (PCRIP)

State Coefficient Formula (Tier 2)

Coefficient = $(A+B) / (C+D)$ where:

- A= number of valid FOC transactions for all CLECs in the state (fully & partially mechanized)
- B = number of valid RI transactions for all CLECs in the state (fully & partially mechanized)
- C = total valid FOC transactions in the region (fully & partially mechanized)
- D = total valid RI transactions in the region (fully & partially mechanized)

E.6.3 IA

- Interface Availability (IA)

State Coefficient Formula (Tier 2)

Coefficient = $(A+B) / (C+D)$ where:

- A= number of valid FOC transactions for all CLECs in the state (fully & partially mechanized)
- B = number of valid RI transactions for all CLECs in the state (fully & partially mechanized)
- C = total valid FOC transactions in the region (fully & partially mechanized)
- D = total valid RI transactions in the region (fully & partially mechanized)

F: OSS Tables

F.1 IA: Interface Availability (Pre-Ordering/Ordering)

SEEM Interface Availability

Interface Availability Application	Applicable to:	% Availability
EDI	CLEC	X
TAG/XML	CLEC	X
LENS	CLEC	X
LEO	CLEC	X
LESOG	CLEC	X
LNP Gateway	CLEC	X
COG	CLEC	X
SOG	CLEC	X
DOM	CLEC	X
SGG	CLEC	X

F.2 MRIA: Interface Availability (Maintenance and Repair)

SEEM Availability (M&R)

Interface	% Availability
CLEC TAFI	X
CLEC ECTA	X

G: Reposting Of Performance Data and Recalculation of SEEM Payments

BellSouth will make available reposted performance data as reflected in the Service Quality Measurement (SQM) reports and recalculate Self-Effectuating Enforcement (SEEM) payments using the Parity Analysis and Remedy Information System (PARIS), to the extent technically feasible, under the following circumstances:

1. Those measures included in a state's specific SQM plan with corresponding sub-metrics are subject to reposting. A notice will be placed on the PMAP website advising CLECs when reposted data is available.
2. Performance sub-metric calculations that result in a shift in the performance in the aggregate from an "in parity" condition to an "out of parity" condition will be available for reposting.
3. Performance sub-metric calculations with benchmarks that are in an "out of parity" condition will be available for reposting whenever there is a $\geq 2\%$ decline in BellSouth's performance at the sub-metric level.
4. Performance sub-metric calculations with retail analogues that are in an "out of parity" condition will be available for reposting whenever there is a decline in performance as shown by an adverse change of $\leq .5$ in the z-score at the sub-metric level.
5. Any data recalculations that reflect an improvement in BellSouth's performance will be reposted at BellSouth's discretion. However, statewide performance must improve by at least 2% for benchmark measures and the z-score must improve by at least 0.5 for retail analogs at the sub-metric level to qualify for reposting.
6. Performance data will be made available for a maximum of three months in arrears.
7. When updated performance data has been made available for reposting or when a payment error in PARIS has been discovered, BellSouth will recalculate applicable SEEM payments. Where technically feasible, SEEM payments will be subject to recalculation for a maximum of three months in arrears from the date updated performance data was made available or the date when the payment error was discovered.
8. Any adjustments for underpayment of Tier 1 and Tier 2 calculated remedies will be made consistent with the terms of the state specific SEEM plan, including the payment of interest. Any adjustments for overpayment of Tier 1 and Tier 2 remedies will be made at BellSouth's discretion.
9. Any adjustments for underpayments will be made in the next month's payment cycle after the recalculation is made. The final current month PARIS reports will reflect the transmitted dollars, including adjustments for prior months where applicable. Questions regarding the adjustments should be made in accordance with the normal process used to address CLEC questions related to SEEM payments.