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September 6, 2002

Mrs. Blanca S. Bayó
Director, Division of the Commission Clerk and
Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Docket No. 000121A-TP (OSS)

Dear Ms. Bayó:

Enclosed is an original and 15 copies of BellSouth Telecommunications, Inc.'s Supplemental Comments, which we ask that you file in the referenced docket.

A copy of this letter is enclosed. Please mark it to indicate that the original was filed and return the copy to me. Copies have been served to the parties shown on the attached Certificate of Service.

Sincerely,

J. Phillip Carver

J. Phillip Carver (LA)

Enclosures

cc: All parties of record
Marshall M. Criser, III
Nancy B. White
R. Douglas Lackey

CERTIFICATE OF SERVICE
DOCKET NO. 020129-TP

I HEREBY CERTIFY that a true and correct copy of the foregoing was served via Electronic Mail and Overnight Federal Express this 6th day of September 2002 to the following:

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Patrick Turner

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(+) Signed Protective Agreement

BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

In Re:	)	
	)	
Investigation into the	)	
Establishment of Operations Support	)	DOCKET NO. 000121A-TP
Systems Performance Measures for	)	
Incumbent Local Exchange	)	
Telecommunications Companies	)	DATE: September 6, 2002

SUPPLEMENTAL COMMENTS OF BELLSOUTH

BellSouth Telecommunications, Inc. ("BellSouth"), hereby submits its Supplemental Comments regarding the Performance Assessment Plan ("PAP") for the Six-Month Review Process, and states the following:

I. INTRODUCTION

On August 30, 2002, BellSouth filed its initial Comments and proposed changes to the PAP, which included a brief overview of BellSouth's proposed Self-Effectuating Enforcement Mechanism ("SEEM") plan. Also, BellSouth's Exhibit 7 to the Comments responded to certain questions posed in the Staff Memorandum of July 29, 2002, including questions that relate to determining the extent of failure, i.e., the degree of disparity between the ILEC's performance to itself and the performance that it provides to ALECs, (which is also referred to as the degree of severity). BellSouth now supplements its Comments by filing two alternative SEEM proposals, and providing additional information regarding BellSouth's proposal for calculating the degree of disparity. The Administrative Plan for BellSouth's primary proposed plan is attached as Exhibit 1. The Administrative plan for BellSouth's alternative proposal is attached as Exhibit 2.

II. BELLSOUTH'S SEEM PROPOSAL

The Staff Memorandum noted that in Order No. PSC-01-1819-FOF-TP, the Commission "expressed an interest in evolving to a transaction-based remedy system, with a minimum payment provision". (Memorandum, Page 1, quoting Order, p. 162). This is a very appropriate approach, particularly if one of the goals is to insure that there is a severity component in the plan. In the case of a transaction-based plan, a more severe disparity means that there are relatively more failed transactions upon which a penalty will be paid. More failed transactions in these circumstances equate to larger penalty payments than in the situation where the disparity is not as severe. Furthermore, conceptually, the degree of the disparity, and hence the magnitude of the serverity of the miss, can be measured in a transaction-based plan. That is, with a transaction-based plan, it is possible to calculate, in many instances, the actual number of transactions that would have to be moved from the "failed" category to the "passed" category, in order to achieve parity. By having such numbers, the notion of a meaningful severity approach can be implemented in a non-arbitrary fashion. Furthermore, as discussed in more detail below, even where such calculations cannot be made with absolute precision, a reasonable surrogate exists to calculate the number of transactions that would have to be "passed" rather than "failed" in order to achieve parity. Consequently, moving to a transaction-based plan makes sense where it is desirable to include the severity of the disparity in treatment as a component of the penalty calculation.

The same cannot be said of a measure-based plan. Indeed, in order to rationalize a severity component in a measure-based plan, the number of underlying transactions would still have to be analyzed in order to determine what would be required to bring the measure into parity. If that were the approach taken, the penalty plan might as well be based on transactions in the first instance. Any other alternative that would introduce a serverity component (that is, any other alternative not based on transactions) would clearly have to involve some arbitrary scaling factor that would be applied to the basic penalty schedule, which cannot provide any assurance that the penalty paid actually reflects the severity of a disparity. Clearly using a transaction-based plan is the best solution to the issue of introducing a severity component to a remedy plan.

If the decision is made to move to a transaction based plan, two issues are going to have to be addressed. A decision will have to be made as to which plan will be adopted, and a decision will have to be made regarding how the number of transactions for which penalties will be paid will be determined. BellSouth, in the following discussion, proposes answers to both of these questions.

With regard to the plan itself, BellSouth's proposal and alternative are both responsive to the Commission's expressed desire to move to a transaction-based plan with a minimum payment. BellSouth's primary proposal is essentially the SEEM plan that has been approved by the Georgia Public Service Commission.[1] The Georgia version of the SEEM transaction-based plan has been approved (in either the exact same version, or in a substantially similar version) by each of the other eight State Commissions in BellSouth's region, at least on an interim basis[2], and has also been adopted by most of these State Commission's for permanent use. Moreover, in granting BellSouth's 271 application for Louisiana and Georgia, the FCC specifically found this plan to be sufficient to provide assurance that " .... local markets will remain open after

[1] The only significant differences between the approved Georgia Plan and BellSouth's proposal is that the Georgia plan includes a Tier III penalty (which the Florida Commission did not order), and a cap on the total payment under the plan that is different than the cap ordered by this Commission. Neither of these differences have any impact on the aspects of the SEEM plan that the Commission and Staff have requested the parties to address in their Comments.

[2] The Tennessee Regulatory Authority has adopted this plan on an interim basis for BellSouth, but on or before December 1, 2002, Tennessee will move to the plan adopted by this Commission.

BellSouth receives section 271 authorization". (CC Docket 02-35, released May 15, 2002, Paragraph 291.)

The Georgia Plan is unquestionably a transaction-based plan, and thus satisfies the principal requirement raised by the Commission in the above-referenced Order. The Georgia Plan also satisfies the second identified criteria in that it has a minimum payment provision, which is tied specifically to nascent competition. The basic concept of this minimum payment (which is referred to as a market penetration adjustment) is that, in some instances, ordered volumes will be relatively small for providers that only offer certain services, and that this will especially tend to occur when deployment of these services is in its infancy. In such situations, the number of total transactions will be small, and the number of failures will also be small. Thus, in a transaction-based plan (in which, by definition, penalties are tied to failures on a per transaction basis) penalty payments will be commensuretely small. To address this situation, the Georgia Commission ordered that, for a number of product sub-metrics that relate to six different measurements, when there are more than 10 and less than 100 observations (for all ALECs), any Tier II penalty payable under the plan would triple.[3]

The principal difference between BellSouth's primary proposal (as described above) and the alternative proposal is that the primary proposal utilizes the disaggregation ordered by the Georgia Commission, which results in 67 Tier I metrics and 80 Tier II metrics. The alternative proposal utilizes the disaggregation that has been ordered by this Commission, (i.e., 798 Tier I metrics and 846 Tier II metrics). In its alternative proposal, because of the number of metrics involved, BellSouth proposes specific minimum and maximum payments per metric.

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[3] The specific measurements, and the products to which they apply, are described more fully in the Administrative Plan for BellSouth's primary proposal, which is attached hereto as Exhibit 1.

BellSouth prefers its primary proposal for several reasons, not the least of which is the fact that it will help achieve more, although not perfect, uniformity across the region. However, BellSouth's primary proposal makes more sense as well, in terms of implementing a meaningful severity component in the plan. A transaction based plan, of course, requires payment according to the number of failed transactions, and the resulting impact on the ALEC. Thus, penalty payments increase as the number of failed transactions increase. That is, payments are appropriately indexed to the number of failures, so that in the event of an extreme failure (as represented by a very large number of failed transactions) payments are correspondingly large.

At the same time, in a transaction-based plan the payment for a failed measure having few transactions and concomitantly fewer failed transactions will be appropriately small. All other things being equal, if the current disaggregation of the metrics into approximately 800 categories is maintained, there will obviously be fewer transactions for each metric, which diminishes the notion of a scalable severity penalty. Moreover, if the current level of disaggregation is combined with a minimum payment in the context of a transaction-based plan, the use of such a minimum payment may effectively evicerate the essence of the severity component. If, for example, there are 800 metrics, and the minimum payment applies to 600 of them, irrespective of the relative size of the disparity, then the severity component of the plan is useless.

Worse yet, the use of of such a large disaggregation in a transaction based plan, given the other constraints imposed by the Commission, may have other unintended consequences. While there obviously will be any number of the 800 or so metrics that have very few transactions, thus incurring the minimum payment, irrespective of the level of that payment, there will always be some metrics with higher numbers of transactions, with the resulting possibility of substantial payments.

In Order No PSC-01-1819-FOF-TP (issued September 10, 2001), the Commission directed BellSouth to develop a penalty schedule in which the average monthly remedy is approximately $2,500.00 (p. 202). BellSouth presented a schedule that complied with this requirement, and it was subsequently approved by the Commission in Order No. PSC-02-187-FOF-TP. There was no indication in the Order, (or in the Staff Memorandum referred to above) of any intention to increase radically the total amount of penalty payments. Therefore, if the Commission were to move to a transaction-based plan, but chose to maintain the current level of disaggregation, some maximium payment would have to be imposed in addition to the minimum payment in order to achieve the balance the Commission determined appropriate..

As to the maximum payment, the ALECs' proposed $25,000.00 as a maximum payment per measure earlier in this proceeding. Although BellSouth, obviously, disagrees with almost every aspect of the ALECs initial proposal, BellSouth does believe this amount would constitute an appropriate maximum if the Commission moves to a transaction-based plan, but continues to use the currently-ordered level of disaggregation. Thus, BellSouth proposes a maximum of $25,000 for each Tier I metric and Tier II metric. At the same time, the minimum that is part of BellSouth's primary proposal (which, again, would triple the payments for transactions missed for certain services when the volume is less than 100) would result in an unreasonably large total penalty payment. Thus, BellSouth proposes the alternative minimum of $500 per sub-metric. This minimum would apply per CLEC per submetric in Tier I. Again, however, BellSouth emphasizes that the better alternative is to adjust the disaggregation as outlined above. Retaining the current disaggregation will simply have the effect of minimizing the effectiveness of an accurate severity factor. The maximum and alternative minimum proposals are simply a way to attempt to mitigate the unwarranted effects of not changing the disaggregation.

III. THE DISPARITY CALCULATION

Once the appropriate plan is determined, the remaining question deals with how the appropriate number of transactions for which a penalty is applied will be determined. Both BellSouth's primary and alternative proposals have in common the use of a parity gap calculation to determine the degree of disparity, or severity of failure. As BellSouth noted in exhibit 7 to its Comments "the basic calculation is to divide the parity gap [which represents the difference between the balancing critical value and the Z score] by four where the parity gap is less than four to arrive at a proportion of disparate transactions (called the volume proportion). If the parity gap is four or larger, then the volume proportion is one (or 100%)."[4]

BellSouth acknowledges that the Commission declined to accept this calculation in its Order of September 10, 2002. BellSouth has concluded, however, that this approach is the only currently available surrogate that can be shown to actually identify the number of "failed" transactions that if "passed" would have resulted in parity. Recognizing that the Commission was not convinced of the correctness of BellSouth's position in the first instance, BellSouth has engaged in extensive analysis to develop an alternative method of calculating the number of transactions to which an appropriate penalty should be applied. Although alternatives appear to exist, such as using a "ratio" approach, and BellSouth continues to work to develop these alternatives, BellSouth has yet to find a better method to address this issue than the parity gap calculation.

As mentioned earlier, any transaction based plan has an inherent severity component. If, in providing service to an ALEC, BellSouth fails to perform on one transaction for a given metric, this could fairly be considered a slight failure. Accordingly, BellSouth would be obligated to make only a single remedy payment, i.e., a slight penalty. For the exact same measurement, if BellSouth fails to perform at parity in 500 instances, this would constitute a more severe failure, and this would be reflected in the fact that if BellSouth pays on all 500 failed transactions, the actual penalty is 500 times as great. Thus, if the plan were simply structured so that there is a payment for every single failure, then this would unquestionably constitute a severity component. The problem, however, is that if a payment were made for every single failure, then BellSouth would effectively be penalized for failure to achieve perfection. The controlling standard, of course, is not that BellSouth must provide service at perfection, but rather service at parity.

Thus, to use an extremely simple example, if both BellSouth's retail operation and a particular ALEC both had 1,000 transactions for a given measure, BellSouth failed to meet the applicable standard for itself in 50 instances, and also failed 100 ALEC transactions, then the disparity would be equal to 50 transactions, i.e., the amount by which the performance to the ALEC was worse than BellSouth's performance to itself. If BellSouth were to pay a penalty for each of the 100 transactions, it would, in effect, be paying for 50 transactions to remedy its failure to render performance at parity, then paying a penalty for another 50 transactions that represent the difference between what BellSouth provides to itself and perfection. Clearly, this is not appropriate. Instead, an appropriately crafted severity component will function in a transaction-based plan to determine how many of the failed transactions must be paid to "remedy" the difference between the performance to the ILEC's retail operations and the CLEC.

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[4] For convenience, an additional copy of this analysis is attached hereto as Exhibit 3.

Therefore, the goal of any approach to imposing a severity factor in a transaction-based penality plan has to be to determine the number of failed transactions that would have had to have "passed" in order to achieve parity, with a penalty payment imposed on that number of "failed" transactions only.

In Exhibit 3, BellSouth discusses in some detail its efforts to answer the question of how many failed ALEC transactions should have an associated payment by using a well-known operations research technique called Linear Programing ("LP"). This technique is described in greater detail in Exhibit 3, but it will suffice to say here that it utilizes a generally accepted mathematical process to address the disparity issue. Because this technique is generally accepted, BellSouth was hopeful that it would provide a workable method to address the disparity issue. That is, if LP could be implemented on a production basis for all measures, then the actual number of failed transactions for which penalties should be paid could be determined, and there would be no controversy. As explained in Exhibit 3, however, LP is extremely demanding of computer time, especially for measures having a large number of transactions. Also, in a few cases where the number of transactions is very large, LP cannot derive a solution. For these reasons, LP is not currently a solution that can be utilized in production mode. That is, it is not feasible to use LP in the limited time in which penalties must be calculated each month.[5]

In light of the practical limitations on using LP, BellSouth has endeavored, instead, to

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[5] Further, BellSouth would note that, to date, it has been unable to perform LP for mean measures. At the same time, BellSouth is unaware of any reason that, from a conceptual standpoint, LP would not work for mean measures, and BellSouth is continuing to work to develop this capability. Recognizing this limitation, the surrogate calculation used by BellSouth's plan uses all of the transactions occurring in a particular cell, not just the failed transactions, to determine the number of transactions upon which a penalty will be paid. This has the impact of increasing the number of transactions upon which penalties are paid for metrics that involve means. Given this, the total affected volume ("TAV") for mean measures would tend, all things being equal, to be higher than the TAV for rate and proportion measures. The purpose of this approach is to insure that if an error is made, BellSouth pays on more transactions, not less.

utilize LP as a way to, in effect, test the validity of other methods to determine the degree of disparate treatment, i.e., methods that actually can be used in a production environment. BellSouth has tested a number of alternative calculations that could be used for this purpose and is continuing to test a number of them. However, the approach that appears to be the best, so far at least, is the parity gap calculation originally proposed by BellSouth. To put a point on this, BellSouth conducted an LP analysis on a number of metrics both in Louisiana and Florida, to determine, for those metrics, the actual number of transactions for which penalties should be paid. After doing that, BellSouth applied its surrogate calculation, described above, to those same metrics. In every instance, the number of transactions for which penalties should be applied as determined by BellSouth's surrogate was equal to or greater than the number of transactions calculated using Linear Programming.

More specifically, several years ago, BellSouth first compared the results of LP to its volume proportion calculation using data from Louisiana. These tests showed LP to be uniformly consistent with BellSouth's parity gap calculation. More recently, BellSouth used Florida data for the months of January, February and March, and ran an additional 149 tests on proportion and rate measures using data from various ALECs. In all, those 149 tests addressed 49 of the 507 submetrics in the current Florida plan for which a retail analog applies. This means that BellSouth performed tests on approximately 10% of the total submetrics for which the test could apply. The results of these tests are depicted in the chart on page 7 of Exhibit 3. BellSouth has also attached hereto as Exhibit 4 a document that describes these results in greater detail. Exhibit 4 shows that in <u>every one</u> of the 149 tests, BellSouth's proposed method arrives (after rounding) at a total number of affected transactions that is <u>equal to or greater</u> than the number produced by LP. Moreover, at an aggregate level, BellSouth's method produces 2193 total affected transactions, while LP produces 1527.

Again, based on both the testing in Louisiana and the 149 tests more recently run in Florida, BellSouth believes that its proposed calculation provides the best surrogate for Linear Programming. Moreover, if the Commission or its staff is concerned that BellSouth selected the metrics to test, BellSouth is more than willing to run additional LP tests for different metrics or for different periods, which it believes will further validate its parity gap calculation. To this end, BellSouth proposes that the Staff select a number of measurements for which BellSouth has not run a LP test, and BellSouth will be happy to run tests for these measurements as well.[6] BellSouth believes, based on the testing to date, that its parity gap calculation will be further validated by LP in these additional tests.

BellSouth mentioned earlier that it has continued to review other alternatives. The Staff suggested in its Memorandum of July 29, 2002, that the parties also consider utilizing a disparity calculation that would be based upon a ratio. BellSouth has undertaken an analysis to do so, and is attempting to compare the results of this approach, as well as several other alternative approaches, to LP. Although the results of this effort are preliminary, each alternative appears to hold the promise of a method that would result in a refinement to BellSouth's parity gap calculation, in that they may produce results closer to the results from LP. In other words, again, BellSouth's proposed method almost always arrives at a TAV equal to or greater than that produced by LP. BellSouth's preliminary tests on the alternative methods suggest that these

[6] Again, BellSouth does not currently have the ability to run LP for mean measures. Moreover, proportion measures take substantially longer to run than rate measures. Thus, BellSouth would prefer, if Staff is inclined to accept its invitation, to run additional rate measures. If Staff prefers, however, BellSouth would certainly be willing to run proportion measures as well.

would produce a smaller number of affected transactions than BellSouth's proposed method, and that the number of transactions would be closer to the generally lower numbers produced by LP. Obviously such a result would be more than satisfactory to BellSouth. The preliminary results also suggest, however, that these other methods may yield, in some cases, a TAV number that is lower than the TAV produced by LP. Thus, again, BellSouth's proposed method appears to be the best potential surrogate for LP, in that it approximates the LP results, but generally pays on more transactions.

While BellSouth has done a great deal of development work to attempt to find an alternative to its proposed parity gap calculation, its efforts to date have not only not produced a better alternative, these efforts have produced results that support the use of the BellSouth-proposed calculation. For this reason, BellSouth submits that when the SEEM plan is moved to a transaction-based plan, its parity gap calculation should be adopted.

WHEREFORE, BellSouth requests that the Commission adopts its primary proposal detailed in Exhibit 1 at the conclusion of the Six-Month Review.

Respectfully submitted this 6th day of September 2002,

BELLSOUTH TELECOMMUNICATIONS, INC.

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BELLSOUTH®

Self-Effectuating Enforcement Mechanism Administrative Plan

Florida Plan – Proposal

Exhibit 1

Version 2.7

Updated September 6, 2002

Administrative Plan

Appendix A: Fee Schedule

Appendix B: SEEM Submetrics

Appendix C: Statistical Properties and Definitions

Appendix D: Statistical Formulas and Technical Description

Appendix E: BST SEEM Remedy Calculation Procedures

Administrative Plan

1. Scope

1.1 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(s) issued by the Florida Public Service Commission (the "Commission").

1.2 Upon the Effective Date of this Plan, all appendices referred to in this Plan will be located on the BellSouth Performance Measurement Reports website at: https://pmap.bellsouth.com.

2. Reporting

2.1 In providing services pursuant to the Interconnection Agreements between BellSouth and each ALEC, BellSouth will report its performance to each ALEC in accordance with BellSouth's SQMs.

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

2.3 Final validated SQM reports will be posted no later than the last day of the month after the 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.

2.4 Final validated SEEM reports will be posted on the 15th day of the month, following the final validated SQM report or the first business day thereafter.

2.5 BellSouth shall pay penalties to the Commission, in the aggregate, for all late SQM reports in the amount of $2000 per day. Such penalty shall be made to the Commission for deposit into the state General Revenue Fund within fifteen (15) calendar days of the actual publication date of the report.

2.6 BellSouth shall pay penalties to the Commission, in the aggregate, for all incomplete or inaccurate SQM reports in the amount of $400 per day. Such penalty 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.

2.7 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.

3. Modification to Measures

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 Commission order. A collaborative work group, which will include BellSouth, interested ALECs and the 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 Commission, be reduced to an annual review.

3.2 BellSouth and the ALECs shall file any proposed revisions to the SEEM plan one month prior to the beginning of each review period.

3.3 From time to time, BellSouth may be ordered by the Florida Public Service Commission to modify or amend the SQMs or SEEMs. Nothing will preclude any party from participating in any proceeding involving BellSouth's SQMs or SEEMs from advocating that those measures be modified.

3.4 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 Florida Public Service Commission.

4. Enforcement Mechanisms

4.1 Definitions

4.1.1 *Enforcement Measurement Elements* – performance measurements identified as SEEM measurements within the SEEM plan.

4.1.2 *Enforcement Measurement benchmark compliance*– competitive level of performance established by the Commission used to evaluate the performance of BellSouth and each ALEC for penalties where no analogous retail process, product or service is feasible.

4.1.3 *Enforcement Measurement retail analog compliance*– comparing performance levels provided to BellSouth retail customers with performance levels provided by BellSouth to the ALEC customer for penalties.

4.1.4 *Test Statistic and Balancing Critical Value* – means by which enforcement will be determined using statistically valid equations. The Test Statistic and Balancing Critical Value properties are set forth in Appendix C, incorporated herein by this reference.

4.1.5 *Cell* – grouping of transactions at which like-to-like comparisons are made. For example, all BellSouth retail ISDN services, for residential customers, requiring a dispatch in a particular wire center, at a particular point in time will be compared directly to ALEC resold ISDN 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 C, incorporated herein by this reference.

4.1.6 *Delta* – a measure of the meaningful difference between BellSouth performance and ALEC performance. For individual ALECs the Delta value shall be .50 and for the ALEC aggregate the Delta value shall be .35.

4.1.7 *Tier-1 Enforcement Mechanisms* – self-executing liquidated damages paid directly to each ALEC when BellSouth delivers non-compliant performance of any one of the Tier-1 Enforcement Measurement Elements for any month as calculated by BellSouth.

4.1.8 *Tier-2 Enforcement Mechanisms* – assessments paid directly to the Florida Public Service Commission or its designee. Tier 2 Enforcement Mechanisms are triggered by three consecutive monthly failures in Tier 2 enforcement measurement elements in which BellSouth performance is out of compliance or does not meet the benchmarks for the aggregate of all ALEC data as calculated by BellSouth for a particular Tier-2 Enforcement Measurement Element.

4.1.9 *Affiliate* – person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership or control with, another person. For purposes of this paragraph, the term "own" means to own an equity interest (or the equivalent thereof) of more than 10%.

4.1.10 *Market Penetration Adjustment* – the additional Tier-2 payments made directly to the Florida Public Service Commission where ALECs order low volumes of advanced and nascent services. These additional payments would apply when there are more than 10 and less than 100 observations for qualifying measurements.

4.2 Application

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

4.2.2 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 and the payment of any Tier-1 or Tier-2 Enforcement Mechanisms shall not be used as evidence that BellSouth has not complied with or has violated any state or federal law or regulation.

4.3 **Methodology**

4.3.1 Tier-1 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for each ALEC for the State of Florida for a given Enforcement Measurement Element in a given month. 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, incorporated herein by this reference.

4.3.1.1 All OCNs and ACNAs for individual ALECs will be consolidated for purposes of calculating measure-based failures.

4.3.1.2 Tier-1 Enforcement Mechanisms apply on a per transaction basis for each negative cell and will escalate based upon the number of consecutive months that BellSouth has reported non-compliance.

4.3.1.3 Fee Schedule for Tier-1 Enforcement Mechanisms is shown on the Performance Measurement Reports in Table-1 of Appendix A, incorporated herein by this reference. Failures beyond Month 6 will be subject to Month 6 fees.

4.3.2 Tier-2 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for the State for given Enforcement Measurement Elements for three consecutive months based upon the method of calculation set forth in Appendix D, incorporated herein by this reference.

4.3.2.1 Tier- 2 Enforcement Mechanisms apply, for an aggregate of all ALEC data generated by BellSouth, on a per transaction basis for each negative cell for a particular Enforcement Measurement Element.

4.3.3 Market Penetration Adjustments will be applied based on the following provisions to enhance competition for small volume and nascent products.

4.3.3.1 In order to ensure parity and benchmark performance where ALECs order low volumes of advanced and nascent services, BellSouth will make additional payments to the Commission. These additional payments will only apply when there are more than 10 and less than 100 observations for those measures listed below on average statewide for a three-month period.

Percent Missed Installation Appointments
- UNE Loop and Port combinations
- UNE xDSL
- UNE Line Sharing

Average Completion Interval
- UNE Loop and Port combinations
- UNE xDSL
- UNE Line Sharing

Missed Repair Appointments
- UNE Loop and Port combinations
- UNE xDSL
- UNE Line Sharing

Maintenance Average Duration
- UNE Loop and Port combinations
- UNE xDSL
- UNE Line Sharing

Average Response Time for Loop Make-up Information
- UNE Loop and Port combinations
- UNE xDSL
- UNE Line Sharing

4.3.3.2 The additional payments in the form of a market penetration adjustment will be made if BellSouth fails to provide parity for the above measurements as determined by the use of the Truncated Z test and the balancing critical value for 3 consecutive months.

4.3.3.3 If, for the three months that are utilized to calculate the rolling average, there were 100 observations or more on average for the submetric, then no additional voluntary payments under this market penetration adjustment provision will be made to the Commission for deposit with the State Treasury. However, if during this 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 Commission for deposit with the State Treasury by trebling the normal Tier II remedy and applying the method of calculating affected volumes ordered by the Commission.

4.3.3.4 Any payments made under this market penetration adjustment provision are subject to the Absolute Cap set by the Commission.

4.3.3.5 Fee Schedule for Total Quarterly Tier-2 Enforcement Mechanisms is shown in Table-2 of Appendix A, incorporated herein by this reference.

4.4 Payment of Tier-1 and Tier-2 Amounts

4.4.1 If BellSouth performance triggers an obligation to pay Tier-1 Enforcement Mechanisms to an ALEC or an obligation to remit Tier-2 Enforcement Mechanisms to the Commission or its designee, BellSouth shall make payment in the required amount by the 15th day of the second month following the month for which disparate treatment was incurred.

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

4.4.3 For each day after the due date that BellSouth fails to pay the Tier-2 Enforcement Mechanisms, BellSouth will pay the Commission $1,000 per day for deposit in the State's General Revenue Fund.

4.4.4 If an ALEC disputes the amount paid under Tier-1 Enforcement Mechanisms, the ALEC shall submit a written claim to BellSouth within sixty (60) days after the payment due date. BellSouth shall investigate all claims and provide the ALEC written findings within thirty (30) days after receipt of the claim. If BellSouth determines the ALEC is owed additional amounts, BellSouth shall pay the ALEC such additional amounts within thirty (30) days after its findings along with 6% simple interest per annum. However, the ALEC shall be responsible for all administrative costs associated with resolution of disputes that result in no actual payment. Administrative costs are those reasonable costs incurred in the resolution of the disputed matter. Such costs would include, but not be limited to, postage, travel and lodging, communication expenses, and legal costs. If BellSouth and the ALEC have exhausted good faith negotiations and are still unable to reach a mutually agreeable settlement pertaining to the amount disputed, the Commission will settle the dispute. If Commission intervention is required, a mediated resolution will be pursued.

4.4.5 At the end of each calendar year, an independent accounting firm, mutually agreeable to the Florida Public Service Commission and BellSouth, shall certify that all penalties under Tier-1 and Tier-2 Enforcement Mechanisms were paid and accounted for in accordance with Generally Accepted Account Principles (GAAP). These annual audits shall be performed based upon audited data of BellSouth's performance measurements.

4.5 Limitations of Liability

4.5.1 BellSouth's total liability for the payment of Tier-1 and Tier-2 Enforcement Mechanisms shall be collectively and absolutely capped at 39% of net revenues in Florida, based upon the most recently reported ARMIS data.

4.5.2 BellSouth will not be responsible for an ALEC'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 ALEC with reasonable notice of such acts or omissions or provide the ALEC with any such supporting documentation.

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

4.5.4 BellSouth shall not be obligated for penalties under Tier-1 or Tier-2 Enforcement Mechanism for noncompliance with a performance measure if such noncompliance was the result of any of the following: a Force Majeure event; an act or omission by an ALEC 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.

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

4.6 Affiliate Reporting

4.6.1 BellSouth shall provide monthly results for each metric for each BellSouth ALEC affiliate; however, only the Florida Public Service Commission shall be provided the number of transactions or observations for BellSouth ALEC affiliates. Further, BellSouth shall inform the Commission of any changes regarding non-ALEC affiliates' use of its OSS databases, systems, and interfaces.

4.7 Dispute Resolution

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

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Appendix A: Fee Schedule

1. Table-1: Liquidated Damages For Tier-1 Measures (Per Affected Item)

Performance Measurment	Month 1	Month 2	Month3	Month4	Month 5	Month 6
Pre-Ordering	$20	$30	$40	$50	$60	$70
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
LNP	$150	$250	$500	$600	$700	$800
Billing	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
IC Trunks	$100	$125	$175	$250	$325	$500
Collocation	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000

2. Table-2: Remedy Payments For Tier-2 Measures

Performance Measurment	Per Affected Item
OSS/Pre-Ordering	$20
Ordering	$60
Provisioning	$300
Provisioning-UNE (Coordinated Customer Conversions)	$875
Maintenance and Repair	$300
Maintenance and Repair-UNE	$875
Billing	$1.00
LNP	$500
IC Trunks	$500
Collocation	$15,000
Change Management	$1,000
Service Order Accuracy	$50

Appendix B: SEEM Submetrics

1. Tier 1 Submetrics

Table B-1 contains a list of Tier 1 submetrics.

Table B-1: Tier 1 Submetrics

Item No.	Submetric
1	Loop Makeup - Response Time - Manual
2	Loop Makeup - Response Time - Electronic
3	Acknowledgement Message Timeliness
4	Acknowledgement Message Completeness
5	Percent Flow-Through Service Requests (Detail)
6	Reject Interval
7	Firm Order Confirmation Timeliness
8	Firm Order Confirmation and Reject Response Completeness - Fully Mechanized
9	Percent Missed Installation Appointments - Resale POTS
10	Percent Missed Installation Appointments - Resale Design
11	Percent Missed Installation Appointments - UNE Loop and Port Combinations
12	Percent Missed Installation Appointments - UNE Loops
13	Percent Missed Installation Appointments - UNE xDSL
14	Percent Missed Installation Appointments - UNE Line Sharing
15	Percent Missed Installation Appointments - Local IC Trunks
16	Average Completion Interval - Resale POTS
17	Average Completion Interval - Resale Design
18	Average Completion Interval - UNE Loop and Port Combinations
19	Average Completion Interval - UNE Loops
20	Average Completion Interval - UNE xDSL
21	Average Completion Interval - UNE Line Sharing
22	Average Completion Interval - Local IC Trunks
23	Coordinated Customer Conversions Interval - Unbundled Loops
24	Coordinated Customer Conversions - Hot Cut Timeliness Percent within interval - UNE Loops
25	Coordinated Customer Conversions - Percent Provisioning Troubles Received within 7 days of a completed service order - UNE Loops
26	Cooperative Acceptance Testing - Percent of xDSL Loops Tested
27	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale POTS
28	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale Design
29	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loop and Port Combinations
30	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loops
31	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE xDSL
32	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Line Sharing

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
33	Percent Provisioning Troubles within 30 days of Service Order Completion - Local IC Trunks
34	LNP - Percent Missed Installation Appointments - LNP
35	Missed Repair Appointments - Resale POTS
36	Missed Repair Appointments - Resale Design
37	Missed Repair Appointments - UNE Loop and Port Combinations
38	Missed Repair Appointments - UNE Loops
39	Missed Repair Appointments - UNE xDSL
40	Missed Repair Appointments - UNE Line Sharing
41	Missed Repair Appointments - Local IC Trunks
42	Customer Trouble Report Rate - Resale POTS
43	Customer Trouble Report Rate - Resale Design
44	Customer Trouble Report Rate - UNE Loop and Port Combinations
45	Customer Trouble Report Rate - UNE Loops
46	Customer Trouble Report Rate - UNE xDSL
47	Customer Trouble Report Rate - UNE Line Sharing
48	Customer Trouble Report Rate - Local IC Trunks
49	Maintenance Average Duration - Resale POTS
50	Maintenance Average Duration - Resale Design
51	Maintenance Average Duration - UNE Loop and Port Combinations
52	Maintenance Average Duration - UNE Loops
53	Maintenance Average Duration - UNE xDSL
54	Maintenance Average Duration - UNE Line Sharing
55	Maintenance Average Duration - Local IC Trunks
56	Percent Repeat Troubles within 30 days - Resale POTS
57	Percent Repeat Troubles within 30 days - Resale Design
58	Percent Repeat Troubles within 30 days - UNE Loop and Port Combinations
59	Percent Repeat Troubles within 30 days - UNE Loops
60	Percent Repeat Troubles within 30 days - UNE xDSL
61	Percent Repeat Troubles within 30 days - UNE Line Sharing
62	Percent Repeat Troubles within 30 days - Local IC Trunks
63	Invoice Accuracy
64	Mean Time to Deliver Invoices
65	Usage Data Delivery Accuracy
66	Trunk Group Performance - ALEC Specific
67	Collocation Percent of Due Dates Missed

2. Tier 2 Submetrics

Table B-2 contains a list of Tier 2 submetrics.

Table B-2: Tier 2 Submetrics

Item No.	Tier 2 Sub Metrics
1	Average Response Time - Pre-Ordering/Ordering
2	Interface Availability - Pre-Ordering/Ordering
3	Interface Availability - Maintenance & Repair
4	Loop Makeup - Response Time - Manual
5	Loop Makeup - Response Time - Electronic
6	Acknowledgement Message Timeliness - EDI
7	Acknowledgement Message Timeliness - TAG
8	Acknowledgement Message Completeness EDI
9	Acknowledgement Message Completeness TAG
10	Percent Flow-through Service Requests (Summary)
11	Reject Interval
12	Firm Order Confirmation Timeliness
13	Firm Order Confirmation and Reject Response Completeness - Fully Mechanized
14	Percent Missed Installation Appointments - Resale POTS
15	Percent Missed Installation Appointments - Resale Design
16	Percent Missed Installation Appointments - UNE Loop and Port Combinations
17	Percent Missed Installation Appointments - UNE Loops
18	Percent Missed Installation Appointments - UNE xDSL
19	Percent Missed Installation Appointments - UNE Line Sharing
20	Percent Missed Installation Appointments - Local IC Trunks
21	Average Completion Interval - Resale POTS
22	Average Completion Interval - Resale Design
23	Average Completion Interval - UNE Loop and Port Combinations
24	Average Completion Interval - UNE Loops
25	Average Completion Interval - UNE xDSL
26	Average Completion Interval - UNE Line Sharing
27	Average Completion Interval - Local IC Trunks
28	Coordinated Customer Conversions Interval - Unbundled Loops
29	Coordinated Customer Conversions - Hot Cut Timeliness Percent within interval - UNE Loops
30	Coordinated Customer Conversions - Percent Provisioning Troubles Received within 7 days of a completed service order - UNE Loops
31	Cooperative Acceptance Testing - Percent xDSL Loops Tested
32	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale POTS
33	Percent Provisioning Troubles within 30 days of Service Order Completion - Resale Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
34	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loop and Port Combinations
35	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE Loops
36	Percent Provisioning Troubles within 30 days of Service Order Completion - UNE xDSL
37	Provisioning Troubles within 30 days of Service Order Completion - UNE Line Sharing
38	Percent Provisioning Troubles within 30 days of Service Order Completion - Local IC Trunks
39	LNP - Percent Missed Installation Appointments
40	Missed Repair Appointments - Resale POTS
41	Missed Repair Appointments - Resale Design
42	Missed Repair Appointments - UNE Loop and Port Combinations
43	Missed Repair Appointments - UNE Loops
44	Missed Repair Appointments - UNE xDSL
45	Missed Repair Appointments - UNE Line Sharing
46	Missed Repair Appointments - Local IC Trunks
47	Customer Trouble Report Rate - Resale POTS
48	Customer Trouble Report Rate - Resale Design
49	Customer Trouble Report Rate - UNE Loop and Port Combinations
50	Customer Trouble Report Rate - UNE Loops
51	Customer Trouble Report Rate - UNE xDSL
52	Customer Trouble Report Rate - UNE Line Sharing
53	Customer Trouble Report Rate - Local IC Trunks
54	Maintenance Average Duration - Resale POTS
55	Maintenance Average Duration - Resale Design
56	Maintenance Average Duration - UNE Loop and Port Combinations
57	Maintenance Average Duration - UNE Loops
58	Maintenance Average Duration - UNE xDSL
59	Maintenance Average Duration - UNE Line Sharing
60	Maintenance Average Duration - Local IC Trunks
61	Percent Repeat Troubles within 30 days - Resale POTS
62	Percent Repeat Troubles within 30 days - Resale Design
63	Percent Repeat Troubles within 30 days - UNE Loop and Port Combinations
64	Percent Repeat Troubles within 30 days - UNE Loops
65	Percent Repeat Troubles within 30 days - UNE xDSL
66	Percent Repeat Troubles within 30 days - UNE Line Sharing
67	Percent Repeat Troubles within 30 days - Local IC Trunks
68	Invoice Accuracy
69	Mean Time to Deliver Invoices
70	Usage Data Delivery Accuracy

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
71	Trunk Group Performance - Aggregate
72	Collocation Percent of Due Dates Missed
73	Timeliness of Change Management Notices
74	Timeliness of Documents Associated with Change
75	Percent of Software Errors Corrected in X (10, 30, 45) Business Days
76	Percent of Change Requests Accepted or Rejected Within 10 Days
77	Percent of Change Requests Implemented Within 60 Weeks of Prioritization
78	Service Order Accuracy - Resale
79	Service Order Accuracy - UNE
80	Service Order Accuracy - UNE-P

Appendix C: Statistical Properties and Definitions

Statistical Methods for BellSouth Performance Measure Analysis

1. Necessary Properties for a Test Methodology

The statistical process for testing if competing local exchange carriers (ALECs) 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, and 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 ALEC 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.
  - 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* – Removing extreme observations from BellSouth and ALEC 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."

Measurement Types

The performance measures that will undergo testing are of four types:

- means
- proportions,
- rates, and
- ratio

While all four have similar characteristics, proportions and rates are derived from count data while means and ratios are derived from interval measurements.

2. 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 ALEC 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 ALEC 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 ALEC, 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 λ_n where λ is the probability of a trouble in 1 circuit and n is the number of circuits.

In an adjustment cell, if the number of ALEC 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 ALEC troubles can be modeled using a binomial distribution with n equal to the total number of troubles (ALEC 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 ALEC transactions. A permutation test is used when one or both of the BST and ALEC sample sizes is less than 6. Both the adjusted "t" statistic and the permutation calculation are described in Appendix D, Statistical Formulas and Technical Description.

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.

Appendix D: Statistical Formulas and Technical Description

We start by assuming that any necessary trimming[1] of the data is complete, and that the data are disaggregated so that comparisons are made within appropriate classes or adjustment cells that define "like" observations.

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) ALEC 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 ALEC 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; $k = 1,\ldots, n_{1j}$
$X_{2jk} =$	individual ALEC transactions in cell j; $k = 1,\ldots, n_{2j}$
$Y_{jk} =$	individual transaction (both ILEC and ALEC) in cell j
	$= \begin{cases} X_{1jk} & k = 1, K, n_{1j} \\ X_{2jk} & k = n_{1j}+1, K, n_j \end{cases}$
$\Phi^{-1}(\cdot) =$	the inverse of the cumulative standard normal distribution function

1. When it is determined that a measure should be trimmed, a trimming rule that is easy to implement in a production setting is:

Trim the ILEC observations to the largest ALEC value from all ALEC observations in the month under consideration.

That is, no ALEC values are removed; all ILEC observations greater than the largest ALEC observation are trimmed.

For Mean Performance Measures the following additional notation is needed.

$\overline{X}_{1j}$ = The ILEC sample mean of cell j

$\overline{X}_{2j}$ = The ALEC sample mean of cell j

s^2_{1j} = The ILEC sample variance in cell j

s^2_{2j} = The ALEC sample variance in cell j

$\{y_{jk}\}$ = a random sample of size n_{2j} from the set of $Y_{j1}, \ldots, Y_{jn_j}$; $k = 1,\ldots,n_{2j}$

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 ALEC 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

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

and the corresponding cumulative permutation distribution is

$$CPM(t) = P(\sum_k y_{jk} \le t) = \frac{\textit{the number of samples with sum } \le t}{M_j}$$

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 ALEC 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

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

and the cumulative hypergeometric distribution is

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

For Rate Measures, the notation needed is defined as

b_{1j}	=	The number of ILEC base elements in cell j
b_{2j}	=	The number of ALEC base elements in cell j
b_j	=	The total number of base elements in cell j; $b_{1j} + b_{2j}$
f_{1j}	=	The ILEC sample rate of cell j; n_{1j}/b_{1j}
f_{2j}	=	The ALEC sample rate of cell j; n_{2j}/b_{2j}
q_j	=	The relative proportion of ILEC elements for cell j; b_{1j}/b_j

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

$$BN(k) = P(B = k) = \begin{cases} \binom{n_j}{k} q_j^k (1 - q_j)^{n_j - k}, & 0 \le k \le n_j \\ 0 & \text{otherwise} \end{cases}$$

and the cumulative binomial distribution is

$$CBN(x) = P(B \le x) = \begin{cases} 0 & x < 0 \\ \sum_{k=0}^{x} BN(k), & 0 \le x \le n_j \\ 1 & x > n_j \end{cases}$$

For Ratio Performance Measures the following additional notation is needed.

U_{1jk} = additional quantity of interest of an individual ILEC transaction in cell j; $k = 1,\ldots, n_{1j}$

U_{2jk} = additional quantity of interest of an individual ALEC transaction in cell j; $k = 1,\ldots, n_{2j}$

$\hat{R}_{ij}$ = the ILEC (I = 1) or ALEC (i = 2) ratio of the total additional quantity of interest to the base transaction total in cell j, i.e.,
$\sum_k U_{ijk} / \sum_k X_{ijk}$

2. Calculating the Truncated Z

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

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 or Ratio Measure

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

Proportion Measure

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

Rate Measure

$$W_j = \sqrt{\frac{b_{1j} b_{2j}}{b_j} \cdot \frac{n_j}{b_j}}$$

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

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

that is, α is the probability that a t random variable with n_{1j} - 1 degrees of freedom, is less than

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

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.

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

- b) $M_j > 1{,}000$
  - 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

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

Rate Measure

$$Z_j = \frac{n_{1j} - n_j q_j}{\sqrt{n_j q_j (1 - q_j)}}$$

Ratio Measure

$$Z_j = \frac{\hat{R}_{1j} - \hat{R}_{2j}}{\sqrt{V(\hat{R}_{1j})\left(\frac{1}{n_{1j}} + \frac{1}{n_{2j}}\right)}}$$

$$V(\hat{R}_{1j}) = \frac{\sum_k \left(U_{1jk} - \hat{R}_{1j} X_{1jk}\right)^2}{\bar{X}_{1j}^2 (n_{1j} - 1)} = \frac{\sum_k U_{1jk}^2 - 2\hat{R}_{1j} \sum_k \left(U_{1jk} X_{1jk}\right) + \hat{R}_{1j}^2 \sum_k X_{1jk}^2}{\bar{X}_{1j}^2 (n_{1j} - 1)}$$

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

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

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 $Var(Z_j^* | H_0)$. 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 $Var(Z_j^* | H_0)$ cannot be used. Set both equal to 0.
- If $\min(n_{1j}, n_{2j}) > 6$ for a mean measure, $\min\left\{a_{1j}\left(1-\frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1-\frac{a_{2j}}{n_{2j}}\right)\right\} > 9$ for a proportion measure, $\min(n_{1j}, n_{2j}) > 15$ and $n_j q_j(1-q_j) > 9$ for a rate measure, or n_{1j} and n_{2j} are large for a ratio measure then

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

and

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

- 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

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

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

Mean Measure

$$N_j = \min(M_j, 1{,}000), \quad i = 1, \ldots, N_j$$

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

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

Proportion Measure

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

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

Rate Measure

$$z_{ji} = \min\left\{0, \frac{i - n_j\, q_j}{\sqrt{n_j\, q_j(1 - q_j)}}\right\}, \quad i = 0, K\ , n_j$$

$$\theta_{ji} = BN(i)$$

Ratio Measure

The performance measure that is in this class is billing accuracy. If a parity test were used, the sample sizes for this measure are quite large, so there is no need for a small sample technique. If one does need a small sample technique, then a re-sampling method can be used.

Calculate the Aggregate Test Statistic (Z^T)

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

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 ALEC 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 rule[2] 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:** $\alpha = P(Z^T < c \mid H_0)$
- **Type II Error:** $\beta = P(Z^T \geq c \mid H_a)$

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

It can be shown that.

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

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

where

$$M(\mu,\sigma) = \mu\Phi(\tfrac{-\mu}{\sigma}) - \sigma\phi(\tfrac{-\mu}{\sigma})$$

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

$\Phi(\cdot)$ 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: $\mu_{2j} = \mu_{1j} + \delta_j \cdot \sigma_{1j}$, $\sigma_{2j}^2 = \lambda_j \cdot \sigma_{1j}^2$ $\delta_j > 0$, $\lambda_j \geq 1$ and $j = 1,\ldots,L$.

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:

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

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

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 ALEC 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 by[3]

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

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

where

$$\pi_j^{(1)} = f_j^{(1)}\left(n_j^2 + f_j^{(2)} + f_j^{(3)} - f_j^{(4)}\right)$$

$$\pi_j^{(2)} = f_j^{(1)}\left(-n_j^2 - f_j^{(2)} + f_j^{(3)} + f_j^{(4)}\right)$$

$$\pi_j^{(3)} = f_j^{(1)}\left(-n_j^2 + f_j^{(2)} - f_j^{(3)} + f_j^{(4)}\right)$$

$$\pi_j^{(4)} = f_j^{(1)}\left(n_j^2\left(\tfrac{2}{\psi_j} - 1\right) - f_j^{(2)} - f_j^{(3)} - f_j^{(4)}\right)$$

$$f_j^{(1)} = \frac{1}{2n_j^2\left(\frac{1}{\psi_j} - 1\right)}$$

$$f_j^{(2)} = n_j n_{1j}\left(\tfrac{1}{\psi_j} - 1\right)$$

$$f_j^{(3)} = n_j a_j\left(\tfrac{1}{\psi_j} - 1\right)$$

$$f_j^{(4)} = \sqrt{n_j^2\left[4n_{1j}\left(n_j - a_j\right)\left(\tfrac{1}{\psi_j} - 1\right) + \left(n_j + \left(a_j - n_{1j}\right)\left(\tfrac{1}{\psi_j} - 1\right)\right)^2\right]}$$

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

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

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

Rate Measure

A rate measure also has only one parameter of interest in each cell, the rate at which a phenomenon is observed relative to a base unit, e.g. the number of troubles per available line. A possible lack of parity may be due to a difference in cell rates. A set of hypotheses that take into account the assumption that transaction are identically distributed within cells is:

H_0: $r_{1j} = r_{2j}$
H_a: $r_{2j} = \varepsilon_j r_{1j}$ $\quad\quad$ $\varepsilon_j > 1$ and $j = 1,\ldots,L$.

Given the total number of ILEC and ALEC transactions in a cell, n_j, and the number of base elements, b_{1j} and b_{2j}, the number of ILEC transaction, n_{1j}, has a binomial distribution from n_j trials and a probability of

$$q_j^* = \frac{r_{1j} b_{1j}}{r_{1j} b_{1j} + r_{2j} b_{2j}}$$

Therefore, the mean and variance of n_{1j}, are given by

$$E(n_{1j}) = n_j q_j^*$$
$$\text{var}(n_{1j}) = n_j q_j^*(1-q_j^*)$$

Under the null hypothesis

$$q_j^* = q_j = \frac{b_{1j}}{b_j}$$

but under the alternative hypothesis

$$q_j^* = q_j^a = \frac{b_{1j}}{b_{1j} + \varepsilon_j b_{2j}}$$

Recall that the cell test statistic is given by

$$Z_j = \frac{n_{1j} - n_j q_j}{\sqrt{n_j q_j (1-q_j)}}$$

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

$$m_j = \frac{n_j (q_j^a - q_j)}{\sqrt{n_j q_j (1-q_j)}} = (1-\varepsilon_j) \frac{\sqrt{n_j b_{1j} b_{2j}}}{b_{1j} + \varepsilon_j b_{2j}}$$

and

$$se_j = \sqrt{\frac{q_j^a (1-q_j^a)}{q_j (1-q_j)}} = \sqrt{\varepsilon_j} \frac{b_j}{b_{1j} + \varepsilon_j b_{2j}}$$

Ratio Measure

As with mean measures, one is concerned with two parameters in each cell, the mean and variance, when testing for parity of ratio measures. As long as sample sizes are large, as in the case of billing accuracy, the same method for finding m_j and se_j that is used for mean measures can be used for ratio measures.

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 and rate measures have been indexed by one set of parameters each, ψ_j and ε_j respectively. 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 ALEC 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. Using the same value of δ for the overall state testing does not seem sensible. At the state level we are aggregating over ALECs, so using the same δ as for an individual ALEC would be saying that a "meaningful" degree of disparity is one where the violation is the same (δ) for each ALEC. But the detection of disparity for any component ALEC 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 or rate of service performance. The truncated Z test is sensitive to such increases; but not as sensitive as the case of δ for mean measures. 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.

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 ALEC's customers.

This critical value changes as the ILEC and ALEC 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.

Appendix E: BST SEEM Remedy Calculation Procedures

BST SEEM Remedy Procedure

1. Tier-1 Calculation For Retail Analogues

1. Calculate the overall test statistic for each ALEC; z^T_{ALEC-1} (Per Statistical Methodology - by Dr. Mulrow)
2. Calculate the balancing critical value (${}^cB_{ALEC-1}$) that is associated with the alternative hypothesis (for fixed parameters δ,Ψ, or ε)
3. If the overall test statistic is equal to or above the balancing critical value, stop here. That is, if ${}^cB_{ALEC-1} < z^T_{A-LEC-1}$, stop here. Otherwise, go to step 4.
4. Calculate the Parity Gap by subtracting the value of step 2 from that of step 1. ABS (z^T_{ALEC-1} - ${}^cB_{ALEC-1}$)
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_{ALEC-1} - ${}^cB_{ALEC-1}$) / 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 $ALEC-_1$ Volume (I_c) in the negatively affected cell; where the cell value is negative.
7. Calculate the payment to ALEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule.
8. Then, ALEC-1 payment = Affected $Volume_{ALEC1}$ * $$from Fee Schedule

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

Note – the statistical results are only illustrative. They are not a result of a statistical test of this data.

	n_I	N_C	I_c	MIA_I	MIA_C	z^T_{ALEC-1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	96	9%	16%	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-1}				
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				2
										29

where n_I = ILEC observations and n_C = ALEC-1 observations

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

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

	n_I	n_C	I_c	OCI_I	OCI_C	z^T_{ALEC-1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	600	5days	7days	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-1}				
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 = ALEC-1 observations

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

2. Tier-2 Calculation For Retail Analogues

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 as outlined in steps 2 through 6 for the ALEC Aggregate performance. Determine average monthly affected volume for the rolling 3-month period.
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

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

State	n_I	n_C	I_c	MIA_I	MIA_C	z^T_{ALEC-A}	C_B	Parity Gap	Volume Proportion	Affected Volume
Month 1	180000	2100	336	9%	16%	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-A}				
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 = ALEC-A observations

If the affected volume for month one is as calculated above, the total payout would be:
99 units * $300/unit = $29,700

Assume the calculated amounts for months two and three are $30,600 and $28,500, respectively, then:

Example: ALEC-A Missed Installation Appointments for 1Q00

State	Miss	Remedy Dollars
Month 1	X	$29,700
Month 2	X	$30,600
Month 3	X	$28,500
1Q00		$29,600

3. Tier-1 Calculation For Benchmarks

1. For each ALEC, with five or more observations, calculate monthly performance results for the State.
2. ALECs 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 $ALEC_{-1}$ Volume.
6. Calculate the payment to ALEC-1 by multiplying the result of step 5 by the appropriate dollar amount from the fee schedule.
7. ALEC-1 payment = Affected $Volume_{ALEC-1}$ * $$from Fee Schedule

Example: ALEC-1 Percent Missed Due Dates for Collocations

	n_C	Benchmark	MIA_C	Volume Proportion	Affected Volume
State	600	10%	13%	.03	18

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

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

1. For each ALEC with five or more observations calculate monthly performance results for the State.
2. ALECs 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 ALEC-_1 Volume.
7. Calculate the payment to ALEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule.

ALEC-1 payment = Affected $\text{Volume}_{\text{ALEC1}}$ * $$from Fee Schedule

Example: ALEC-1 Reject Timeliness

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

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

5. Tier-2 Calculations For Benchmarks

Tier-2 calculations for benchmark measures are the same as the Tier-1 benchmark calculations, except the ALEC Aggregate data having failed for three months.

BELLSOUTH®

Self-Effectuating Enforcement Mechanism Administrative Plan

Florida Plan – Alternative

Exhibit 2

Version 2.7

Updated September 6, 2002

Administrative Plan

Appendix A: Fee Schedule

Appendix B: SEEM Submetrics

Appendix C: Statistical Properties and Definitions

Appendix D: Statistical Formulas and Technical Description

Appendix E: BST SEEM Remedy Calculation Procedures

Administrative Plan

1. Scope

1.1 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(s) issued by the Florida Public Service Commission (the "Commission").

1.2 Upon the Effective Date of this Plan, all appendices referred to in this Plan will be located on the BellSouth Performance Measurement Reports website at: https://pmap.bellsouth.com.

2. Reporting

2.1 In providing services pursuant to the Interconnection Agreements between BellSouth and each ALEC, BellSouth will report its performance to each ALEC in accordance with BellSouth's SQMs.

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

2.3 Final validated SQM reports will be posted no later than the last day of the month after the 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.

2.4 Final validated SEEM reports will be posted on the 15th day of the month, following the final validated SQM report or the first business day thereafter.

2.5 BellSouth shall pay penalties to the Commission, in the aggregate, for all late SQM reports in the amount of $2000 per day. Such penalty shall be made to the Commission for deposit into the state General Revenue Fund within fifteen (15) calendar days of the actual publication date of the report.

2.6 BellSouth shall pay penalties to the Commission, in the aggregate, for all incomplete or inaccurate SQM reports in the amount of $400 per day. Such penalty 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.

2.7 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.

3. Modification to Measures

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 Commission order. A collaborative work group, which will include BellSouth, interested ALECs and the 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 Commission, be reduced to an annual review.

3.2 BellSouth and the ALECs shall file any proposed revisions to the SEEM plan one month prior to the beginning of each review period.

3.3 From time to time, BellSouth may be ordered by the Florida Public Service Commission to modify or amend the SQMs or SEEMs. Nothing will preclude any party from participating in any proceeding involving BellSouth's SQMs or SEEMs from advocating that those measures be modified.

3.4 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 Florida Public Service Commission.

4. Enforcement Mechanisms

4.1 Definitions

4.1.1 *Enforcement Measurement Elements* – performance measurements identified as SEEM measurements within the SEEM plan.

4.1.2 *Enforcement Measurement benchmark compliance*– competitive level of performance established by the Commission used to evaluate the performance of BellSouth and each ALEC for penalties where no analogous retail process, product or service is feasible.

4.1.3 *Enforcement Measurement retail analog compliance*– comparing performance levels provided to BellSouth retail customers with performance levels provided by BellSouth to the ALEC customer for penalties.

4.1.4 *Test Statistic and Balancing Critical Value* – means by which enforcement will be determined using statistically valid equations. The Test Statistic and Balancing Critical Value properties are set forth in Appendix C, incorporated herein by this reference.

4.1.5 *Cell* – grouping of transactions at which like-to-like comparisons are made. For example, all BellSouth retail ISDN services, for residential customers, requiring a dispatch in a particular wire center, at a particular point in time will be compared directly to ALEC resold ISDN 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 C, incorporated herein by this reference.

4.1.6 *Delta* – measure of the meaningful difference between BellSouth performance and submetric performance. For individual submetrics the Delta value shall be determined using Ford's Delta Function as ordered by the Florida Public Service Commission. See Appendix C, incorporated herein by this reference.

4.1.7 *Tier-1 Enforcement Mechanisms* – self-executing liquidated damages paid directly to each ALEC when BellSouth delivers non-compliant performance of any one of the Tier-1 Enforcement Measurement Elements for any month as calculated by BellSouth.

4.1.8 *Tier-2 Enforcement Mechanisms* – assessments paid directly to the Florida Public Service Commission or its designee. Tier 2 Enforcement Mechanisms are triggered by three consecutive monthly failures in Tier 2 enforcement measurement elements in which BellSouth performance is out of compliance or does not meet the benchmarks for the aggregate of all ALEC data as calculated by BellSouth for a particular Tier-2 Enforcement Measurement Element.

4.1.9 *Affiliate* – person that (directly or indirectly) owns or controls, is owned or controlled by, or is under common ownership or control with, another person. For purposes of this paragraph, the term "own" means to own an equity interest (or the equivalent thereof) of more than 10%.

4.2 Application

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

4.2.2 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 and the payment of any Tier-1 or Tier-2 Enforcement Mechanisms shall not be used as evidence that BellSouth has not complied with or has violated any state or federal law or regulation.

4.3 Methodology

4.3.1 Tier-1 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for each ALEC for the State of Florida for a given Enforcement Measurement Element in a given month. 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, incorporated herein by this reference.

4.3.1.1 All OCNs and ACNAs for individual ALECs will be consolidated for purposes of calculating measure-based failures.

4.3.1.2 Tier-1 Enforcement Mechanisms apply on a per transaction basis for each negative cell and will escalate based upon the number of consecutive months that BellSouth has reported non-compliance.

4.3.1.3 The total payment for Tier 1 will be based on a $500 minimum and a $25,000 maximum per submetric per ALEC.

4.3.1.4 Fee Schedule for Tier-1 Enforcement Mechanisms is shown on the Performance Measurement Reports in Table-1 of Appendix A, incorporated herein by this reference. Failures beyond Month 6 will be subject to Month 6 fees.

4.3.2 Tier-2 Enforcement Mechanisms will be triggered by BellSouth's failure to achieve applicable Enforcement Measurement Compliance or Enforcement Measurement Benchmarks for the State for given Enforcement Measurement Elements for three consecutive months based upon the method of calculation set forth in Appendix D, incorporated herein by this reference.

4.3.2.1 Tier- 2 Enforcement Mechanisms apply, for an aggregate of all ALEC data generated by BellSouth, on a per transaction basis for each negative cell for a particular Enforcement Measurement Element.

4.3.2.2 Fee Schedule for Total Quarterly Tier-2 Enforcement Mechanisms is shown in Table-2 of Appendix A, incorporated herein by this reference. A minimum payment of $500 and a maximum oF $25,000 per submetric will apply.

4.4 **Payment of Tier-1 and Tier-2 Amounts**

4.4.1 If BellSouth performance triggers an obligation to pay Tier-1 Enforcement Mechanisms to an ALEC or an obligation to remit Tier-2 Enforcement Mechanisms to the Commission or its designee, BellSouth shall make payment in the required amount by the 15th day of the second month following the month for which disparate treatment was incurred.

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

4.4.3 For each day after the due date that BellSouth fails to pay the Tier-2 Enforcement Mechanisms, BellSouth will pay the Commission $1,000 per day for deposit in the State's General Revenue Fund.

4.4.4 If an ALEC disputes the amount paid under Tier-1 Enforcement Mechanisms, the ALEC shall submit a written claim to BellSouth within sixty (60) days after the payment due date. BellSouth shall investigate all claims and provide the ALEC written findings within thirty (30) days after receipt of the claim. If BellSouth determines the ALEC is owed additional amounts, BellSouth shall pay the ALEC such additional amounts within thirty (30) days after its findings along with 6% simple interest per annum. However, the ALEC shall be responsible for all administrative costs associated with resolution of disputes that result in no actual payment. Administrative costs are those reasonable costs incurred in the resolution of the disputed matter. Such costs would include, but not be limited to, postage, travel and lodging, communication expenses, and legal costs. If BellSouth and the ALEC have exhausted good faith negotiations and are still unable to reach a mutually agreeable settlement pertaining to the amount disputed, the Commission will settle the dispute. If Commission intervention is required, a mediated resolution will be pursued.

4.4.5 At the end of each calendar year, an independent accounting firm, mutually agreeable to the Florida Public Service Commission and BellSouth, shall certify that all penalties under Tier-1 and Tier-2 Enforcement Mechanisms were paid and accounted for in accordance with Generally Accepted Account Principles (GAAP). These annual audits shall be performed based upon audited data of BellSouth's performance measurements.

4.5 **Limitations of Liability**

4.5.1 BellSouth's total liability for the payment of Tier-1 and Tier-2 Enforcement Mechanisms shall be collectively and absolutely capped at 39% of net revenues in Florida, based upon the most recently reported ARMIS data.

4.5.2 BellSouth will not be responsible for an ALEC'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 ALEC with reasonable notice of such acts or omissions or provide the ALEC with any such supporting documentation.

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

4.5.4 BellSouth shall not be obligated for penalties under Tier-1 or Tier-2 Enforcement Mechanism for noncompliance with a performance measure if such noncompliance was the result of any of the following: a Force Majeure event; an act or omission by an ALEC 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.

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

4.6 Affiliate Reporting

4.6.1 BellSouth shall provide monthly results for each metric for each BellSouth ALEC affiliate; however, only the Florida Public Service Commission shall be provided the number of transactions or observations for BellSouth ALEC affiliates. Further, BellSouth shall inform the Commission of any changes regarding non-ALEC affiliates' use of its OSS databases, systems, and interfaces.

4.7 Dispute Resolution

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

Appendix A: Fee Schedule

1. Table-1: Liquidated Damages For Tier-1 Measures (Per Affected Item)

Performance Measurment	Month 1	Month 2	Month3	Month4	Month 5	Month 6
Pre-Ordering	$20	$30	$40	$50	$60	$70
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
LNP	$150	$250	$500	$600	$700	$800
Billing	$1.00	$1.00	$1.00	$1.00	$1.00	$1.00
IC Trunks	$100	$125	$175	$250	$325	$500
Collocation	$5,000	$5,000	$5,000	$5,000	$5,000	$5,000

2. Table-2: Remedy Payments For Tier-2 Measures

Performance Measurment	Per Affected Item
OSS/Pre-Ordering	$20
Ordering	$60
Provisioning	$300
Provisioning-UNE (Coordinated Customer Conversions)	$875
Maintenance and Repair	$300
Maintenance and Repair-UNE	$875
Billing	$1.00
LNP	$500
IC Trunks	$500
Collocation	$15,000
Change Management	$1,000
Service Order Accuracy	$50

Appendix B: SEEM Submetrics

1. Tier 1 Submetrics

Table B-1 contains a list of Tier 1 submetric. (The submetric numbers - such as B-1 - refer to the Florida 01/23/02 SQM. These labels may need revision at the conclusion of 6 month review).

Table B-1: Tier 1 Submetrics

Item No.	Submetric
1	B-1 Invoice Accuracy Interconnection
2	B-1 Invoice Accuracy Resale
3	B-1 Invoice Accuracy UNE
4	B-2 Mean Time to Deliver Invoices - CRIS
5	B-2 Mean Time to Deliver Invoices - CABS
6	C-3 Collocation Percent of Due Dates Missed Physical Caged - Augment
7	C-3 Collocation Percent of Due Dates Missed Physical Caged - Initial
8	C-3 Collocation Percent of Due Dates Missed Physical Cageless - Augment
9	C-3 Collocation Percent of Due Dates Missed Physical Cageless - Initial
10	C-3 Collocation Percent of Due Dates Missed - State
11	C-3 Collocation Percent of Due Dates Missed Virtual - Augment
12	C-3 Collocation Percent of Due Dates Missed Virtual - Initial
13	MR-1 Percent Missed Repair Appointments Dispatch - 2 w Analog Loop Design
14	MR-1 Percent Missed Repair Appointments Dispatch - 2 w Analog Loop Non-Design
15	MR-1 Percent Missed Repair Appointments Dispatch - Resale Business
16	MR-1 Percent Missed Repair Appointments Dispatch - Resale Centrex
17	MR-1 Percent Missed Repair Appointments Dispatch - Resale Design
18	MR-1 Percent Missed Repair Appointments Dispatch - Resale ISDN
19	MR-1 Percent Missed Repair Appointments Dispatch - Local Transport
20	MR-1 Percent Missed Repair Appointments Dispatch - Local Interconnection Trunks
21	MR-1 Percent Missed Repair Appointments Dispatch - Resale PBX
22	MR-1 Percent Missed Repair Appointments Dispatch - Resale Residence
23	MR-1 Percent Missed Repair Appointments Dispatch - UNE Combo Other
24	MR-1 Percent Missed Repair Appointments Dispatch - UNE Digital Loop ≥ DS1
25	MR-1 Percent Missed Repair Appointments Dispatch - UNE Digital Loop < DS1
26	MR-1 Percent Missed Repair Appointments Dispatch - UNE ISDN (includes UDC)
27	MR-1 Percent Missed Repair Appointments Dispatch - UNE Loop and Port Combo
28	MR-1 Percent Missed Repair Appointments Dispatch - UNE Line Sharing
29	MR-1 Percent Missed Repair Appointments Dispatch - UNE Switch ports
30	MR-1 Percent Missed Repair Appointments Dispatch - UNE xDSL (ADSL, HDSL, UCL)
31	MR-1 Percent Missed Repair Appointments Dispatch - UNE Other - Design
32	MR-1 Percent Missed Repair Appointments Dispatch - UNE Other - Non Design
33	MR-1 Percent Missed Repair Appointments Non Dispatch - 2 w Analog Loop Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
34	MR-1 Percent Missed Repair Appointments Non Dispatch - 2 w Analog Loop Non-Design
35	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Business
36	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Centrex
37	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Design
38	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale ISDN
39	MR-1 Percent Missed Repair Appointments Non Dispatch - Local Transport
40	MR-1 Percent Missed Repair Appointments Non Dispatch - Local Interconnection Trunks
41	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale PBX
42	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Residence
43	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Combo Other
44	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Digital Loop ≥ DS1
45	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Digital Loop < DS1
46	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE ISDN (includes UDC)
47	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Loop and Port Combo
48	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Line Sharing
49	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Switch ports
50	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
51	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Other - Design
52	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Other - Non Design
53	MR-2 Customer Trouble Report Rate - 2 w Analog Loop Design
54	MR-2 Customer Trouble Report Rate - 2 w Analog Loop Non-Design
55	MR-2 Customer Trouble Report Rate - Resale Business
56	MR-2 Customer Trouble Report Rate - Resale Centrex
57	MR-2 Customer Trouble Report Rate - Resale Design
58	MR-2 Customer Trouble Report Rate - Resale ISDN
59	MR-2 Customer Trouble Report Rate - Local Transport
60	MR-2 Customer Trouble Report Rate - Local Interconnection Trunks
61	MR-2 Customer Trouble Report Rate - Resale PBX
62	MR-2 Customer Trouble Report Rate - Resale Residence
63	MR-2 Customer Trouble Report Rate - UNE Combo Other
64	MR-2 Customer Trouble Report Rate - UNE Digital Loop ≥ DS1
65	MR-2 Customer Trouble Report Rate - UNE Digital Loop < DS1
66	MR-2 Customer Trouble Report Rate - UNE ISDN (includes UDC)
67	MR-2 Customer Trouble Report Rate - UNE Loop and Port Combo
68	MR-2 Customer Trouble Report Rate - UNE Line Sharing
69	MR-2 Customer Trouble Report Rate - UNE Switch ports
70	MR-2 Customer Trouble Report Rate - UNE xDSL (ADSL, HDSL, UCL)

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
71	MR-2 Customer Trouble Report Rate - UNE Other - Design
72	MR-2 Customer Trouble Report Rate - UNE Other - Non Design
73	MR-3 Maintenance Average Duration Dispatch - 2 w Analog Loop Design
74	MR-3 Maintenance Average Duration Dispatch - 2 w Analog Loop Non-Design
75	MR-3 Maintenance Average Duration Dispatch - Resale Business
76	MR-3 Maintenance Average Duration Dispatch - Resale Centrex
77	MR-3 Maintenance Average Duration Dispatch - Resale Design
78	MR-3 Maintenance Average Duration Dispatch - Resale ISDN
79	MR-3 Maintenance Average Duration Dispatch - Local Transport
80	MR-3 Maintenance Average Duration Dispatch - Local Interconnection Trunks
81	MR-3 Maintenance Average Duration Dispatch - Resale PBX
82	MR-3 Maintenance Average Duration Dispatch - Resale Residence
83	MR-3 Maintenance Average Duration Dispatch - UNE Combo Other
84	MR-3 Maintenance Average Duration Dispatch - UNE Digital Loop ≥ DS1
85	MR-3 Maintenance Average Duration Dispatch - UNE Digital Loop < DS1
86	MR-3 Maintenance Average Duration Dispatch - UNE ISDN (includes UDC)
87	MR-3 Maintenance Average Duration Dispatch - UNE Loop and Port Combo
88	MR-3 Maintenance Average Duration Dispatch - UNE Line Sharing
89	MR-3 Maintenance Average Duration Dispatch - UNE Switch ports
90	MR-3 Maintenance Average Duration Dispatch - UNE xDSL (ADSL, HDSL, UCL)
91	MR-3 Maintenance Average Duration Dispatch - UNE Other - Design
92	MR-3 Maintenance Average Duration Dispatch - UNE Other - Non Design
93	MR-3 Maintenance Average Duration Non Dispatch - 2 w Analog Loop Design
94	MR-3 Maintenance Average Duration Non Dispatch - 2 w Analog Loop Non-Design
95	MR-3 Maintenance Average Duration Non Dispatch - Resale Business
96	MR-3 Maintenance Average Duration Non Dispatch - Resale Centrex
97	MR-3 Maintenance Average Duration Non Dispatch - Resale Design
98	MR-3 Maintenance Average Duration Non Dispatch Resale ISDN
99	MR-3 Maintenance Average Duration Non Dispatch - Local Transport
100	MR-3 Maintenance Average Duration Non Dispatch - Local Interconnection Trunks
101	MR-3 Maintenance Average Duration Non Dispatch - Resale PBX
102	MR-3 Maintenance Average Duration Non Dispatch - Resale Residence
103	MR-3 Maintenance Average Duration Non Dispatch - UNE Combo Other
104	MR-3 Maintenance Average Duration Non Dispatch - UNE Digital Loop ≥ DS1
105	MR-3 Maintenance Average Duration Non Dispatch - UNE Digital Loop < DS1
106	MR-3 Maintenance Average Duration Non Dispatch - UNE ISDN (includes UDC)
107	MR-3 Maintenance Average Duration Non Dispatch - UNE Loop and Port Combo

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
108	MR-3 Maintenance Average Duration Non Dispatch - UNE Line Sharing
109	MR-3 Maintenance Average Duration Non Dispatch - UNE Switch ports
110	MR-3 Maintenance Average Duration Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
111	MR-3 Maintenance Average Duration Non Dispatch - UNE Other - Design
112	MR-3 Maintenance Average Duration Non Dispatch - UNE Other - Non Design
113	MR-4 Percent Repeat Trouble within 30 Days Dispatch - 2 w Analog Loop Design
114	MR-4 Percent Repeat Trouble within 30 Days Dispatch - 2 w Analog Loop Non-Design
115	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Business
116	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Centrex
117	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Design
118	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale ISDN
119	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Local Transport
120	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Local Interconnection Trunks
121	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale PBX
122	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Residence
123	MR-4 Percent Repeat Trouble within 30 Days Dispatch -UNE Combo Other
124	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Digital Loop ≥ DS1
125	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Digital Loop < DS1
126	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE ISDN (includes UDC)
127	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Loop and Port Combo
128	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Line Sharing
129	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Switch ports
130	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE xDSL (ADSL, HDSL, UCL)
131	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Other - Design
132	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Other - Non Design
133	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - 2 w Analog Loop Design
134	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - 2 w Analog Loop Non-Design
135	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Business
136	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Centrex
137	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Design
138	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale ISDN
139	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Local Transport
140	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Local Interconnection Trunks
141	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale PBX
142	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Residence
143	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Combo Other
144	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Digital Loop ≥ DS1

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
145	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Digital Loop < DS1
146	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE ISDN (includes UDC)
147	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Loop and Port Combo
148	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Line Sharing
149	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Switch ports
150	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
151	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Other - Design
152	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Other - Non Design
153	MR-5 Out of Service (OOS) > 24 hours Dispatch - 2 w Analog Loop Design
154	MR-5 Out of Service (OOS) > 24 hours Dispatch - 2 w Analog Loop Non-Design
155	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Business
156	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Centrex
157	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Design
158	MR-5 Out of Service (OOS) > 24 hours Dispatch Resale ISDN
159	MR-5 Out of Service (OOS) > 24 hours Dispatch - Local Transport
160	MR-5 Out of Service (OOS) > 24 hours Dispatch - Local Interconnection Trunks
161	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale PBX
162	MR-5 Out of Service (OOS) > 24 hours Dispatch Resale Residence
163	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Combo Other
164	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Digital Loop ≥ DS1
165	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Digital Loop < DS1
166	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE ISDN (includes UDC)
167	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Loop and Port Combo
168	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Line Sharing
169	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Switch ports
170	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE xDSL (ADSL, HDSL, UCL)
171	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Other - Design
172	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Other - Non Design
173	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - 2 w Analog Loop Design
174	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - 2 w Analog Loop Non-Design
175	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Business
176	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Centrex
177	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Design
178	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale ISDN
179	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Local Transport
180	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Local Interconnection Trunks
181	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale PBX

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
182	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Residence
183	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Combo Other
184	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Digital Loop ≥ DS1
185	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Digital Loop < DS1
186	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE ISDN (includes UDC)
187	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Loop and Port Combo
188	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Line Sharing
189	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Switch ports
190	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE xDSL (ADSL, HDSL, UCL)
191	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE Other - Design
192	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE Other - Non Design
193	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop Design
194	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/LNP Design
195	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/LNP Non Design
196	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop Non Design
197	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/INP Design
198	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/INP Non Design
199	O-11 FOC & Reject Completeness Fully Mechanized Resale Business
200	O-11 FOC & Reject Completeness Fully Mechanized Resale Centrex
201	O-11 FOC & Reject Completeness Fully Mechanized Resale Design (Special)
202	O-11 FOC & Reject Completeness Fully Mechanized EEL's
203	O-11 FOC & Reject Completeness Fully Mechanized Resale ISDN
204	O-11 FOC & Reject Completeness Fully Mechanized UNE Line Splitting
205	O-11 FOC & Reject Completeness Fully Mechanized Local Interoffice Transport
206	O-11 FOC & Reject Completeness Local Interconnection Trunks
207	O-11 FOC & Reject Completeness Fully Mechanized LNP Standalone
208	O-11 FOC & Reject Completeness Fully Mechanized INP Standalone
209	O-11 FOC & Reject Completeness Fully Mechanized Line Sharing
210	O-11 FOC & Reject Completeness Fully Mechanized Resale PBX
211	O-11 FOC & Reject Completeness Fully Mechanized Resale Residence
212	O-11 FOC & Reject Completeness Fully Mechanized Switch Ports
213	O-11 FOC & Reject Completeness Fully Mechanized UNE Combo Other
214	O-11 FOC & Reject Completeness Fully Mechanized UNE Digital Loop ≥ DS1
215	O-11 FOC & Reject Completeness Fully Mechanized UNE Digital Loop <DS1
216	O-11 FOC & Reject Completeness Fully Mechanized UNE ISDN Loop
217	O-11 FOC & Reject Completeness Fully Mechanized UNE Loop + Port Combos
218	O-11 FOC & Reject Completeness Fully Mechanized UNE Other Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
219	O-11 FOC & Reject Completeness Fully Mechanized UNE Other Non Design
220	O-11 FOC & Reject Completeness Fully Mechanized UNE xDSL (ADSL, HDSL, UC)
221	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop Design
222	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/LNP Design
223	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/LNP Non Design
224	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop Non Design
225	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/INP Design
226	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/INP Non Design
227	O-11 FOC & Reject Completeness Non Mechanized Resale Business
228	O-11 FOC & Reject Completeness Non Mechanized Resale Centrex
229	O-11 FOC & Reject Completeness Non Mechanized Resale Design (Special)
230	O-11 FOC & Reject Completeness Non Mechanized EEL's
231	O-11 FOC & Reject Completeness Non Mechanized Resale ISDN
232	O-11 FOC & Reject Completeness Non Mechanized UNE Line Splitting
233	O-11 FOC & Reject Completeness Non Mechanized Local Interoffice Transport
234	O-11 FOC & Reject Completeness Non Mechanized LNP Standalone
235	O-11 FOC & Reject Completeness Non Mechanized INP Standalone
236	O-11 FOC & Reject Completeness Non Mechanized Line Sharing
237	O-11 FOC & Reject Completeness Non Mechanized Resale PBX
238	O-11 FOC & Reject Completeness Non Mechanized Resale Residence
239	O-11 FOC & Reject Completeness Non Mechanized Switch Ports
240	O-11 FOC & Reject Completeness Non Mechanized UNE Combo Other
241	O-11 FOC & Reject Completeness Non Mechanized UNE Digital Loop ≥ DS1
242	O-11 FOC & Reject Completeness Non Mechanized UNE Digital Loop <DS1
243	O-11 FOC & Reject Completeness Non Mechanized UNE ISDN Loop
244	O-11 FOC & Reject Completeness Non Mechanized UNE Loop + Port Combos
245	O-11 FOC & Reject Completeness Non Mechanized UNE Other Design
246	O-11 FOC & Reject Completeness Non Mechanized UNE Other Non Design
247	O-11 FOC & Reject Completeness Non Mechanized UNE xDSL (ADSL, HDSL, UC)
248	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop Design
249	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/LNP Design
250	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/LNP Non Design
251	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop Non Design
252	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/INP Design
253	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/INP Non Design
254	O-11 FOC & Reject Completeness Partially Mechanized Resale Business
255	O-11 FOC & Reject Completeness Partially Mechanized Resale Centrex

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
256	O-11 FOC & Reject Completeness Partially Mechanized Resale Design (Special)
257	O-11 FOC & Reject Completeness Partially Mechanized EEL's
258	O-11 FOC & Reject Completeness Partially Mechanized Resale ISDN
259	O-11 FOC & Reject Completeness Partially Mechanized UNE Line Splitting
260	O-11 FOC & Reject Completeness Partially Mechanized Local Interoffice Transport
261	O-11 FOC & Reject Completeness Partially Mechanized LNP Standalone
262	O-11 FOC & Reject Completeness Partially Mechanized INP Standalone
263	O-11 FOC & Reject Completeness Partially Mechanized Line Sharing
264	O-11 FOC & Reject Completeness Partially Mechanized Resale PBX
265	O-11 FOC & Reject Completeness Partially Mechanized Resale Residence
266	O-11 FOC & Reject Completeness Partially Mechanized Switch Ports
267	O-11 FOC & Reject Completeness Partially Mechanized UNE Combo Other
268	O-11 FOC & Reject Completeness Partially Mechanized UNE Digital Loop ≥ DS1
269	O-11 FOC & Reject Completeness Partially Mechanized UNE Digital Loop <DS1
270	O-11 FOC & Reject Completeness Partially Mechanized UNE ISDN Loop
271	O-11 FOC & Reject Completeness Partially Mechanized UNE Loop + Port Combos
272	O-11 FOC & Reject Completeness Partially Mechanized UNE Other Design
273	O-11 FOC & Reject Completeness Partially Mechanized UNE Other Non Design
274	O-11 FOC & Reject Completeness Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
275	O-1 Acknowledgement Message Timeliness (Electronically) - EDI
276	O-1 Acknowledgement Message Timeliness (Electronically) - TAG
277	O-2 Acknowledgement Message Completeness - EDI Fully Mechanized
278	O-2 Acknowledgement Message Completeness - TAG Fully Mechanized
279	O-4 Percent flow-through Service Requests (Detail) Business
280	O-4 Percent flow-through Service Requests (Detail) LNP
281	O-4 Percent flow-through Service Requests (Detail) Residence
282	O-4 Percent flow-through Service Requests (Detail) UNE
283	O-8 Reject Interval Fully Mechanized 2W Analog Loop Design
284	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/LNP Design
285	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/LNP Non Design
286	O-8 Reject Interval Fully Mechanized 2W Analog Loop Non Design
287	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/INP Design
288	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/INP Non Design
289	O-8 Reject Interval Fully Mechanized Resale Business
290	O-8 Reject Interval Fully Mechanized Resale Centrex
291	O-8 Reject Interval Fully Mechanized Resale Design (Special)
292	O-8 Reject Interval Fully Mechanized EELs

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
293	O-8 Reject Interval Fully Mechanized Resale ISDN
294	O-8 Reject Interval Fully Mechanized UNE Line Splitting
295	O-8 Reject Interval Fully Mechanized Local Interoffice Transport
296	O-8 Reject Interval Local Interconnection Trunks
297	O-8 Reject Interval Fully Mechanized LNP Standalone
298	O-8 Reject Interval Fully Mechanized INP Standalone
299	O-8 Reject Interval Fully Mechanized Line Sharing
300	O-8 Reject Interval Fully Mechanized Resale PBX
301	O-8 Reject Interval Fully Mechanized Resale Residence
302	O-8 Reject Interval Fully Mechanized Switch Ports
303	O-8 Reject Interval Fully Mechanized UNE Combo Other
304	O-8 Reject Interval Fully Mechanized UNE Digital Loop ≥ DS1
305	O-8 Reject Interval Fully Mechanized UNE Digital Loop <DS1
306	O-8 Reject Interval Fully Mechanized UNE ISDN Loop
307	O-8 Reject Interval Fully Mechanized UNE Loop + Port Combos
308	O-8 Reject Interval Fully Mechanized UNE Other Design
309	O-8 Reject Interval Fully Mechanized UNE Other Non Design
310	O-8 Reject Interval Fully Mechanized UNE xDSL (ADSL, HDSL, UC)
311	O-8 Reject Interval Non Mechanized 2W Analog Loop Design
312	O-8 Reject Interval Non Mechanized 2W Analog Loop w/LNP Design
313	O-8 Reject Interval Non Mechanized 2W Analog Loop w/LNP Non Design
314	O-8 Reject Interval Non Mechanized 2W Analog Loop Non Design
315	O-8 Reject Interval Non Mechanized 2W Analog Loop w/INP Design
316	O-8 Reject Interval Non Mechanized 2W Analog Loop w/INP Non Design
317	O-8 Reject Interval Non Mechanized Resale Business
318	O-8 Reject Interval Non Mechanized Resale Centrex
319	O-8 Reject Interval Non Mechanized Resale Design (Special)
320	O-8 Reject Interval Non Mechanized EELs
321	O-8 Reject Interval Non Mechanized Resale ISDN
322	O-8 Reject Interval Non Mechanized UNE Line Splitting
323	O-8 Reject Interval Non Mechanized Local Interoffice Transport
324	O-8 Reject Interval Non Mechanized LNP Standalone
325	O-8 Reject Interval Non Mechanized INP Standalone
326	O-8 Reject Interval Non Mechanized Line Sharing
327	O-8 Reject Interval Non Mechanized Resale PBX
328	O-8 Reject Interval Non Mechanized Resale Residence
329	O-8 Reject Interval Non Mechanized Switch Ports

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
330	O-8 Reject Interval Non Mechanized UNE Combo Other
331	O-8 Reject Interval Non Mechanized UNE Digital Loop ≥ DS1
332	O-8 Reject Interval Non Mechanized UNE Digital Loop <DS1
333	O-8 Reject Interval Non Mechanized UNE ISDN Loop
334	O-8 Reject Interval Non Mechanized UNE Loop + Port Combos
335	O-8 Reject Interval Non Mechanized UNE Other Design
336	O-8 Reject Interval Non Mechanized UNE Other Non Design
337	O-8 Reject Interval Non Mechanized UNE xDSL (ADSL, HDSL, UC)
338	O-8 Reject Interval Partially Mechanized 2W Analog Loop Design
339	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/LNP Design
340	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/LNP Non Design
341	O-8 Reject Interval Partially Mechanized 2W Analog Loop Non Design
342	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/INP Design
343	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/INP Non Design
344	O-8 Reject Interval Partially Mechanized Resale Business
345	O-8 Reject Interval Partially Mechanized Resale Centrex
346	O-8 Reject Interval Partially Mechanized Resale Design (Special)
347	O-8 Reject Interval Partially Mechanized EEL's
348	O-8 Reject Interval Partially Mechanized Resale ISDN
349	O-8 Reject Interval Partially Mechanized UNE Line Splitting
350	O-8 Reject Interval Partially Mechanized Local Interoffice Transport
351	O-8 Reject Interval Partially Mechanized LNP Standalone
352	O-8 Reject Interval Partially Mechanized INP Standalone
353	O-8 Reject Interval Partially Mechanized Line Sharing
354	O-8 Reject Interval Partially Mechanized Resale PBX
355	O-8 Reject Interval Partially Mechanized Resale Residence
356	O-8 Reject Interval Partially Mechanized Switch Ports
357	O-8 Reject Interval Partially Mechanized UNE Combo Other
358	O-8 Reject Interval Partially Mechanized UNE Digital Loop ≥ DS1
359	O-8 Reject Interval Partially Mechanized UNE Digital Loop <DS1
360	O-8 Reject Interval Partially Mechanized UNE ISDN Loop
361	O-8 Reject Interval Partially Mechanized UNE Loop + Port Combos
362	O-8 Reject Interval Partially Mechanized UNE Other Design
363	O-8 Reject Interval Partially Mechanized UNE Other Non Design
364	O-8 Reject Interval Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
365	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop Design
366	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/LNP Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
367	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/LNP Non Design
368	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop Non Design
369	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/INP Design
370	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/INP Non Design
371	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Business
372	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Centrex
373	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Design (Special)
374	O-9 Firm Order Confirmation Timeliness Fully Mechanized - EELs
375	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale ISDN
376	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Line Splitting
377	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Local Interoffice Transport
378	O-9 Firm Order Confirmation Timeliness - Local Interconnection Trunks
379	O-9 Firm Order Confirmation Timeliness Fully Mechanized - LNP Standalone
380	O-9 Firm Order Confirmation Timeliness Fully Mechanized - INP Standalone
381	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Line Sharing
382	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale PBX
383	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Residence
384	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Switch Ports
385	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Combo Other
386	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Digital Loop ≥ DS1
387	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Digital Loop <DS1
388	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE ISDN Loop
389	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Loop + Port Combos
390	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Other Design
391	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Other Non Design
392	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE xDSL (ADSL, HDSL, UC)
393	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop Design
394	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/LNP Design
395	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/LNP Non Design
396	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop Non Design
397	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/INP Design
398	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/INP Non Design
399	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Business
400	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Centrex
401	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Design (Special)
402	O-9 Firm Order Confirmation Timeliness Non Mechanized - EELs
403	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale ISDN

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
404	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Line Splitting
405	O-9 Firm Order Confirmation Timeliness Non Mechanized Local Interoffice Transport
406	O-9 Firm Order Confirmation Timeliness Non Mechanized LNP Standalone
407	O-9 Firm Order Confirmation Timeliness Non Mechanized INP Standalone
408	O-9 Firm Order Confirmation Timeliness Non Mechanized Line Sharing
409	O-9 Firm Order Confirmation Timeliness Non Mechanized Resale PBX
410	O-9 Firm Order Confirmation Timeliness Non Mechanized Resale Residence
411	O-9 Firm Order Confirmation Timeliness Non Mechanized Switch Ports
412	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Combo Other
413	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Digital Loop ≥ DS1
414	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Digital Loop <DS1
415	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE ISDN Loop
416	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Loop + Port Combos
417	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Other Design
418	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Other Non Design
419	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE xDSL (ADSL, HDSL, UC)
420	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop Design
421	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/LNP Design
422	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/LNP Non Design
423	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop Non Design
424	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/INP Design
425	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/INP Non Design
426	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Business
427	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Centrex
428	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Design (Special)
429	O-9 Firm Order Confirmation Timeliness Partially Mechanized EELs
430	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale ISDN
431	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Line Splitting
432	O-9 Firm Order Confirmation Timeliness Partially Mechanized Local Interoffice Transport
433	O-9 Firm Order Confirmation Timeliness Partially Mechanized LNP Standalone
434	O-9 Firm Order Confirmation Timeliness Partially Mechanized INP Standalone
435	O-9 Firm Order Confirmation Timeliness Partially Mechanized Line Sharing
436	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale PBX
437	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Residence
438	O-9 Firm Order Confirmation Timeliness Partially Mechanized Switch Ports
439	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Combo Other
440	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Digital Loop ≥ DS1

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
441	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Digital Loop <DS1
442	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE ISDN Loop
443	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Loop + Port Combos
444	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Other Design
445	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Other Non Design
446	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
447	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Residence
448	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Business
449	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Design
450	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale PBX
451	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Centrex
452	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale ISDN
453	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - LNP Standalone
454	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - INP Standalone
455	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop Design
456	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop Non-Design
457	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
458	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
459	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
460	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
461	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Digital Loop < DS1
462	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Digital Loop ≥ DS1

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
463	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Switch ports
464	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Combo Other
465	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
466	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
467	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE ISDN (includes UDC)
468	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Line Sharing
469	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Local Transport
470	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Line Splitting
471	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Other Design
472	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Other Non Design
473	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - EELs
474	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Residence
475	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Business
476	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Design
477	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale PBX
478	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Centrex
479	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale ISDN
480	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - LNP Standalone
481	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - INP Standalone
482	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
483	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop Non-Design
484	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/LNP Design
485	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
486	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/INP Design
487	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/INP Non Design
488	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Digital Loop < DS1
489	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Digital Loop ≥ DS1
490	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Switch ports
491	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Combo Other
492	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
493	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
494	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE ISDN (includes UDC)
495	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Line Sharing
496	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Local Transport
497	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Line Splitting
498	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Other Design
499	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Other Non Design
500	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - EELs
501	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Residence
502	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Business
503	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
504	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale PBX
505	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Centrex
506	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale ISDN
507	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - LNP Standalone
508	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - INP Standalone
509	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop Design
510	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
511	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
512	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
513	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
514	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
515	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
516	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
517	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Switch ports
518	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Combo Other
519	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
520	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
521	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
522	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Line Sharing
523	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Local Transport

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
524	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Line Splitting
525	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Other Design
526	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Other Non Design
527	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - EELs
528	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo
529	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo
530	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Residence
531	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Business
532	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Design
533	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale PBX
534	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Centrex
535	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale ISDN
536	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - LNP Standalone
537	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - INP Standalone
538	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop Design
539	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop Non-Design
540	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
541	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
542	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
543	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
544	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Digital Loop < DS1

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
545	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
546	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Switch ports
547	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Combo Other
548	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
549	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
550	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE ISDN (includes UDC)
551	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Line Sharing
552	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Local Transport
553	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Line Splitting
554	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Other Design
555	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Other Non Design
556	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - EELs
557	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
558	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
559	P-3A Percent Missed Installation Appointments Including Subsequent Appointments - Local Inter-connection Trunks
560	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Residence
561	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Business
562	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Design
563	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale PBX
564	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Centrex
565	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale ISDN

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
566	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - LNP Standalone
567	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - INP Standalone
568	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop Design
569	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop Non-Design
570	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
571	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
572	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
573	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
574	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Digital Loop < DS1
575	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
576	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Switch ports
577	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Combo Other
578	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
579	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
580	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE ISDN (includes UDC)
581	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Line Sharing
582	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Local Transport
583	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Line Splitting
584	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Other Design
585	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Other Non Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
586	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - EELs
587	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Residence
588	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Business
589	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Design
590	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale PBX
591	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Centrex
592	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale ISDN
593	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - LNP Standalone
594	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - INP Standalone
595	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop Design
596	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop Non-Design
597	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/LNP Design
598	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
599	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/INP Design
600	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/INP Non Design
601	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Digital Loop < DS1
602	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Digital Loop ≥ DS1
603	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Switch ports
604	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Combo Other
605	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
606	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
607	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE ISDN (includes UDC)
608	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Line Sharing
609	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Local Transport
610	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Line Splitting
611	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Other Design
612	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Other Non Design
613	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - EELs
614	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Residence
615	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Business
616	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Design
617	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale PBX
618	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Centrex
619	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale ISDN
620	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - LNP Standalone
621	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - INP Standalone
622	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop Design
623	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
624	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
625	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
626	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
627	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
628	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
629	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
630	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Switch ports
631	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Combo Other
632	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
633	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
634	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
635	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Line Sharing
636	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Local Transport
637	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Line Splitting
638	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Other Design
639	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Other Non Design
640	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - EELs
641	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo
642	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo
643	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Residence
644	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Business
645	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Design
646	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale PBX

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
647	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Centrex
648	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale ISDN
649	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - LNP Standalone
650	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - INP Standalone
651	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop Design
652	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop Non-Design
653	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
654	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
655	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
656	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
657	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Digital Loop < DS1
658	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
659	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Switch ports
660	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Combo Other
661	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
662	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
663	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE ISDN (includes UDC)
664	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Line Sharing
665	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Local Transport
666	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Line Splitting
667	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Other Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
668	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Other Non Design
669	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - EELs
670	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
671	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
672	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution - Local Interconnection Trunks
673	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL1 IDLC
674	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL1 Non Time Specific
675	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL 1 Time Specific
676	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 IDLC
677	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 Time Non Specific
678	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 Time Specific
679	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Design - Dispatch
680	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Design - Non Dispatch
681	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Non Design - Dispatch
682	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Non Design - Non Dispatch
683	P-7 Coordinated Customer Conversions Internal Unbundles Loops with INP
684	P-7 Coordinated Customer Conversions Internal Unbundles Loops with LNP
685	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc ADSL
686	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc HDSL
687	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc Other
688	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc UNE UCL
689	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Residence
690	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Business
691	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
692	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale PBX
693	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Centrex
694	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale ISDN
695	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - LNP Standalone
696	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - INP Standalone
697	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop Design
698	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop Non-Design
699	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
700	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
701	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
702	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
703	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Digital Loop < DS1
704	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
705	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Switch ports
706	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Combo Other
707	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL)
708	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE ISDN (includes UDC)
709	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Line Sharing
710	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Local Transport
711	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Line Splitting

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
712	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Other Design
713	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Other Non Design
714	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - EELs
715	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Residence
716	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Business
717	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Design
718	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale PBX
719	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Centrex
720	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale ISDN
721	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - LNP Standalone
722	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - INP Standalone
723	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop Design
724	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop Non-Design
725	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/LNP Design
726	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
727	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/INP Design
728	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/INP Non Design
729	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Digital Loop < DS1
730	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Digital Loop ≥ DS1
731	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Switch ports
732	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Combo Other

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
733	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL)
734	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE ISDN (includes UDC)
735	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Line Sharing
736	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Local Transport
737	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Line Splitting
738	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Other Design
739	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Other Non Design
740	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - EELs
741	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Residence
742	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Business
743	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Design
744	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale PBX
745	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Centrex
746	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale ISDN
747	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - LNP Standalone
748	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - INP Standalone
749	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop Design
750	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
751	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
752	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
753	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
754	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
755	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
756	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
757	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Switch ports
758	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Combo Other
759	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL)
760	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
761	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Line Sharing
762	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Local Transport
763	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Line Splitting
764	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Other Design
765	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Other Non Design
766	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - EELs
767	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo
768	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo
769	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Residence
770	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Business
771	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Design
772	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale PBX
773	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Centrex

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
774	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale ISDN
775	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - LNP Standalone
776	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - INP Standalone
777	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop Design
778	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop Non-Design
779	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
780	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
781	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
782	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
783	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Digital Loop < DS1
784	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
785	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Switch ports
786	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Combo Other
787	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL)
788	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE ISDN (includes UDC)
789	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Line Sharing
790	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Local Transport
791	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Line Splitting
792	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Other Design
793	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Other Non Design
794	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - EELs

Table B-1: Tier 1 Submetrics (Continued)

Item No.	Submetric
795	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
796	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
797	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion - Local Interconnection Trunks
798	TGP-2 Trunk Group Performance ALEC Specific

2. Tier 2 Submetrics

Table B-2 contains a list of Tier 2 submetrics.

Table B-2: Tier 2 Submetrics

Item No.	Tier 2 Sub Metrics
1	B-1 Invoice Accuracy Interconnection
2	B-1 Invoice Accuracy Resale
3	B-1 Invoice Accuracy UNE
4	B-2 Mean Time to Deliver Invoices - CRIS
5	B-2 Mean Time to Deliver Invoices – CABS
6	B-3 Usage Data Delivery Accuracy
7	C-3 Collocation Percent of Due Dates Missed Physical Caged - Augment
8	C-3 Collocation Percent of Due Dates Missed Physical Caged - Initial
9	C-3 Collocation Percent of Due Dates Missed Physical Cageless - Augment
10	C-3 Collocation Percent of Due Dates Missed Physical Cageless - Initial
11	C-3 Collocation Percent of Due Dates Missed - State
12	C-3 Collocation Percent of Due Dates Missed Virtual - Augment
13	C-3 Collocation Percent of Due Dates Missed Virtual - Initial
14	CM-1 Timeliness of Change Management Notices
15	CM-3 Timeliness of Documents Associated with Change
16	CM-6 Percent of Software Errors Corrected in X (10, 30, 45) Business Days
17	CM-7 Percent of Change Requests Accepted or Rejected Within 10 Days
18	CM-11 Percent of Change Requests Implemented Within 60 Weeks of Prioritization
19	MR-1 Percent Missed Repair Appointments Dispatch - 2 w Analog Loop Design
20	MR-1 Percent Missed Repair Appointments Dispatch - 2 w Analog Loop Non-Design
21	MR-1 Percent Missed Repair Appointments Dispatch - Resale Business
22	MR-1 Percent Missed Repair Appointments Dispatch - Resale Centrex
23	MR-1 Percent Missed Repair Appointments Dispatch - Resale Design
24	MR-1 Percent Missed Repair Appointments Dispatch - Resale ISDN
25	MR-1 Percent Missed Repair Appointments Dispatch - Local Transport
26	MR-1 Percent Missed Repair Appointments Dispatch - Local Interconnection Trunks
27	MR-1 Percent Missed Repair Appointments Dispatch - Resale PBX
28	MR-1 Percent Missed Repair Appointments Dispatch - Resale Residence
29	MR-1 Percent Missed Repair Appointments Dispatch - UNE Combo Other
30	MR-1 Percent Missed Repair Appointments Dispatch - UNE Digital Loop ≥ DS1
31	MR-1 Percent Missed Repair Appointments Dispatch - UNE Digital Loop < DS1
32	MR-1 Percent Missed Repair Appointments Dispatch - UNE ISDN (includes UDC)
33	MR-1 Percent Missed Repair Appointments Dispatch - UNE Loop and Port Combo
34	MR-1 Percent Missed Repair Appointments Dispatch - UNE Line Sharing

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
35	MR-1 Percent Missed Repair Appointments Dispatch - UNE Switch ports
36	MR-1 Percent Missed Repair Appointments Dispatch - UNE xDSL (ADSL, HDSL, UCL)
37	MR-1 Percent Missed Repair Appointments Dispatch - UNE Other - Design
38	MR-1 Percent Missed Repair Appointments Dispatch - UNE Other - Non Design
39	MR-1 Percent Missed Repair Appointments Non Dispatch - 2 w Analog Loop Design
40	MR-1 Percent Missed Repair Appointments Non Dispatch - 2 w Analog Loop Non-Design
41	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Business
42	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Centrex
43	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Design
44	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale ISDN
45	MR-1 Percent Missed Repair Appointments Non Dispatch - Local Transport
46	MR-1 Percent Missed Repair Appointments Non Dispatch - Local Interconnection Trunks
47	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale PBX
48	MR-1 Percent Missed Repair Appointments Non Dispatch - Resale Residence
49	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Combo Other
50	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Digital Loop ≥ DS1
51	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Digital Loop < DS1
52	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE ISDN (includes UDC)
53	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Loop and Port Combo
54	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Line Sharing
55	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Switch ports
56	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
57	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Other - Design
58	MR-1 Percent Missed Repair Appointments Non Dispatch - UNE Other - Non Design
59	MR-2 Customer Trouble Report Rate - 2 w Analog Loop Design
60	MR-2 Customer Trouble Report Rate - 2 w Analog Loop Non-Design
61	MR-2 Customer Trouble Report Rate - Resale Business
62	MR-2 Customer Trouble Report Rate - Resale Centrex
63	MR-2 Customer Trouble Report Rate - Resale Design
64	MR-2 Customer Trouble Report Rate - Resale ISDN
65	MR-2 Customer Trouble Report Rate - Local Transport
66	MR-2 Customer Trouble Report Rate - Local Interconnection Trunks
67	MR-2 Customer Trouble Report Rate - Resale PBX
68	MR-2 Customer Trouble Report Rate - Resale Residence
69	MR-2 Customer Trouble Report Rate - UNE Combo Other
70	MR-2 Customer Trouble Report Rate - UNE Digital Loop ≥ DS1
71	MR-2 Customer Trouble Report Rate - UNE Digital Loop < DS1

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
72	MR-2 Customer Trouble Report Rate - UNE ISDN (includes UDC)
73	MR-2 Customer Trouble Report Rate - UNE Loop and Port Combo
74	MR-2 Customer Trouble Report Rate - UNE Line Sharing
75	MR-2 Customer Trouble Report Rate - UNE Switch ports
76	MR-2 Customer Trouble Report Rate - UNE xDSL (ADSL, HDSL, UCL)
77	MR-2 Customer Trouble Report Rate - UNE Other - Design
78	MR-2 Customer Trouble Report Rate - UNE Other - Non Design
79	MR-3 Maintenance Average Duration Dispatch - 2 w Analog Loop Design
80	MR-3 Maintenance Average Duration Dispatch - 2 w Analog Loop Non-Design
81	MR-3 Maintenance Average Duration Dispatch - Resale Business
82	MR-3 Maintenance Average Duration Dispatch - Resale Centrex
83	MR-3 Maintenance Average Duration Dispatch - Resale Design
84	MR-3 Maintenance Average Duration Dispatch - Resale ISDN
85	MR-3 Maintenance Average Duration Dispatch - Local Transport
86	MR-3 Maintenance Average Duration Dispatch - Local Interconnection Trunks
87	MR-3 Maintenance Average Duration Dispatch - Resale PBX
88	MR-3 Maintenance Average Duration Dispatch - Resale Residence
89	MR-3 Maintenance Average Duration Dispatch - UNE Combo Other
90	MR-3 Maintenance Average Duration Dispatch - UNE Digital Loop ≥ DS1
91	MR-3 Maintenance Average Duration Dispatch - UNE Digital Loop < DS1
92	MR-3 Maintenance Average Duration Dispatch - UNE ISDN (includes UDC)
93	MR-3 Maintenance Average Duration Dispatch - UNE Loop and Port Combo
94	MR-3 Maintenance Average Duration Dispatch - UNE Line Sharing
95	MR-3 Maintenance Average Duration Dispatch - UNE Switch ports
96	MR-3 Maintenance Average Duration Dispatch - UNE xDSL (ADSL, HDSL, UCL)
97	MR-3 Maintenance Average Duration Dispatch - UNE Other - Design
98	MR-3 Maintenance Average Duration Dispatch - UNE Other - Non Design
99	MR-3 Maintenance Average Duration Non Dispatch - 2 w Analog Loop Design
100	MR-3 Maintenance Average Duration Non Dispatch - 2 w Analog Loop Non-Design
101	MR-3 Maintenance Average Duration Non Dispatch - Resale Business
102	MR-3 Maintenance Average Duration Non Dispatch - Resale Centrex
103	MR-3 Maintenance Average Duration Non Dispatch - Resale Design
104	MR-3 Maintenance Average Duration Non Dispatch Resale ISDN
105	MR-3 Maintenance Average Duration Non Dispatch - Local Transport
106	MR-3 Maintenance Average Duration Non Dispatch - Local Interconnection Trunks
107	MR-3 Maintenance Average Duration Non Dispatch - Resale PBX
108	MR-3 Maintenance Average Duration Non Dispatch - Resale Residence

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
109	MR-3 Maintenance Average Duration Non Dispatch - UNE Combo Other
110	MR-3 Maintenance Average Duration Non Dispatch - UNE Digital Loop ≥ DS1
111	MR-3 Maintenance Average Duration Non Dispatch - UNE Digital Loop < DS1
112	MR-3 Maintenance Average Duration Non Dispatch - UNE ISDN (includes UDC)
113	MR-3 Maintenance Average Duration Non Dispatch - UNE Loop and Port Combo
114	MR-3 Maintenance Average Duration Non Dispatch - UNE Line Sharing
115	MR-3 Maintenance Average Duration Non Dispatch - UNE Switch ports
116	MR-3 Maintenance Average Duration Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
117	MR-3 Maintenance Average Duration Non Dispatch - UNE Other - Design
118	MR-3 Maintenance Average Duration Non Dispatch - UNE Other - Non Design
119	MR-4 Percent Repeat Trouble within 30 Days Dispatch - 2 w Analog Loop Design
120	MR-4 Percent Repeat Trouble within 30 Days Dispatch - 2 w Analog Loop Non-Design
121	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Business
122	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Centrex
123	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Design
124	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale ISDN
125	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Local Transport
126	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Local Interconnection Trunks
127	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale PBX
128	MR-4 Percent Repeat Trouble within 30 Days Dispatch - Resale Residence
129	MR-4 Percent Repeat Trouble within 30 Days Dispatch -UNE Combo Other
130	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Digital Loop ≥ DS1
131	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Digital Loop < DS1
132	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE ISDN (includes UDC)
133	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Loop and Port Combo
134	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Line Sharing
135	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Switch ports
136	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE xDSL (ADSL, HDSL, UCL)
137	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Other - Design
138	MR-4 Percent Repeat Trouble within 30 Days Dispatch - UNE Other - Non Design
139	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - 2 w Analog Loop Design
140	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - 2 w Analog Loop Non-Design
141	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Business
142	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Centrex
143	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Design
144	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale ISDN
145	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Local Transport

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
146	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Local Interconnection Trunks
147	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale PBX
148	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - Resale Residence
149	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Combo Other
150	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Digital Loop ≥ DS1
151	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Digital Loop < DS1
152	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE ISDN (includes UDC)
153	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Loop and Port Combo
154	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Line Sharing
155	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Switch ports
156	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE xDSL (ADSL, HDSL, UCL)
157	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Other - Design
158	MR-4 Percent Repeat Trouble within 30 Days Non Dispatch - UNE Other - Non Design
159	MR-5 Out of Service (OOS) > 24 hours Dispatch - 2 w Analog Loop Design
160	MR-5 Out of Service (OOS) > 24 hours Dispatch - 2 w Analog Loop Non-Design
161	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Business
162	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Centrex
163	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale Design
164	MR-5 Out of Service (OOS) > 24 hours Dispatch Resale ISDN
165	MR-5 Out of Service (OOS) > 24 hours Dispatch - Local Transport
166	MR-5 Out of Service (OOS) > 24 hours Dispatch - Local Interconnection Trunks
167	MR-5 Out of Service (OOS) > 24 hours Dispatch - Resale PBX
168	MR-5 Out of Service (OOS) > 24 hours Dispatch Resale Residence
169	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Combo Other
170	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Digital Loop ≥ DS1
171	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Digital Loop < DS1
172	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE ISDN (includes UDC)
173	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Loop and Port Combo
174	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Line Sharing
175	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Switch ports
176	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE xDSL (ADSL, HDSL, UCL)
177	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Other - Design
178	MR-5 Out of Service (OOS) > 24 hours Dispatch - UNE Other - Non Design
179	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - 2 w Analog Loop Design
180	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - 2 w Analog Loop Non-Design
181	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Business
182	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Centrex

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
183	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Design
184	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale ISDN
185	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Local Transport
186	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Local Interconnection Trunks
187	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale PBX
188	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - Resale Residence
189	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Combo Other
190	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Digital Loop ≥ DS1
191	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Digital Loop < DS1
192	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE ISDN (includes UDC)
193	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Loop and Port Combo
194	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Line Sharing
195	MR-5 Out of Service (OOS) > 24 hours Non Dispatch - UNE Switch ports
196	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE xDSL (ADSL, HDSL, UCL)
197	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE Other - Design
198	MR-5 Out of Service (OOS) > 24 hours Non Dispatch UNE Other - Non Design
199	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop Design
200	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/LNP Design
201	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/LNP Non Design
202	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop Non Design
203	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/INP Design
204	O-11 FOC & Reject Completeness Fully Mechanized 2W Analog Loop w/INP Non Design
205	O-11 FOC & Reject Completeness Fully Mechanized Resale Business
206	O-11 FOC & Reject Completeness Fully Mechanized Resale Centrex
207	O-11 FOC & Reject Completeness Fully Mechanized Resale Design (Special)
208	O-11 FOC & Reject Completeness Fully Mechanized EEL's
209	O-11 FOC & Reject Completeness Fully Mechanized Resale ISDN
210	O-11 FOC & Reject Completeness Fully Mechanized UNE Line Splitting
211	O-11 FOC & Reject Completeness Fully Mechanized Local Interoffice Transport
212	O-11 FOC & Reject Completeness Local Interconnection Trunks
213	O-11 FOC & Reject Completeness Fully Mechanized LNP Standalone
214	O-11 FOC & Reject Completeness Fully Mechanized INP Standalone
215	O-11 FOC & Reject Completeness Fully Mechanized Line Sharing
216	O-11 FOC & Reject Completeness Fully Mechanized Resale PBX
217	O-11 FOC & Reject Completeness Fully Mechanized Resale Residence
218	O-11 FOC & Reject Completeness Fully Mechanized Switch Ports
219	O-11 FOC & Reject Completeness Fully Mechanized UNE Combo Other

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
220	O-11 FOC & Reject Completeness Fully Mechanized UNE Digital Loop ≥ DS1
221	O-11 FOC & Reject Completeness Fully Mechanized UNE Digital Loop <DS1
222	O-11 FOC & Reject Completeness Fully Mechanized UNE ISDN Loop
223	O-11 FOC & Reject Completeness Fully Mechanized UNE Loop + Port Combos
224	O-11 FOC & Reject Completeness Fully Mechanized UNE Other Design
225	O-11 FOC & Reject Completeness Fully Mechanized UNE Other Non Design
226	O-11 FOC & Reject Completeness Fully Mechanized UNE xDSL (ADSL, HDSL, UC)
227	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop Design
228	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/LNP Design
229	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/LNP Non Design
230	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop Non Design
231	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/INP Design
232	O-11 FOC & Reject Completeness Non Mechanized 2W Analog Loop w/INP Non Design
233	O-11 FOC & Reject Completeness Non Mechanized Resale Business
234	O-11 FOC & Reject Completeness Non Mechanized Resale Centrex
235	O-11 FOC & Reject Completeness Non Mechanized Resale Design (Special)
236	O-11 FOC & Reject Completeness Non Mechanized EEL's
237	O-11 FOC & Reject Completeness Non Mechanized Resale ISDN
238	O-11 FOC & Reject Completeness Non Mechanized UNE Line Splitting
239	O-11 FOC & Reject Completeness Non Mechanized Local Interoffice Transport
240	O-11 FOC & Reject Completeness Non Mechanized LNP Standalone
241	O-11 FOC & Reject Completeness Non Mechanized INP Standalone
242	O-11 FOC & Reject Completeness Non Mechanized Line Sharing
243	O-11 FOC & Reject Completeness Non Mechanized Resale PBX
244	O-11 FOC & Reject Completeness Non Mechanized Resale Residence
245	O-11 FOC & Reject Completeness Non Mechanized Switch Ports
246	O-11 FOC & Reject Completeness Non Mechanized UNE Combo Other
247	O-11 FOC & Reject Completeness Non Mechanized UNE Digital Loop ≥ DS1
248	O-11 FOC & Reject Completeness Non Mechanized UNE Digital Loop <DS1
249	O-11 FOC & Reject Completeness Non Mechanized UNE ISDN Loop
250	O-11 FOC & Reject Completeness Non Mechanized UNE Loop + Port Combos
251	O-11 FOC & Reject Completeness Non Mechanized UNE Other Design
252	O-11 FOC & Reject Completeness Non Mechanized UNE Other Non Design
253	O-11 FOC & Reject Completeness Non Mechanized UNE xDSL (ADSL, HDSL, UC)
254	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop Design
255	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/LNP Design
256	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/LNP Non Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
257	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop Non Design
258	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/INP Design
259	O-11 FOC & Reject Completeness Partially Mechanized 2W Analog Loop w/INP Non Design
260	O-11 FOC & Reject Completeness Partially Mechanized Resale Business
261	O-11 FOC & Reject Completeness Partially Mechanized Resale Centrex
262	O-11 FOC & Reject Completeness Partially Mechanized Resale Design (Special)
263	O-11 FOC & Reject Completeness Partially Mechanized EEL's
264	O-11 FOC & Reject Completeness Partially Mechanized Resale ISDN
265	O-11 FOC & Reject Completeness Partially Mechanized UNE Line Splitting
266	O-11 FOC & Reject Completeness Partially Mechanized Local Interoffice Transport
267	O-11 FOC & Reject Completeness Partially Mechanized LNP Standalone
268	O-11 FOC & Reject Completeness Partially Mechanized INP Standalone
269	O-11 FOC & Reject Completeness Partially Mechanized Line Sharing
270	O-11 FOC & Reject Completeness Partially Mechanized Resale PBX
271	O-11 FOC & Reject Completeness Partially Mechanized Resale Residence
272	O-11 FOC & Reject Completeness Partially Mechanized Switch Ports
273	O-11 FOC & Reject Completeness Partially Mechanized UNE Combo Other
274	O-11 FOC & Reject Completeness Partially Mechanized UNE Digital Loop ≥ DS1
275	O-11 FOC & Reject Completeness Partially Mechanized UNE Digital Loop <DS1
276	O-11 FOC & Reject Completeness Partially Mechanized UNE ISDN Loop
277	O-11 FOC & Reject Completeness Partially Mechanized UNE Loop + Port Combos
278	O-11 FOC & Reject Completeness Partially Mechanized UNE Other Design
279	O-11 FOC & Reject Completeness Partially Mechanized UNE Other Non Design
280	O-11 FOC & Reject Completeness Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
281	O-12 Speed of Answer in Ordering Center Business Service Center
282	O-12 Speed of Answer in Ordering Center Residence Service Center
283	O-1 Acknowledgement Message Timeliness (Electronically) - EDI
284	O-1 Acknowledgement Message Timeliness (Electronically) - TAG
285	O-2 Acknowledgement Message Completeness - EDI Fully Mechanized
286	O-2 Acknowledgement Message Completeness - TAG Fully Mechanized
287	O-3 Percent flow-through Service Requests (Summary) Business
288	O-3 Percent flow-through Service Requests (Summary) LNP
289	O-3 Percent flow-through Service Requests (Summary) Residence
290	O-3 Percent flow-through Service Requests (Summary) UNE
291	O-8 Reject Interval Fully Mechanized 2W Analog Loop Design
292	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/LNP Design
293	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/LNP Non Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
294	O-8 Reject Interval Fully Mechanized 2W Analog Loop Non Design
295	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/INP Design
296	O-8 Reject Interval Fully Mechanized 2W Analog Loop w/INP Non Design
297	O-8 Reject Interval Fully Mechanized Resale Business
298	O-8 Reject Interval Fully Mechanized Resale Centrex
299	O-8 Reject Interval Fully Mechanized Resale Design (Special)
300	O-8 Reject Interval Fully Mechanized EELs
301	O-8 Reject Interval Fully Mechanized Resale ISDN
302	O-8 Reject Interval Fully Mechanized UNE Line Splitting
303	O-8 Reject Interval Fully Mechanized Local Interoffice Transport
304	O-8 Reject Interval Local Interconnection Trunks
305	O-8 Reject Interval Fully Mechanized LNP Standalone
306	O-8 Reject Interval Fully Mechanized INP Standalone
307	O-8 Reject Interval Fully Mechanized Line Sharing
308	O-8 Reject Interval Fully Mechanized Resale PBX
309	O-8 Reject Interval Fully Mechanized Resale Residence
310	O-8 Reject Interval Fully Mechanized Switch Ports
311	O-8 Reject Interval Fully Mechanized UNE Combo Other
312	O-8 Reject Interval Fully Mechanized UNE Digital Loop ≥ DS1
313	O-8 Reject Interval Fully Mechanized UNE Digital Loop <DS1
314	O-8 Reject Interval Fully Mechanized UNE ISDN Loop
315	O-8 Reject Interval Fully Mechanized UNE Loop + Port Combos
316	O-8 Reject Interval Fully Mechanized UNE Other Design
317	O-8 Reject Interval Fully Mechanized UNE Other Non Design
318	O-8 Reject Interval Fully Mechanized UNE xDSL (ADSL, HDSL, UC)
319	O-8 Reject Interval Non Mechanized 2W Analog Loop Design
320	O-8 Reject Interval Non Mechanized 2W Analog Loop w/LNP Design
321	O-8 Reject Interval Non Mechanized 2W Analog Loop w/LNP Non Design
322	O-8 Reject Interval Non Mechanized 2W Analog Loop Non Design
323	O-8 Reject Interval Non Mechanized 2W Analog Loop w/INP Design
324	O-8 Reject Interval Non Mechanized 2W Analog Loop w/INP Non Design
325	O-8 Reject Interval Non Mechanized Resale Business
326	O-8 Reject Interval Non Mechanized Resale Centrex
327	O-8 Reject Interval Non Mechanized Resale Design (Special)
328	O-8 Reject Interval Non Mechanized EELs
329	O-8 Reject Interval Non Mechanized Resale ISDN
330	O-8 Reject Interval Non Mechanized UNE Line Splitting

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
331	O-8 Reject Interval Non Mechanized Local Interoffice Transport
332	O-8 Reject Interval Non Mechanized LNP Standalone
333	O-8 Reject Interval Non Mechanized INP Standalone
334	O-8 Reject Interval Non Mechanized Line Sharing
335	O-8 Reject Interval Non Mechanized Resale PBX
336	O-8 Reject Interval Non Mechanized Resale Residence
337	O-8 Reject Interval Non Mechanized Switch Ports
338	O-8 Reject Interval Non Mechanized UNE Combo Other
339	O-8 Reject Interval Non Mechanized UNE Digital Loop ≥ DS1
340	O-8 Reject Interval Non Mechanized UNE Digital Loop <DS1
341	O-8 Reject Interval Non Mechanized UNE ISDN Loop
342	O-8 Reject Interval Non Mechanized UNE Loop + Port Combos
343	O-8 Reject Interval Non Mechanized UNE Other Design
344	O-8 Reject Interval Non Mechanized UNE Other Non Design
345	O-8 Reject Interval Non Mechanized UNE xDSL (ADSL, HDSL, UC)
346	O-8 Reject Interval Partially Mechanized 2W Analog Loop Design
347	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/LNP Design
348	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/LNP Non Design
349	O-8 Reject Interval Partially Mechanized 2W Analog Loop Non Design
350	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/INP Design
351	O-8 Reject Interval Partially Mechanized 2W Analog Loop w/INP Non Design
352	O-8 Reject Interval Partially Mechanized Resale Business
353	O-8 Reject Interval Partially Mechanized Resale Centrex
354	O-8 Reject Interval Partially Mechanized Resale Design (Special)
355	O-8 Reject Interval Partially Mechanized EEL's
356	O-8 Reject Interval Partially Mechanized Resale ISDN
357	O-8 Reject Interval Partially Mechanized UNE Line Splitting
358	O-8 Reject Interval Partially Mechanized Local Interoffice Transport
359	O-8 Reject Interval Partially Mechanized LNP Standalone
360	O-8 Reject Interval Partially Mechanized INP Standalone
361	O-8 Reject Interval Partially Mechanized Line Sharing
362	O-8 Reject Interval Partially Mechanized Resale PBX
363	O-8 Reject Interval Partially Mechanized Resale Residence
364	O-8 Reject Interval Partially Mechanized Switch Ports
365	O-8 Reject Interval Partially Mechanized UNE Combo Other
366	O-8 Reject Interval Partially Mechanized UNE Digital Loop ≥ DS1
367	O-8 Reject Interval Partially Mechanized UNE Digital Loop <DS1

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
368	O-8 Reject Interval Partially Mechanized UNE ISDN Loop
369	O-8 Reject Interval Partially Mechanized UNE Loop + Port Combos
370	O-8 Reject Interval Partially Mechanized UNE Other Design
371	O-8 Reject Interval Partially Mechanized UNE Other Non Design
372	O-8 Reject Interval Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
373	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop Design
374	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/LNP Design
375	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/LNP Non Design
376	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop Non Design
377	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/INP Design
378	O-9 Firm Order Confirmation Timeliness Fully Mechanized - 2W Analog Loop w/INP Non Design
379	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Business
380	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Centrex
381	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Design (Special)
382	O-9 Firm Order Confirmation Timeliness Fully Mechanized - EELs
383	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale ISDN
384	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Line Splitting
385	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Local Interoffice Transport
386	O-9 Firm Order Confirmation Timeliness - Local Interconnection Trunks
387	O-9 Firm Order Confirmation Timeliness Fully Mechanized - LNP Standalone
388	O-9 Firm Order Confirmation Timeliness Fully Mechanized - INP Standalone
389	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Line Sharing
390	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale PBX
391	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Resale Residence
392	O-9 Firm Order Confirmation Timeliness Fully Mechanized - Switch Ports
393	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Combo Other
394	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Digital Loop ≥ DS1
395	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Digital Loop <DS1
396	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE ISDN Loop
397	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Loop + Port Combos
398	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Other Design
399	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE Other Non Design
400	O-9 Firm Order Confirmation Timeliness Fully Mechanized - UNE xDSL (ADSL, HDSL, UC)
401	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop Design
402	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/LNP Design
403	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/LNP Non Design
404	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop Non Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
405	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/INP Design
406	O-9 Firm Order Confirmation Timeliness Non Mechanized - 2W Analog Loop w/INP Non Design
407	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Business
408	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Centrex
409	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale Design (Special)
410	O-9 Firm Order Confirmation Timeliness Non Mechanized - EELs
411	O-9 Firm Order Confirmation Timeliness Non Mechanized - Resale ISDN
412	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Line Splitting
413	O-9 Firm Order Confirmation Timeliness Non Mechanized Local Interoffice Transport
414	O-9 Firm Order Confirmation Timeliness Non Mechanized LNP Standalone
415	O-9 Firm Order Confirmation Timeliness Non Mechanized INP Standalone
416	O-9 Firm Order Confirmation Timeliness Non Mechanized Line Sharing
417	O-9 Firm Order Confirmation Timeliness Non Mechanized Resale PBX
418	O-9 Firm Order Confirmation Timeliness Non Mechanized Resale Residence
419	O-9 Firm Order Confirmation Timeliness Non Mechanized Switch Ports
420	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Combo Other
421	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Digital Loop ≥ DS1
422	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Digital Loop <DS1
423	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE ISDN Loop
424	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Loop + Port Combos
425	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Other Design
426	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE Other Non Design
427	O-9 Firm Order Confirmation Timeliness Non Mechanized UNE xDSL (ADSL, HDSL, UC)
428	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop Design
429	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/LNP Design
430	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/LNP Non Design
431	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop Non Design
432	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/INP Design
433	O-9 Firm Order Confirmation Timeliness Partially Mechanized 2W Analog Loop w/INP Non Design
434	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Business
435	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Centrex
436	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Design (Special)
437	O-9 Firm Order Confirmation Timeliness Partially Mechanized EELs
438	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale ISDN
439	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Line Splitting
440	O-9 Firm Order Confirmation Timeliness Partially Mechanized Local Interoffice Transport
441	O-9 Firm Order Confirmation Timeliness Partially Mechanized LNP Standalone

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
442	O-9 Firm Order Confirmation Timeliness Partially Mechanized INP Standalone
443	O-9 Firm Order Confirmation Timeliness Partially Mechanized Line Sharing
444	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale PBX
445	O-9 Firm Order Confirmation Timeliness Partially Mechanized Resale Residence
446	O-9 Firm Order Confirmation Timeliness Partially Mechanized Switch Ports
447	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Combo Other
448	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Digital Loop ≥ DS1
449	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Digital Loop <DS1
450	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE ISDN Loop
451	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Loop + Port Combos
452	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Other Design
453	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE Other Non Design
454	O-9 Firm Order Confirmation Timeliness Partially Mechanized UNE xDSL (ADSL, HDSL, UC)
455	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC LENS ATLAS
456	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC LENS DSAP
457	OSS-1 Average Response Interval and Percent Within Interval, BST performance in OASISBIG compared to ALEC performance in PSIMS/ORB (includes COFFI/USOC), PARITY + 2 SEC LENS
458	OSS-1 Average Response Interval and Percent Within Interval, BST performance in OASISBIG compared to ALEC performance in PSIMS/ORB (includes COFFI/USOC), PARITY + 2 SEC TAG
459	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC LENS RSAG-ADDR
460	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC LENS RSAG-TN
461	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC TAG ATLAS
462	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC LENS CRIS-CRESCSRL
463	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC TAG CRIS-TAG-CSR
464	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC TAG DSAP
465	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC TAG RSAG-ADDR
466	OSS-1 Average Response Interval and Percent Within Interval PARITY + 2 SEC TAG RSAG-TN
467	OSS-2 OSS Availability (Pre-Ordering) EDI
468	OSS-2 OSS Availability (Pre-Ordering) LENS
469	OSS-2 OSS Availability (Pre-Ordering) LEO MAINFRAME
470	OSS-2 OSS Availability (Pre-Ordering) LESOG
471	OSS-2 OSS Availability (Pre-Ordering) PSIMS
472	OSS-2 OSS Availability (Pre-Ordering) TAG
473	OSS-2 OSS Availability (Pre-Ordering) LNP (Gateway)
474	OSS-2 OSS Availability (Pre-Ordering) COG
475	OSS-2 OSS Availability (Pre-Ordering) SOG

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
476	OSS-2 OSS Availability (Pre-Ordering) DOM
477	OSS-3 OSS Availability (Maintenance and Repair) ALEC ECTA
478	OSS-3 OSS Availability (Maintenance and Repair) ALEC TAFI
479	OSS-4 Response Interval (Maintenance and Repair) CRIS
480	OSS-4 Response Interval (Maintenance and Repair) DLETH
481	OSS-4 Response Interval (Maintenance and Repair) DLR
482	OSS-4 Response Interval (Maintenance and Repair) LMOS
483	OSS-4 Response Interval (Maintenance and Repair) LMOSupd
484	OSS-4 Response Interval (Maintenance and Repair) LNP
485	OSS-4 Response Interval (Maintenance and Repair) MARCH
486	OSS-4 Response Interval (Maintenance and Repair) NIW
487	OSS-4 Response Interval (Maintenance and Repair) OSPCM
488	OSS-4 Response Interval (Maintenance and Repair) Predictor
489	OSS-4 Response Interval (Maintenance and Repair) SOCS
490	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Residence
491	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Business
492	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Design
493	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale PBX
494	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale Centrex
495	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Resale ISDN
496	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - LNP Standalone
497	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - INP Standalone
498	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop Design
499	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop Non-Design
500	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
501	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
502	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
503	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
504	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Digital Loop < DS1
505	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
506	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Switch ports
507	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Combo Other
508	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
509	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
510	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE ISDN (includes UDC)
511	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Line Sharing
512	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - Local Transport
513	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Line Splitting
514	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Other Design
515	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - UNE Other Non Design
516	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch ≥ 10 - EELs
517	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Residence
518	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Business
519	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Design
520	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale PBX
521	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale Centrex

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
522	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Resale ISDN
523	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - LNP Standalone
524	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - INP Standalone
525	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop Design
526	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop Non-Design
527	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/LNP Design
528	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
529	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/INP Design
530	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - 2 w Analog Loop w/INP Non Design
531	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Digital Loop < DS1
532	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Digital Loop ≥ DS1
533	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Switch ports
534	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Combo Other
535	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
536	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
537	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE ISDN (includes UDC)
538	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Line Sharing
539	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - Local Transport
540	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Line Splitting
541	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Other Design
542	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - UNE Other Non Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
543	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Dispatch < 10 - EELs
544	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Residence
545	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Business
546	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Design
547	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale PBX
548	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale Centrex
549	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Resale ISDN
550	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - LNP Standalone
551	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - INP Standalone
552	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop Design
553	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
554	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
555	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
556	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
557	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
558	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
559	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
560	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Switch ports
561	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Combo Other
562	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
563	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
564	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
565	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Line Sharing
566	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - Local Transport
567	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Line Splitting
568	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Other Design
569	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - UNE Other Non Design
570	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch ≥ 10 - EELs
571	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo
572	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo
573	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Residence
574	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Business
575	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Design
576	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale PBX
577	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale Centrex
578	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Resale ISDN
579	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - LNP Standalone
580	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - INP Standalone
581	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop Design
582	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop Non-Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
583	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
584	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
585	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
586	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
587	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Digital Loop < DS1
588	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
589	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Switch ports
590	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Combo Other
591	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
592	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
593	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE ISDN (includes UDC)
594	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Line Sharing
595	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - Local Transport
596	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Line Splitting
597	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Other Design
598	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - UNE Other Non Design
599	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch < 10 - EELs
600	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
601	P-3A Percent Missed Installation Appointments Including Subsequent Appointments Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
602	P-3A Percent Missed Installation Appointments Including Subsequent Appointments - Local Inter-connection Trunks
603	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Residence

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
604	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Business
605	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Design
606	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale PBX
607	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale Centrex
608	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Resale ISDN
609	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - LNP Standalone
610	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - INP Standalone
611	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop Design
612	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop Non-Design
613	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
614	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
615	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
616	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
617	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Digital Loop < DS1
618	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
619	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Switch ports
620	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Combo Other
621	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
622	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
623	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE ISDN (includes UDC)

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
624	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Line Sharing
625	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - Local Transport
626	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Line Splitting
627	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Other Design
628	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - UNE Other Non Design
629	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch ≥ 10 - EELs
630	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Residence
631	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Business
632	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Design
633	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale PBX
634	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale Centrex
635	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Resale ISDN
636	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - LNP Standalone
637	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - INP Standalone
638	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop Design
639	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop Non-Design
640	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/LNP Design
641	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
642	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/INP Design
643	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - 2 w Analog Loop w/INP Non Design
644	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Digital Loop < DS1

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
645	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Digital Loop ≥ DS1
646	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Switch ports
647	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Combo Other
648	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
649	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
650	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE ISDN (includes UDC)
651	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Line Sharing
652	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - Local Transport
653	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Line Splitting
654	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Other Design
655	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - UNE Other Non Design
656	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Dispatch < 10 - EELs
657	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Residence
658	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Business
659	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Design
660	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale PBX
661	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale Centrex
662	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Resale ISDN
663	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - LNP Standalone
664	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - INP Standalone

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
665	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop Design
666	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
667	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
668	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
669	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
670	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
671	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
672	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
673	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Switch ports
674	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Combo Other
675	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
676	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning
677	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
678	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Line Sharing
679	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - Local Transport
680	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Line Splitting
681	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Other Design
682	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - UNE Other Non Design
683	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch ≥ 10 - EELs
684	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
685	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo
686	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Residence
687	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Business
688	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Design
689	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale PBX
690	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale Centrex
691	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Resale ISDN
692	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - LNP Standalone
693	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - INP Standalone
694	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop Design
695	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop Non-Design
696	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
697	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
698	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
699	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
700	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Digital Loop < DS1
701	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
702	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Switch ports
703	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Combo Other
704	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) w/o conditioning
705	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL) with conditioning

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
706	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE ISDN (includes UDC)
707	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Line Sharing
708	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - Local Transport
709	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Line Splitting
710	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Other Design
711	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - UNE Other Non Design
712	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch < 10 - EELs
713	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
714	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
715	P-4A Average Order Completion and Completion Notice Interval (AOCCNI) Distribution - Local Interconnection Trunks
716	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL1 IDLC
717	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL1 Non Time Specific
718	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Interval SL 1 Time Specific
719	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 IDLC
720	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 Time Non Specific
721	P-7A Coordinated Customer Conversions Hot Cuts Timeliness Percent within Interval and Average Inter-val SL2 Time Specific
722	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Design - Dispatch
723	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Design - Non Dispatch
724	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Non Design - Dispatch
725	P-7C Coordinated Customer Conversions - Percent Provisioning Troubles Rec w/in 7 days of a completed Service Order - UNE Loops Non Design - Non Dispatch
726	P-7 Coordinated Customer Conversions Internal Unbundles Loops with INP
727	P-7 Coordinated Customer Conversions Internal Unbundles Loops with LNP

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
728	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc ADSL
729	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc HDSL
730	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc Other
731	P-8 Cooperative Acceptance Testing - Percent of xDSL Loc UNE UCL
732	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Residence
733	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Business
734	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Design
735	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale PBX
736	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale Centrex
737	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Resale ISDN
738	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - LNP Standalone
739	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - INP Standalone
740	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop Design
741	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop Non-Design
742	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
743	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
744	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
745	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
746	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Digital Loop < DS1
747	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
748	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Switch ports
749	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Combo Other

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
750	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL)
751	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE ISDN (includes UDC)
752	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Line Sharing
753	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - Local Transport
754	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Line Splitting
755	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Other Design
756	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - UNE Other Non Design
757	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch ≥ 10 - EELs
758	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Residence
759	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Business
760	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Design
761	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale PBX
762	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale Centrex
763	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Resale ISDN
764	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - LNP Standalone
765	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - INP Standalone
766	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop Design
767	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop Non-Design
768	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/LNP Design
769	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
770	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/INP Design

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
771	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - 2 w Analog Loop w/INP Non Design
772	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Digital Loop < DS1
773	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Digital Loop ≥ DS1
774	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Switch ports
775	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Combo Other
776	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL)
777	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE ISDN (includes UDC)
778	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Line Sharing
779	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - Local Transport
780	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Line Splitting
781	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Other Design
782	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - UNE Other Non Design
783	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Dispatch < 10 - EELs
784	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Residence
785	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Business
786	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Design
787	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale PBX
788	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale Centrex
789	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Resale ISDN
790	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - LNP Standalone
791	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - INP Standalone

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
792	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop Design
793	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop Non-Design
794	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Design
795	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/LNP Non Design
796	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Design
797	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - 2 w Analog Loop w/INP Non Design
798	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Digital Loop < DS1
799	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Digital Loop ≥ DS1
800	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Switch ports
801	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Combo Other
802	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE xDSL (ADSL, HDSL, UCL)
803	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE ISDN (includes UDC)
804	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Line Sharing
805	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - Local Transport
806	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Line Splitting
807	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Other Design
808	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - UNE Other Non Design
809	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch ≥ 10 - EELs
810	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Dispatch in ≥ 10 - UNE Loop and Port Combo
811	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Switch Based ≥ 10 - UNE Loop and Port Combo

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
812	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Residence
813	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Business
814	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Design
815	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale PBX
816	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale Centrex
817	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Resale ISDN
818	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - LNP Standalone
819	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - INP Standalone
820	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop Design
821	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop Non-Design
822	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/LNP Design
823	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/LNP Non Design
824	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/INP Design
825	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - 2 w Analog Loop w/INP Non Design
826	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Digital Loop < DS1
827	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Digital Loop ≥ DS1
828	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Switch ports
829	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Combo Other
830	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE xDSL (ADSL, HDSL, UCL)
831	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE ISDN (includes UDC)
832	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Line Sharing

Table B-2: Tier 2 Submetrics (Continued)

Item No.	Tier 2 Sub Metrics
833	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - Local Transport
834	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Line Splitting
835	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Other Design
836	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - UNE Other Non Design
837	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch < 10 - EELs
838	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Dispatch in < 10 - UNE Loop and Port Combo
839	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion Non-Dispatch Switch Based < 10 - UNE Loop and Port Combo
840	P-9 Percent Provisioning Troubles w/in 30 days of Service Order Completion - Local Interconnection Trunks
841	P-11 Service Order Accuracy - Resale
842	P-11 Service Order Accuracy - UNE
843	P-11 Service Order Accuracy - UNE-P
844	PO-1 Loop Makeup - Average Response Time - Manual
845	PO-2 Loop Makeup - Average Response Time - Electronic
846	TGP-1 Trunk Group Performance ALEC Aggregate

Appendix C: Statistical Properties and Definitions

The statistical process for testing whether BellSouth's (BST) wholesale customers (alternative local exchange carriers or ALECs) 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 four types of measures.

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
- Trimming

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 ALEC 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 make 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 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.

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.
- 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 ALEC 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 conditions 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."

Measurement Types

The performance measurements that will undergo testing are of four types: mean, ratio, proportion, and rate. All four 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
Ratio	
Proportion	Counts
Rate	

2. Testing Methodology – The Truncated Z

The calculation of the Truncated Z statistic is described in Appendix A of the "Louisiana Statistician's Report." The methodology described in this document is the same as that described in the "Statistician's Report;" however, this document contains extra technical details to avoid undefined situations when programming the technique.

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 ALEC 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 sum of the truncated statistics is calculated where a cell's weight depends on the volume of BST and ALEC orders in the cell. The weighted sum is standardized by the subtracting theoretical mean of the truncated distribution, and this is divided by the standard error of the weighted sum. Summaries based on measurement type are given for the calculation of the cell Z statistic.

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 ALEC transactions. This statistic is an adjustment to the modified z statistic in order to make the assumption that the statistic is approximately normally distributed more reasonable even for fairly small sample sizes. The adjusted, asymmetric t statistic is part of the methodology described in the "Statistician's Report," and it has been documented for the statistical community in the August 2001 issue of The American Statistician,[1] a peer review statistics journal. The statistic was created for mean performance measure parity tests in order to reduce the number of permutation tests needed for calculating cell statistics. Several sets of BST/CLEC mean measure data from Louisiana were examined in order to determine when the adjustment results give approximately the same results as a permutation test. The result is that a permutation test is used when one or both of the BST and ALEC sample sizes is less than seven. The adjusted, asymmetric t statistic and the permutation calculation are described below.

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, the hypergeometric distribution is the exact permutation 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 the rate measure customer trouble report rate there are a fixed number of access lines in service for the ALEC, b_{2j}, and a fixed number for BST, b_{1j}. The modeling assumption is that the occurrence of a trouble is independent between access lines, and the number of troubles in b access lines follows a Poisson distribution with mean λ_b where λ is the probability of a trouble per 1 access line and b ($= b_{1j} + b_{2j}$) is the total number of access lines in service. The exact permutation distribution for this situation is the binomial distribution (the limit for the hypergeometric distribution) that is based on the total number of BST and ALEC troubles, n, and the proportion of BST access lines in service, $q_j = b_{1j}/b$

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1. Balkin, S. D. and Mallows, C. L. (2001), "An Adjusted, Asymmetric Two-Sample t Test," The American Statistician, 55, 203-206.

In an adjustment cell, if the number of ALEC troubles is greater than 15 and the number of BST troubles is greater than 15, and $n_{ij}q_{ij}(1-q_{ij}) > 9$, then a normal approximation can be used. 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 ALEC troubles can be modeled using a binomial distribution with n equal to the total number of troubles (ALEC plus BST troubles.) In this case, the moments for the truncated Z are calculated explicitly using the binomial distribution.

Ratio Measures

The current plan contains no measures that call for the use of a Z parity statistic.

Appendix D: Statistical Formulas and Technical Description

We start by assuming that any necessary trimming[2] of the data is complete, and that the data are disaggregated so that the comparison are made within appropiiate classes or adjustment cells that define "like" observations.

This section contains information on the following:

- Notation and Exact Testing Distributions
- Calculating the Truncated Z
- Balancing Critical Value

1. Notation and Exact Testing Distributions

The basic notation for the construction of the truncated z statistic is detailed below. In these notations the word "cell" should be taken to mean a like-to-like comparison cell that has both of the following:

- one (or more) ILEC observations
- one (or more) ALEC observations

L = the total number of occupied cells

j = 1, . . . ,L; and index for the cells

n_{1j} = the number of ILEC transactions in cell j

n_{2j} = the number of ALEC transactions in cell j

n_j = the total number of transactions in cell j; $n_{1j} + n_{2j}$

X_{1jk}= individual ILEC transactions in cell j; $k = 1, \ldots, n_{1j}$

X_{2jk}= individual ALEC transactions in cell j; $k = 1, \ldots, n_{2j}$

Y_{jk} = individual transactions (both ILEC and ALEC) in cell j

$$= \begin{cases} X_{1jk} & k = 1, K, n_{1j} \\ X_{2jk} & k = n_{1j}+1, K, n_j \end{cases}$$

$\Phi^{-1}(.)$=the inverse of the cumulative standard normal distribution function

In addition to this basic notation, additional notation is necessary for mean and ratio measures. This additional notation, and the notation needed for proportional and rate measures, is given in the following sections.

2. When it is determined that a measure should be trimmed, trim the ILEC observations to the largest ALEC value from all ALEC observations in the month under consideration. That is, no ALEC values are removed; all ILEC observations greater than the largest ALEC observation are trimmed.

Additional Notation for Mean Measures

For mean performance measures, the following additional notation is needed.

$\overline{X}_{1j}$ = the ILEC sample mean of cell j

$\overline{X}_{2j}$ = the ALEC sample mean of cell j

s^2_{1j} = the ILEC sample variance in cell j

s^2_{2j} = the ALEC sample variance in cell j

$\{Y_{jk}\}$= a random sample of size n_{2j} from the set of $Y_{j1}, \ldots, Y_{jn}$; $k = 1, \ldots, n_{2j}$

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 ALEC 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

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

and the corresponding cumulative permutation distribution is

$$CPM(t) = P(\sum_k y_{jk} \le t) = \frac{\textit{the number of samples with sum } \le t}{M_j}$$

Notation for Proportion Measures

For proportion 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 ALEC 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

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

and the cumulative hypergeometric distribution is

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

Notation for Rate Measures

For rate measures, the notation needed is defined as:

b_{1j} = the number of ILEC base elements in cell j

b_{2j} = the number of ALEC base elements in cell j

b_j = the total number of base elements in cell j; $b_{1j} + b_{2j}$

$\ddot{r}_{1j}$ = the ILED sample rate of cell j; $n_{1j} \div b_{1j}$

$\ddot{r}_{2j}$ = the ILED sample rate of cell j; $n_{2j} \div b_{2j}$

q_j = the relative proportion of ILEC elements for cell j; $b_{1j} \div b_j$

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

$$BN(k) = P(B = k) = \begin{cases} \binom{n_j}{k} q_j^k (1 - q_j)^{n_j - k}, & 0 \le k \le n_j \\ 0 & \text{otherwise} \end{cases}$$

and the cumulative binomial distribution is

$$CBN(x) = P(B \le x) = \begin{cases} 0 & x < 0 \\ \sum_{k=0}^{x} BN(k), & 0 \le x \le n_j \\ 1 & x > n_j \end{cases}$$

2. Calculating the Truncated Z

The general methodology for calculating an aggregate level test statistic is outlined below. More detailed instructions follow.

- Calculate Cell Weights (Wj)
- Calculate Zj
- Obtain a Truncated Z Value for Each Cell (Z*j)
- Calculate the Theoretical Mean and Variance
- Calculate the Aggregate Test Statistic, ZT

Calculate Cell Weights (W_j)

To 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 formula depends on the type of measure. The formulas for each type of measure are given below.

W_j for Mean Measures

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

In the special case where all BST and ALEC values in a cell are identical, the weight must be reset to zero, that is $W_j = 0$. For more information, see "Calculate Zj" on page 6.

W_j for Proportion Measures

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

W_j for Rate Measures

$$W_j = \sqrt{\frac{b_{1j}b_{2j}}{b_j} \cdot \frac{n_j}{b_j}}$$

Calculate Z_j

In each cell calculate a Z statistic, Zj, which has mean 0 and variance 1 under the null hypothesis. The formula for the test statistic depends on the type of measure.

Mean Measure

Use the conditions in the following table to determine the method for calculating Z_j. Details of each solution are given below.

Condition 1	Condition 2	Condition 3	Solution
$s^2_{1j} = 0$	$s^2_{2j} = 0$	$\overline{X}_{1j} = \overline{X}_{2j}$ †	Set $Z_j = 0$ and reset $W_j = 0$.
		$\overline{X}_{1j} \neq \overline{X}_{2j}$	Permutation Test, See Solution 1
	$s^2_{2j} > 0$	NA	
$s^2_{1j} > 0$	$\min(n_{1j}, n_{2j}) \le 6$	NA	
	$\min(n_{1j}, n_{2j}) > 6$	NA	"t" Test, See Solution 2

† All values in the cell, from BellSouth and the ALEC, are the same.

Solution 1: Permutation Test

The type of permutation test will depend on M_j, the total number of distinct pairs of samples of size n_{1j} and n_{2j}.

a) $M_j \le 1000$, Perform an Exact Permutation Test

i) Calculate the sample sum for all possible samples of size n_{2j}.

ii) Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.

iii) Let R_0 be the rank of the observed sample sum with respect to all the sample sums.

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

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

b) $M_j > 1000$, Perform a Random Permutation Test

i) Draw a random sample of 1,000 sample sums from the permutation distribution.

ii) Add the observed sample sum to the list. There is a total of 1001 sample sums.

iii) Rank the sample sums from smallest to largest. Ties are dealt by using average ranks.

vi) Let R_0 be the rank of the observed sample sum with respect to all the sample sums.

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

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

Solution 2: Adjusted Asymmetric "t" Test

i) $t_j = \frac{\bar{X}_{1j} - \bar{X}_{2j}}{s_{1j}\sqrt{\frac{1}{n_{1j}} + \frac{1}{n_{2j}}}}$ This is the "modified Z" statistic.

ii) Find g, the median value of all values of

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

over all cells within the submeasure being tested such that all three conditions stated below are true. If no submeasure cells exist that satisfy these conditions, then $g = 0$.

$\gamma_{1j} > 0$

$n_{1j} > 6$

$n_{1j} \ge n_{3q}$, where n_{3q} is the 3 quartile of all n_{1j} in cells where the first two conditions are true.

iii) If g = 0, skip this step. Otherwise, calculate

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

$$\text{iv)}\quad T_j = \begin{cases} t_j & g = 0 \\ t_j + \frac{g}{6}\left(\frac{n_{1j}+2n_{2j}}{\sqrt{n_{1j}\,n_{2j}(n_{1j}+n_{2j})}}\right)\left(t_j^2 + \frac{n_{2j}-n_{1j}}{n_{1j}+2n_{2j}}\right) & g > 0, t_j \geq t_{\min j} \\ t_j + \frac{g}{6}\left(\frac{n_{1j}+2n_{2j}}{\sqrt{n_{1j}\,n_{2j}(n_{1j}+n_{2j})}}\right)\left(t_{\min j}^2 + \frac{n_{2j}-n_{1j}}{n_{1j}+2n_{2j}}\right) & g > 0, t_j < t_{\min j} \end{cases}$$

v) $\alpha = P(t_{n_{1j}-1} \leq T_j)$

That is, α is the probability that a t random variable with n_{1j} - 1 degrees of freedom, is less than T_j.

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

Proportion Measure

Use the conditions in the following table to determine the method for calculating Z_j.

Condition 1	Condition 2	Condition 3	Solution
$W_j = 0$	NA	NA	$Z_j = 0$
$W_j > 0$	$L = 1$	$\min\left\{a_{1j}\left(1-\frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1-\frac{a_{2j}}{n_{2j}}\right)\right\} \le 9$	Use the exact hypergeometric test: $\alpha = CHG(a_{1j})$ $Z_j = \Phi^{-1}(\alpha)$
		$\min\left\{a_{1j}\left(1-\frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1-\frac{a_{2j}}{n_{2j}}\right)\right\} > 9$	Use the standardize hypergeometric Z score $Z_j = \frac{n_j a_{1j} - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}$
	$L > 1$	NA	

Rate Measure

Use the conditions in the following table to determine the method for calculating Z_j.

Condition 1	Condition 2	Condition 3	Solution
$W_j = 0$	NA	NA	$Z_j = 0$
$W_j > 0$	$L = 1$	$\min(n_{1j}, n_{2j}) \le 15$ or $n_j q_j(1-q_j) \le 9$	Use the exact binomial test: $\alpha = CBN(a_{1j})$ $Z_j = \Phi^{-1}(\alpha)$
		$\{\min(n_{1j}, n_{2j}) > 15,\ n_j q_j(1-q_j) > 9\}$	Use the standardize binomial Z score $Z_j = \frac{n_{1j} - n_j q_j}{\sqrt{n_j q_j(1-q_j)}}$
	$L > 1$	NA	

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. However, if there is only one cell, this is unnecessary. Mathematically, this is written as

$$Z^*_j = \begin{cases} Z_j & L = 1 \\ \min(0, Z_j) & \text{otherwise} \end{cases}$$

Recall that L is the total number of occupied cells with positive weight for the test.

Calculate the Theoretical Mean and Variance

Calculate the Theoretical Mean and Variance of the Truncated Statistic Under the Null Hypothesis of Parity. To compensate for the truncation in Obtain a Truncated Z Value for Each Cell (Z*j) an aggregated, weighted sum of the Z^*_j must be centered and scaled properly so that the final aggregate statistic follows a standard normal distribution.

Note: If there is only one occupied cell with positive weight, that is, L = 1, then the following calculations are not needed.

There are three possibilities in this procedure:

1. If $W_j = 0$, then no evidence of favoritism is contained in the cell. The formula for calculating

   $E(Z^*_j|H_0)$ and $Var(Z^*_j|H_0)$ cannot be used. Set both equal to 0.

2. If one of the following statements in the 'If' column is true, use the formulas in the 'Then' column.

Measure Type	If	Then
Mean	$\min(n_{1j}, n_{2j}) > 6$ and $s^2_{1j} > 0$	$E(Z^*_j \mid H_0) = -\frac{1}{\sqrt{2\pi}}$
Proportion	$\min\left\{a_{1j}\left(1-\frac{a_{1j}}{n_{1j}}\right), a_{2j}\left(1-\frac{a_{2j}}{n_{2j}}\right)\right\} > 9$	and
Rate	$\min(n_{1j}, n_{2j}) > 15$ and $n_j q_j (1-q_j) > 9$	$Var(Z^*_j \mid H_0) = \frac{1}{2} - \frac{1}{2\pi}$

3. 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.

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

The actual value of z and θ depends on the type of measure. Use the table below to calculate z and θ.

Measure Type	Formulas
Mean	$N_j = \min(M_j, 1{,}000), \; i = 1, K, N_j$ $z_{ji} = \min\left\{0, \Phi^{-1}\left(1 - \frac{R_i - 0.5}{N_j}\right)\right\}$ where R_i is the rank of sample sum i $\theta_j = \frac{1}{N_j}$
Proportion	$z_{ji} = \min\left\{0, \frac{n_j i - n_{1j} a_j}{\sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j - 1}}}\right\}, \quad i = \max(0, a_j - n_{2j}), K, \min(a_j, n_{1j})$ $\theta_{ji} = HG(i)$
Rate	$z_{ji} = \min\left\{0, \frac{i - n_j q_j}{\sqrt{n_j q_j (1 - q_j)}}\right\}, \quad i = 0, K, n_j$ $\theta_{ji} = BN(i)$

Calculate the Aggregate Test Statistic, Z^T

Calculate the aggregate test statistic, Z^T, using the following formula.

$$Z^T = \begin{cases} Z_1 & L = 1 \\ \dfrac{\sum_j W_j Z_j^* - \sum_j W_j E(Z_j^* | H_0)}{\sqrt{\sum_j W_j^2 Var(Z_j^* | H_0)}} & \text{otherwise} \end{cases}$$

3. Balancing Critical Value

There are four key elements of the statistical testing process:

Symbol	Element	Description
H_0	Null hypothesis	parity exists between ILEC and ALEC services
H_a	alternative hypothesis	the ILEC is giving better service to its own customers
Z^T	truncated Z statistic	
c	critical value	

The decision rule[3] using these elements is summarized below.

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

There are two types of errors 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 error are:

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

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

$$c_B = \frac{E(Z^T \mid H_a) - E(Z^T \mid H_0)}{SE(Z^T \mid H_a) + SE(Z^T \mid H_0)}$$

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

when Z^T is approximately normally distributed. The derivation of the components of this equation depends on the form of the null and alternative hypotheses, as well as other factors.

Test Hypotheses

Measure Type	Null Hypothesis, H_0	Alternative Hypothesis, H_a
Mean	$\mu_{1j} = \mu_{2j}, \sigma_{1j}^2 = \sigma_{2j}^2$	$\mu_{2j} = \mu_{1j} + \delta_j \cdot \sigma_{1j}, \sigma_{2j}^2 = \lambda_j \cdot \sigma_{1j}^2\ \delta_j > 0, \lambda_j \geq 1$
Proportion	$p_{2j} = p_{1j}$	$\arcsin(\sqrt{p_{2j}}) - \arcsin(\sqrt{p_{1j}}) = \frac{\delta_j}{2}$
Rate	$r_{2j} = r_{1j}$	$\sqrt{r_{2j}} - \sqrt{r_{1j}} = \frac{\delta_j}{2}$

Determining the Parameters of the Alternative Hypothesis

Parameter Choices for δ_j – set of parameters δ_j are important because they directly index differences in service. The Florida commission staff has chosen to use one value across all cells for a submeasure test ($\delta_j = \delta$). The value of δ will be based on the effective number of ALEC transaction used in the test. The following formulae will be used to determine δ.

1) $$\Omega_j = \begin{cases} \dfrac{W_j}{\sqrt{\frac{n_{1j} n_{2j}}{n_j}}} & \text{mean or proportion measure} \\ \dfrac{W_j}{\sqrt{\frac{b_{1j} b_{2j}}{b_j}}} & \text{rate measure} \end{cases}$$

2) $$n_e = \frac{\left(\sum_j \Omega_j n_{2j}\right)^2}{\sum_j \Omega_j^2 n_{2j}}$$

Note, that given the definition of W_j for mean measures, Ωj is either 0 or 1. Thus, n_e for mean measures is the total number of ALEC transactions across cells with positive weight. Also, when there is only one occupied cell with positive weight, then $n_e = n_{2j}$, the ALEC sample size in the single cell.

3) $$\delta = \left(\frac{4}{n_e^2}\right)^{0.155}$$

Parameter Choices for λ_j – set of parameters λ_j index alternatives to the mean measure null hypothesis that arise because there might be greater unpredictability or variability in the delivery of service to an ALEC 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 test 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. Hence,

$$\lambda_j = 1 \quad j = 1, K\ , L$$

Calculate the Mean and Standard Error of Z_j Under the Alternative Hypothesis

Let m_j and se_j be the mean and standard error of Z_j under the alternative hypothesis. The distribution of the cell statistic depends on the measurement type.

Mean Measure

Z_j is approximately normally distributed with mean 0 and standard error 1 under the null hypotheses. Under the alternative hypothesis, the distribution is approximately normal with mean and variance given in the table below.

Proportion Measure

In this case, Z_j is approximately the same as

$$Z = \frac{\arcsin\left(\sqrt{\frac{a_{1j}}{n_{1j}}}\right) - \arcsin\left(\sqrt{\frac{a_{2j}}{n_{2j}}}\right)}{\frac{1}{2}\sqrt{\frac{1}{n_{1j}} + \frac{1}{n_{2j}}}}$$

which is approximately normally distributed with mean 0 and standard error 1 under the null hypotheses. Under the alternative hypothesis, the distribution is approximately normal with mean and standard error given in the table below.

Rate Measure

In this case, Z_j is approximately the same as

$$Z = \frac{\sqrt{\frac{n_{1j}}{b_{1j}}} - \sqrt{\frac{n_{2j}}{b_{2j}}}}{\frac{1}{2}\sqrt{\frac{1}{b_{1j}} + \frac{1}{b_{2j}}}}$$

which is approximately normally distributed with mean 0 and standard error 1 under the null hypotheses. Note that this statistic is approximately the same as

$$Z = \frac{\arcsin\left(\sqrt{\frac{n_{1j}}{b_{1j}}}\right) - \arcsin\left(\sqrt{\frac{n_{2j}}{b_{2j}}}\right)}{\frac{1}{2}\sqrt{\frac{1}{b_{1j}} + \frac{1}{b_{2j}}}}$$

when the BST and CLEC sample rates are close to 0. Under the alternative hypothesis, the distribution is approximately normal with mean and standard error given in the table below.

Measure Type	m_j	se_j
Mean	$-\delta\sqrt{\frac{n_{1j}n_{2j}}{n_{1j}+n_{2j}}}$	1
Proportion		
Rate	$-\delta\sqrt{\frac{b_{1j}b_{2j}}{b_{1j}+b_{2j}}}$	

Calculate the Critical Value

Single Cell Test (L = 1)

$c_B = \frac{m_j}{se_j+1} = \frac{m_j}{2}$ since $se_j = 1$ in all cases.

Multi-Cell Tests (L > 1)

Calculate the critical value according to the following procedure.

1. Calculate the theoretical mean and variance of the truncated statistic under the null hypothesis of parity, $E(Z_j^*|H_0)$ and $Var(Z_j^*|H_0)$, within each cell.

Condition	$E(Z_j^*\|H_0)$	$Var(Z_j^*\|H_0)$
$W_j = 0$	0	0
$W_j > 0$	$-\frac{1}{\sqrt{2\pi}}$	$\frac{1}{2}-\frac{1}{2\pi}$

2. Calculate the theoretical mean and variance of the truncated statistic under the alternative hypothesis, $E(Z_j^*|H_a)$ and $Var(Z_j^*|H_a)$, within each cell.

Condition	$E(Z_j^*\|H_a)$	$Var(Z_j^*\|H_a)$
$W_j = 0$	0	0
$W_j > 0$	$m_j\Phi(-m_j) - \phi(-m_j)$	$(m_j^2 + 1)\Phi(-m_j) - m_j\phi(-m_j) - E(Z_j^* \mid H_a)^2$

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

3. $$c_B = \frac{\sum_j W_j E(Z_j^* \mid H_a) - \sum_j W_j E(Z_j^* \mid H_0)}{\sqrt{\sum_j W_j^2 Var(Z_j^* \mid H_a)} + \sqrt{\sum_j W_j^2 Var(Z_j^* \mid H_0)}}$$

Appendix E: BST SEEM Remedy Calculation Procedures

BST SEEM Remedy Procedure

1. Tier-1 Calculation For Retail Analogues

1. Calculate the overall test statistic for each ALEC; z^T_{ALEC-1} (Per Statistical Methodology - by Dr. Mulrow)
2. Calculate the balancing critical value (${}^cB_{ALEC-1}$) that is associated with the alternative hypothesis (for fixed parameters δ, Ψ, or ε)
3. If the overall test statistic is equal to or above the balancing critical value, stop here. That is, if ${}^cB_{ALEC-1} < z^T_{ALEC-1}$, stop here. Otherwise, go to step 4.
4. Calculate the Parity Gap by subtracting the value of step 2 from that of step 1. ABS (z^T_{ALEC-1} - ${}^cB_{ALEC-1}$)
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_{ALEC-1} - ${}^cB_{ALEC-1}$) / 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 $ALEC_{-1}$ Volume (I_c) in the negatively affected cell; where the cell value is negative.
7. Calculate the payment to ALEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule.
8. Then, ALEC-1 payment = Affected $Volume_{ALEC1}$ * $$from Fee Schedule

Example: ALEC-1 Missed Installation Appointments (MIA) Non-dispatch <10 Resale Residence

Note – the statistical results are only illustrative. They are not a result of a statistical test of this data.

	n_I	N_C	I_c	MIA_I	MIA_C	z^T_{ALEC-1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	96	9%	16%	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-1}				
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				2
										29

where n_I = ILEC observations and n_C = ALEC-1 observations

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

Example: ALEC-1 Average Order Completion Interval (OCI) and Completion Notice Interval (AOCCNI) Distribution Non-dispatch <10 Resale Residence

	n_I	n_C	I_c	OCI_I	OCI_C	z^T_{ALEC-1}	C_B	Parity Gap	Volume Proportion	Affected Volume
State	50000	600	600	5days	7days	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-1}				
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 = ALEC-1 observations

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

2. Tier-2 Calculation For Retail Analogues

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 as outlined in steps 2 through 6 for the ALEC Aggregate performance. Determine average monthly affected volume for the rolling 3-month period.
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

Example: ALEC-A Missed Installation Appointments (MIA) Non-disptach <10 Resale Residence

State	n_I	n_C	I_c	MIA_I	MIA_C	z^T_{ALEC-A}	C_B	Parity Gap	Volume Proportion	Affected Volume
Month 1	180000	2100	336	9%	16%	-1.92	-0.21	1.71	0.4275	
Cell						z_{ALEC-A}				
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 = ALEC-A observations

If the affected volume for month one is as calculated above, the total payout would be:
99 units * $300/unit = $29,700

Assume the calculated amounts for months two and three are $30,600 and $28,500, respectively, then:

Example: ALEC-A Missed Installation Appointments for 1Q00

State	Miss	Remedy Dollars
Month 1	X	$29,700
Month 2	X	$30,600
Month 3	X	$28,500
1Q00		$29,600

3. Tier-1 Calculation For Benchmarks

1. For each ALEC, with five or more observations, calculate monthly performance results for the State.
2. ALECs 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
5	60.00%	80.00%
6	66.67%	83.33%
7	71.43%	85.71%
8	75.00%	75.00%
9	66.67%	77.78%
10	70.00%	80.00%
11	72.73%	81.82%
12	75.00%	83.33%
13	76.92%	84.62%
14	78.57%	85.71%
15	73.33%	86.67%
16	75.00%	87.50%
17	76.47%	82.35%

Sample Size	Equivalent 90% Benchmark	Equivalent 95% Benchmark
18	77.78%	83.33%
19	78.95%	84.21%
20	80.00%	85.00%
21	76.19%	85.71%
22	77.27%	86.36%
23	78.26%	86.96%
24	79.17%	87.50%
25	80.00%	88.00%
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 ALEC-$_1$ Volume.
6. Calculate the payment to ALEC-1 by multiplying the result of step 5 by the appropriate dollar amount from the fee schedule.
7. ALEC-1 payment = Affected Volume$_{ALEC-1}$ * $$from Fee Schedule

Example: ALEC-1 Percent Missed Due Dates for Collocations

	n_C	Benchmark	MIA_C	Volume Proportion	Affected Volume
State	600	10%	13%	.03	18

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

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

1. For each ALEC with five or more observations calculate monthly performance results for the State.
2. ALECs having observations (sample sizes) between 5 and 30 will use Table 1 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 $ALEC_{-1}$ Volume.
7. Calculate the payment to ALEC-1 by multiplying the result of step 6 by the appropriate dollar amount from the fee schedule.

ALEC-1 payment = Affected $Volume_{ALEC1}$ * $$from Fee Schedule

Example: ALEC-1 Reject Timeliness

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

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

5. Tier-2 Calculations For Benchmarks

Tier-2 calculations for benchmark measures are the same as the Tier-1 benchmark calculations, except the ALEC Aggregate data having failed for three months.

BellSouth Telecommunications, Inc.
Florida Public Service Commission
Docket No. 000121A-TP
Exhibit 3

Transaction Based Penalty Calculation Methodology

In a July 29, 2002 Florida Public Service Commission (FPSC) Memorandum, FPSC staff members ask for comments and suggestions related to incorporating the severity of a test failure into the remedy plan. While there are no limitations on the types of ideas that parties can provide, the staff members do request input for certain areas, which we summarize as follows:

- The extent of a failure (or disparity, severity):
  - Is there a way to determine the number of disparate transactions subject to penalty payments?
  - In what ways can disparity be measured?
    - e.g. ratios measures, difference measures
- Remedy payment calculations
  - Can a remedy plan incorporate the extent of the disparity?
  - Should payments be linear or non-linear functions of the disparity measure?
  - Should a measure's relative importance, used in computing a remedy payment, be adjusted by considering other factors, e.g. the number of transactions?

In eight states in BellSouth's region, remedy payments are paid on transactions that are determined to be out of compliance. The methodology for determining the number of disparate transactions relies on a linear function of a measure of disparity called the parity gap. The parity gap is the difference between the truncated z statistic and the balancing critical value. The remedy is paid on each out-of-compliance transaction, and the value of the per-transaction penalty amount depends on the type of submeasure that has failed. BellSouth's proposed SEEM plan and remedy calculation address the issues that the staff wants to consider. Since the Commission does express an interest in a transaction based remedy plan, BellSouth is proposing a plan founded on the same basic concepts, but based on a more sound methodology.

The basic concept that is central to BellSouth's approach is one that is used in Southwestern Bell's Texas plan. Under that plan the number of ALEC transactions that need to be "changed-for-the-better" in order for the ILEC to pass the parity test for a submetric is computed for the number of disparate transaction that should be remedied. For example, if the submetric is percent missed installations, the number ALEC "missed" transactions that should be "changed" to non-misses is determined. The basic computation involves equating the modified z statistic to the critical value, and solving for the number of the ALEC transactions, holding all other values fixed.[1] Finding this solution is a matter of simple algebra.

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[1] Strictly speaking, the total number of "misses" between the ILEC and ALEC is held fixed, and one finds the allocation of "misses" between ILEC and ALEC that makes the z-score equal to the critical value. The

In contrast, BellSouth's Florida SEEM plan uses a truncated z-statistic that aggregates the results of cell level modified z statistics. In comparing the plans in Texas and BellSouth's proposal for Florida, the truncated z methodology used in the BellSouth proposal seeks to reduce statistical bias that may exist in the simpler modified z of the Texas plan due to the lack of control over important confounding factors (such as wire center or type of service). The computation of the number of transactions that need to be "changed-for-the-better" (or number of disparate transactions) becomes more difficult, especially as the number of cells aggregated in the test increases. We will show below a theoretical solution to this problem that is a well-known operations research technique called a "Linear Program." Linear program (LP) software is available for solving these problems, but a computer may not be able to arrive at the solution to a "large" LP due to limitations on physical memory.

For the linear program that solves for the number of disparate transactions, the number of cells that have negative z-scores determines the size of the linear program. We have no control over how many cells this will be. As local telecommunication competition increases in the future the number of cells will grow, and this in turn means that an LP solution to the problem may not always be obtainable. Even with a very powerful computer that is loaded with memory, there will still be LPs with a large number of variables and a large number of constraints that the computer will not be able to finish solving. In essence, the LP solution is well defined but it is simply not viable in a production environment.

However, what we can do with the LP solution is determine the number of disparate transactions for some failed submetrics from past months, and look for relationships between some measures of disparity and the number of disparate transactions. After determining these relationships, we can then develop a surrogate for the LP solution that can be used in a production environment, but also produces the results close to that generated by an LP solution.

Below we discuss the LP method, and show how it works to determine the number of disparate transactions that need to change-for-the-better in order to have the truncated z statistic equal to the balancing critical value. We then look at the relationship between the LP solution and two measures of disparity: BellSouth's parity gap, and the ratio measure of severity described in "A Transactions Based Performance Plan for Florida."[2] Based on the observed relationships, we may be able to conceive of an approach that the staff members may wish to study.

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difference between the observed number of ALEC transactions and the number from this allocation is the number of "changed" ALEC transactions.

[2] *Deposition of Dr. George Ford.* Docket No. 000121-TP, Z-Tel Late Filed Exhibit 2, Part II, p. 2, eq. 3. This style of disparity measure is similar to "effect size" calculations performed in the Meta Analysis field of Statistics.

LP Method

Recall that the truncated z statistic has the following form:

$$Z^{T} = \frac{\sum_{j=1}^{L} W_j z_j - \sum_{j=1}^{L} W_j E_{jo}}{S_o},$$

where

- z_j = the cell j z-score which is truncated to 0 when the z-score is positive,
- W_j = the weight of cell j,
- E_{jo} = the expected value of z_j under the null hypothesis,
- $S_o = \sqrt{\sum_{j=1}^{L} W_j Var(z_j)}$, the standard error of z_j under the null hypothesis, and
- L = the number of cells that will be aggregated for the truncated z statistic.

As described above, we would like to solve for the number of ALEC transactions that would make $Z^T = Val$, some agreed upon value. In the Texas style plan used in many states, *Val* is the critical value of the test because this represents the threshold for passing the test. It is analogous to finding the number of transactions that caused a performance measure to go beyond a benchmark. Other choices of *VAL* are possible, but the choice of the value should be based on a sound concept.

Regardless of the value for *Val*, we would like to determine values z_j^* such that

$$\sum_{j=1}^{L} W_j z_j^* = Val \cdot S_o + \sum_{j=1}^{L} W_j E_{jo}. \qquad (1)$$

In doing this, we will assume that the weights, expected values under the null hypothesis and the standard error under the null hypothesis stay fixed. Once the z_j^* are determined that satisfy (1), we can solve for the number of ALEC transactions that need to be "changed" in order to achieve parity. But, there are a number of ways this can happen. For instance, if there are two cells that are combined for the truncated z, a big change in one of the cells could obtain the desired result, or small changes in each of the two cells could bring about the result. So we need a way to choose between solutions.

One way to choose the solution is to say that you want the solution that generates the largest number of "changed" transactions because this will generate the largest penalty. Thus, our objective is to maximize the number of "changed" ALEC transactions, under the constraint that the truncated z is equal to *Val*.

To make this more concrete, let us consider the rate measure, Customer Trouble Report Rate (CTRR). We will use the following notation:

- n_{1j} = the number of BellSouth troubles that occurred in cell j,
- n_{2j} = the number of ALEC troubles that occurred in cell j,
- $n_j = n_{1j} + n_{2j}$, the total number of troubles in cell j
- b_{1j} = the number of BellSouth lines in service in cell j,
- b_{2j} = the number of ALEC lines in service in cell j,
- $b_j = b_{1j} + b_{2j}$,
- $q_j = \dfrac{b_{1j}}{b_j}$.

Recall that the cell z-score and the cell weight for a rate measure are the following.

$$z_j = \min\left(\frac{n_{1j} - n_j q_j}{\sqrt{n_j q_j (1-q_j)}}, 0\right) = \min\left(\frac{n_j(1-q_j) - n_{2j}}{\sqrt{n_j q_j (1-q_j)}}, 0\right) \tag{2}$$

$$W_j = \sqrt{\frac{b_{1j} b_{2j}}{b_j} \cdot \frac{n_j}{b_j}} \tag{3}$$

Note the following:

1. If we determine z_j^*, the z-score value for cell j in equation (1), then we can solve for

   n_{2j}^* = the number of ALEC troubles that should have occurred in cell j in order to satisfy equation (1),

   in terms of z_j^*, n_j, and q_j.

2. The number of "changed" ALEC troubles in cell j is the difference between the actual number of troubles that did occur and the number that should have occurred, i.e.,

   $$n_{2j} - n_{2j}^*.$$

3. Improvement of a cell z-score amounts to changing the ALEC troubles to non-troubles so that the z-score increases (the value moves from left to right on the number line, i.e., negative values move towards zero, while positive values move away from 0). But since positive initial z-scores are truncated to zero when

forming the truncated z statistic, improvements in positive cells have no effect – the resulting cell z-score, z_j^*, stays at 0. This being the case, the only way to improve the aggregated truncated z statistic is to make improvements in cells where the original cell z-score is negative.

4. A cell weight depends on the total number of troubles in the cell, $n_j = n_{1j} + n_{2j}$. If we do not hold this total fixed as we solve for n_{2j}^* then we may get unexpected results. If n_{2j} decreases to n_{2j}^*, and we allow n_j to decrease as well, then the cell weight (equation (3) above) will decrease. This could result in the truncated z statistic getting worse (movement in the negative direction). Therefore, we hold n_j fixed. If n_{2j} decreases, then n_{1j} must increase. This can be interpreted as saying that given the total number of troubles observed in a cell, the allocation of those troubles in a parity situation should be n_{2j}^* for the ALEC, and $n_{1j}^* = n_j - n_{2j}^*$ for the ILEC.

Let's assume that the failed submeasure of interest has L^{Neg} cells for which z_j is negative, and these are label j = 1,…,L^{Neg}.[3] Then the total number of ALEC troubles that need to be "changed" for the better, referred to as the Total Affected Volume, is

$$TAV = \sum_{j=1}^{L^{Neg}} \left(n_{2j} - n_{2j}^*\right). \qquad (4)$$

Now, suppose that we find values z_j^* in cells $j = 1,\ldots,L^{Neg}$ that satisfy equation (1), then we can used the form of equation (2) to solve for n_{2j}^* in these cells. That is,

$$n_{2j}^* = -\sqrt{n_j q_j (1-q_j)} \cdot z_j^* + n_j (1-q_j).$$

Combining this with equation (4), we can rewrite our objective as a linear function of z_j^*:

$$TAV(z_j^*) = h_1 z_1^* + h_2 z_2^* + \ldots + h_{L^{Neg}} z_{L^{Neg}}^* + H = \sum_{j=1}^{L^{Neg}} h_j z_j^* + H$$

where

$$H = \sum_{j=1}^{L^{Neg}} (n_j q_j - n_{1j}) \text{ and}$$
$$h_j = \sqrt{n_j q_j (1-q_j)} \text{ for } j = 1,\ldots,L^{Neg}$$

[3] For example, suppose the submeasure is disaggregated into 10 cells, and 7 cells have negative cell z-scores. So $L^{Neg} = 7$, and we will assume that the negative cells are j = 1, 2, 3, 4, 5, 6, and 7 while the cells with positive z-scores truncated to 0 are j = 8,9, and 10.

As we have indicated, we will seek to find the set of z_j^* that will maximize the value of $TAV(z_j^*)$, under constraint (1), which can be written as

$$\sum_{j=1}^{L^{Neg}} W_j z_j^* = Val \cdot S_o + \sum_{j=1}^{L} W_j E_{j\mu}$$

It is important to note that the sum of the weighted expected values on the right-hand-side of the equation is across all cells, while the sum on the left-hand-side is only over the negative cells. This occurs because the value of z_j in nonnegative cells is 0, but the cell expected values are not. We see then that this is a constraint that is linear in z_j^* over the negative cells.

There are several other constraints that are implicit in this problem. Namely,

$$\begin{aligned} &z_j^* \geq z_j \text{ for } j = 1,\ldots,L^{Neg}, \text{ and} \\ &z_j^* \leq 0 \text{ for } j = 1,\ldots,L^{Neg} \end{aligned} \qquad (5)$$

These are also linear in z_j^* over the negative cells.

Thus, we have a linear objective function, $TAV(z_j^*)$ which we want to maximize subject to a set of linear constraints. This is known as a "linear program," and algorithms, such as the simplex method, exist for determining the solution.

If we consider a proportion measure instead we will obtain a similar LP. The way in which W_j, $E_{j\sigma}$, and S_o are computed will differ (they are calculated according to the rules for proportion measures (see BellSouth's Florida SEEM plan documentation), and the coefficients of the objective function will be

$$H = \sum_{j=1}^{L^{Neg}} \left(\tfrac{n_{1j}}{n_j} a_j - a_{1j}\right) \text{ and}$$

$$h_j = \sqrt{\frac{n_{1j} n_{2j} a_j (n_j - a_j)}{n_j^2 (n_j - 1)}} \text{ for } j = 1,\ldots,L^{Neg}$$

where

- a_{1j} = the number of ILEC "missed" transactions in cell j
- a_{2j} = the number of ALEC "missed" transactions in cell j
- $a_j = a_{1j} + a_{2j}$, the total number of "missed" transactions in cell j
- n_{1j} = the number of ILEC "missed" transactions in cell j
- n_{2j} = the number of ALEC "missed" transactions in cell j
- $n_j = n_{1j} + n_{2j}$, the total number of "missed" transactions in cell j

It is harder to describe what needs to be done for mean measures. We can still require that we find values of z_i^* that satisfy the set of constraints defined by relationships (1) and (5). But the calculation of the number of values that need to be changed-for-the-better is difficult. The rate and proportion situations involved count variables, but mean variables involve measured variables. As an example, it is easy to conceive of changing a transaction such as the amount of time to complete an order to a better value – you simply make it smaller. However, not only do you need to consider which transactions to change, you also need to consider how much each change transaction should be improved. One concept for this comes from making an analogy with the proportion or rate measures. As was mentioned above, we don't just change the number of ALEC troubles or misses to non-troubles or non-misses, we actually hold the total number of ILEC and ALEC troubles (misses) fixed at the observed value for the cell. We then reallocate the troubles (misses) in a way that satisfies the constraints of the problem. Similarly, we can think of exchanging ILEC and ALEC values until we find a permutation of all the observed values that provides the cell z-score we are after. This is what is done in permutation testing, and it can be very computer intensive. If we needed to do this as well as solve an LP with a large number of constraints, we may not have enough computer time to solve this problem in a production environment. So we cannot easily write down the LP solution for a mean measure, nor solve it, but we can define it conceptually.

As the algorithms and computer capabilities improve, LPs will become easier to solve. However there are still many large LPs which are too complex for even the most powerful computers. It is evident, that an LP solution provides a nice theoretical way of determining the number of disparate transactions given a set of constraints like (1) and (5).[4] But such a solution may not be suitable for the production environment that is needed for administering a remedy plan like SEEM which must quickly and efficiently evaluate millions of retail and ALEC observations. Therefore, we need to look for production-friendly alternatives.

Surrogate Methods

Given that one would like to use an LP to solve for the number of disparate transactions, it is possible to look at the LP solutions for a number of performance measure tests from past months and see if a viable surrogate method can be determined that provides a solution that adequately captures the number of disparate transactions. This can be accomplished, as the commission staff suggests, by looking for ways to measure the disparity of a failed submeasure test.

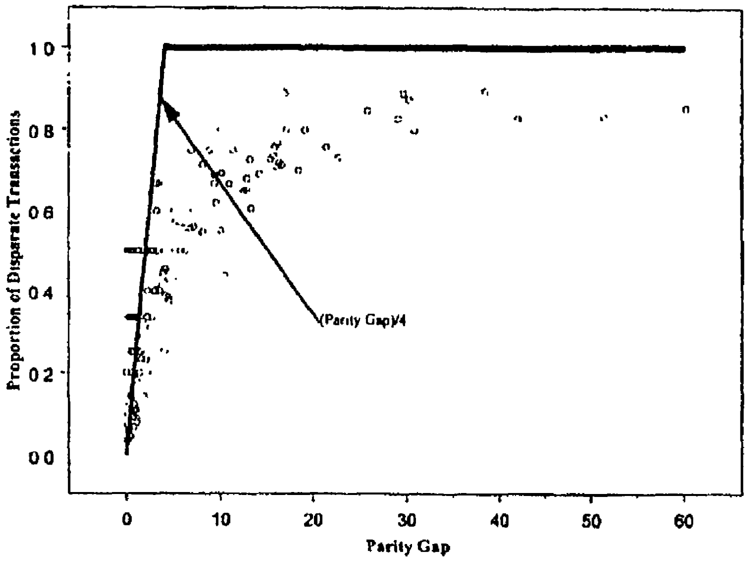
A very simple way of measuring disparity is taking the difference between the critical value and the truncated z statistic, as in the Texas plan. BellSouth calls this measure the

[4] It should be noted that the LP solution would treat the number of troubles (or missed installations) as a real (or floating-point) number, not an integer. If we want to insist that we arrive at an integer solution, we will need to take a little more care in how we define the problem, and used a "Mixed-Integer Program" (MIP) to find the solution. MIPs are far more computer intensive than LPs, and, for the most part, can only solve small to moderate sized problems.

"parity gap." It seems reasonable to assume that as the distance between the critical value and the test statistic gets larger, the severity of the failure is greater, and therefore the number of disparate transactions should increase. This relationship, however, must be relative to the total number of transactions that could be considered disparate. Therefore we would not define a relationship between the parity gap and the number of disparate transactions, but between the parity gap and the proportion of disparate transactions. When the parity gap is small, the proportion of disparate transactions should be small. When the parity gap is large the proportion of disparate transactions should be large. In more mathematical terms, the proportion of disparate transactions should be a monotonically increasing function of the parity gap.

BellSouth chose to use the simplest monotonically increasing function of the parity gap - a simple linear function. The basic calculation is to divide the parity gap by four when the parity gap is less than four to arrive at the proportion of disparate transactions (called the volume proportion). If the parity gap is four or larger, then the volume proportion is one (or 100 percent). To arrive at the final number of disparate transactions that should be remedied, you multiply the volume proportion by the base number of transactions that have the potential to be disparate. BellSouth uses the total number of impacted transactions in cells with negative z-scores because these are the only ones that can be "improved" and have the affect of shrinking the parity gap.

To test whether or not the parity gap captures enough transactions, the results of the method can be compared to the more rigorous LP method. The graphic below is a plot of the parity gap of a submetic test versus the proportion of disparate transactions found by the LP solution for 150 proportion and rates measures from Florida during the months of January, February and March of 2002. Superimposed on this plot is BellSouth's parity gap function. The plot indicates that BellSouth's parity gap function adequately captures the proportion of disparate transactions; requiring that BellSouth pay on a higher proportion of disparate transactions than the LP solution.



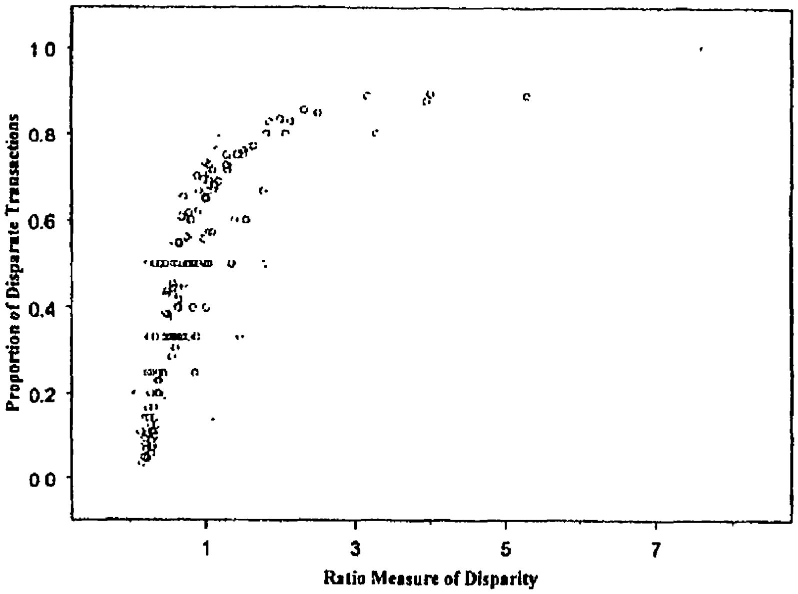
In Mr. Fudge's letter of July 29, 2002, Staff also suggests the consideration of other approaches to a disparity measure than the parity gap. The parity gap can be sensitive to the number of transactions that the truncated z statistic is based upon. This means that two submetric tests, based on different numbers of transactions, but with the same actual disparity, could have different parity gaps and therefore be judged differently in terms of disparity. If we want to avoid this, we should consider a disparity measure that is not affected by sample size. There are many ways to define such a measure like this, but a convenient one that is based on the truncated z calculation is:

$$\hat{d} = \frac{\delta}{2} \frac{Z^{T}}{c}.$$

Here, Z^T is the truncated z statistic for the submetric test, δ is result of evaluating the delta function that Dr. Ford of Z-Tel developed, and c is the critical value that is calculated using the balancing critical value equations with the delta function.

It is possible to look for a surrogate for the LP solution using this ratio measure instead of the parity gap. The graphic below is similar to the parity gap graphic above, but it plots the alternative ratio disparity measure versus the proportion of disparate transactions calculated by the LP solution.

BellSouth Telecommunications, Inc.
Florida Public Service Commission
Docket No. 000121A-TP
Exhibit 3



This graphic exhibits some structure that could be used to define a function of the ratio measure that could be used to determine remedies in a similar way to the parity gap calculation that BellSouth is currently offering.

In conclusion, BellSouth believes that the LP methodology provides justification for the parity gap approach that it uses in many of its states for calculating the number of disparate transactions that are subject to remedy payments. While this is BellSouth's preferred approach to the problem, we are open to exploring other methods for performing the calculation provided that they are practical to implement in the production environment of the SEEM remedy calculation system, and provided that any alternative has its' basis in looking at the more mathematically sound LP solution. BellSouth does not feel that the LP methodology is a viable solution however, because it is not amenable to a production environment.

In Mr. Fudge's letter of July 29, 2002, Staff suggests a reevaluation of the" importance (weights) of submetrics or measures to determine the remedy amounts" and references Dr. Ford's Late filed Exhibit 2, Part II. BellSouth could not find a specific discussion of this topic in the Exhibit but BellSouth does agree the remedy amounts for each measurement should be based on the relative importance of a failure in that measurement. There are a number of measurements in BellSouth's SEEM plan and some of these are clearly more critical than others. The remedy amounts should reflect this relative importance.

Heading	Description
Year	Report Year
Month	Report Month
Measure	Measurement Category
Submetric	Submetric
# Cells	# of Characteristic categories
Z	Aggregated Z Score
BCV	Balancing Critical Value
TIV	Total Impacted Volume
Delta	Material difference
Parity Gap	Z-BCV
ABS(PG)	Absolute Parity Gap
VP_A	Volume Proportion for "divide by 4" method
TAV_A	Total Affected Volume using "divide by 4" method
TAV_LP	Total Affected Volume using Linear Programming Model

Year	Month	Measure	Submetric	# Cells	Z	BCV	TIV	Delta	Parity Gap	ABS(PG)	VP_A	TAV_A	TAV_LP
2001	Dec	Customer Trouble Report Rate	2 w Analog Loop Design	7	-6 72	-1 64	5	0 75	-5 08	5 08	1	5	3
2001	Dec	Customer Trouble Report Rate	Resale Business	88	-12 25	-4.11	31	0 43	-8 14	8 14	1	31	17
2001	Dec	Customer Trouble Report Rate	Resale Business	92	-15 8	-3.22	37	0 41	-12 58	12 58	1	37	24
2001	Dec	Customer Trouble Report Rate	Resale Business	16	-13 08	-3 55	21	0 49	-9 53	9 53	1	21	13
2001	Dec	Customer Trouble Report Rate	Resale Business	81	-18 71	-2 98	38	0 41	-15 73	15 73	1	38	28
2001	Dec	Customer Trouble Report Rate	Resale Business	37	-6 66	-3 33	9	0 63	-3 33	3 33	0 8325	7	4
2001	Dec	Customer Trouble Report Rate	Resale Business	14	-31 71	-2 08	36	0 41	-29 63	29 63	1	36	32
2001	Dec	Customer Trouble Report Rate	Resale Business	87	-26 98	-4 23	86	0 31	-22 75	22 75	1	86	63
2001	Dec	Customer Trouble Report Rate	Resale Business	22	-9.96	-2 45	12	0 58	-7 51	7 51	1	12	8
2001	Dec	Customer Trouble Report Rate	Resale Business	92	-54 82	-3 36	193	0 25	-51 46	51 46	1	193	161
2001	Dec	Customer Trouble Report Rate	Resale Business	29	-4 15	-2 75	5	0 76	-1 4	1 4	0 35	2	1
2001	Dec	Customer Trouble Report Rate	Resale PBX	26	-11 76	-4 27	13	0 56	-7.49	7 49	1	13	8
2001	Dec	Customer Trouble Report Rate	Resale Residence	64	-6 43	-6 05	60	0 35	-0 38	0 38	0 095	6	3
2001	Dec	Customer Trouble Report Rate	Resale Residence	53	-5 26	-4 44	24	0 46	-0 82	0 82	0 205	5	3
2001	Dec	Customer Trouble Report Rate	Resale Residence	39	-4 1	-3 82	17	0.52	-0 28	0 28	0 07	1	1
2001	Dec	Customer Trouble Report Rate	UNE Combo Other	11	-3 25	-3 24	5	0 75	-0 01	0 01	0 0025	1	1
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	47	-10 7	-4 62	9	0.65	-6 08	6 08	1	9	5
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	27	-11 1	-3 01	7	0 70	-8 09	8 09	1	7	5
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	11	-17 9	-7 84	20	0 50	-10 06	10 06	1	20	11
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	30	-21 44	-5 37	24	0 48	-16 07	16 07	1	24	17
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	24	-32 43	-2 2	16	0 54	-30.23	30 23	1	16	14
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	5	-15 84	-4 86	9	0 64	-10.98	10 98	1	9	6
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	12	-10 11	-4 37	6	0 71	-5 74	5 74	1	6	3
2001	Dec	Customer Trouble Report Rate	UNE Digital Loop >= DS1	8	-21 48	-4 87	21	0 49	-16 61	16 61	1	21	15
2001	Dec	Customer Trouble Report Rate	UNE ISDN (includes UDC)	27	-4 04	-3 91	14	0 55	-0 13	0 13	0 0325	1	1
2001	Dec	Percent Missed Installation	Resale Residence	25	-1 15	-1 03	3	0 45	-0 12	0 12	0 03	1	1
2001	Dec	Percent Missed Repair Appointment	Resale Business	31	-3 7	-1 16	13	0 37	-2 54	2 54	0 635	8	4
2001	Dec	Percent Missed Repair Appointment	UNE Line Sharing	18	-1 64	-0 89	3	0 57	-0 75	0 75	0 1875	1	1
2001	Dec	Percent Missed Repair Appointment	UNE Other - Non Design	14	-3 1	-0 89	2	0 59	-2 21	2 21	0 5525	1	1
2001	Dec	Percent Missed Repair Appointment	UNE Loop and Port Combo	28	-3 28	-1 06	3	0 44	-2 22	2 22	0 555	2	1
2001	Dec	Out of Service in 24 Hrs	Resale Business	49	-1 61	-1.26	15	0 31	-0 35	0 35	0 0875	1	1
2001	Dec	Out of Service in 24 Hrs	UNE Loop and Port Combo	79	-1 53	-1 39	27	0 27	-0 14	0 14	0 035	1	1
2001	Dec	Percent Provisioning Troubles within 30 days	2 w Analog Loop w/LNP Design	4	-3 16	-0 93	2	0 58	-2 23	2 23	0 5575	1	1
2001	Dec	Percent Provisioning Troubles within 30 days	UNE Digital Loop >= DS1	2	-0 66	-0 2	2	0 42	-0 46	0 46	0 115	1	1
2001	Dec	Percent Provisioning Troubles within 30 days	Resale Business	10	-2 14	-0 86	2	0 63	-1.28	1.28	0 32	1	1
2001	Dec	Percent Provisioning Troubles within 30 days	Resale Residence	24	-1 17	-1 07	2	0 43	-0 1	0 1	0 025	1	1
2001	Dec	Percent Repeat Troubles within 30 days	Resale Business	4	-1 68	-0 91	3	0 59	-0 77	0 77	0 1925	1	1
2001	Dec	Percent Repeat Troubles within 30 days	Resale Residence	5	-1 26	-0 83	3	0 68	-0 43	0 43	0 1075	1	1
2001	Dec	Percent Repeat Troubles within 30 days	UNE ISDN (includes UDC)	4	-1 32	-0 61	3	0 81	-0.71	0 71	0 1775	1	1
2001	Dec	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	5	-1 4	-0 81	2	0 71	-0 59	0 59	0 1475	1	1
2001	Dec	Percent Repeat Troubles within 30 days	2 w Analog Loop Design	5	-1 44	-0 93	4	0.57	-0 51	0 51	0 1275	1	1
2001	Dec	Percent Repeat Troubles within 30 days	2 w Analog Loop Non-Design	2	-0 58	-0 3	3	0.51	-0 28	0 28	0 07	1	1
2001	Dec	Percent Repeat Troubles within 30 days	Resale Residence	4	-1 02	-0 79	2	0 71	-0 23	0.23	0 0575	1	1
2001	Dec	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	14	-2 2	-0 99	7	0 49	-1 21	1 21	0 3025	2	2
2001	Dec	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	14	-1 07	-0.99	5	0 49	-0.08	0 08	0.02	1	1
2002	Feb	Customer Trouble Report Rate	Resale Business	85	-32 01	-2 88	70	0 333298945	-29 13	29 13	1	70	58
2002	Feb	Customer Trouble Report Rate	Resale Business	93	-17 51	-3 3	42	0 391325656	-14.21	14 21	1	42	29
2002	Feb	Customer Trouble Report Rate	Resale Business	16	-16.2	-3 3	25	0 457459501	-12 9	12 9	1	25	17
2002	Feb	Customer Trouble Report Rate	Resale Business	14	-8 11	-2 55	7	0 679508768	-5.56	5 56	1	7	4
2002	Feb	Customer Trouble Report Rate	Resale Business	6	-17 2	-0 85	5	0 753542218	-16 35	16 35	1	5	5
2002	Feb	Customer Trouble Report Rate	Resale Business	59	-8 1	-2 92	14	0 548952318	-5 18	5 18	1	14	7
2002	Feb	Customer Trouble Report Rate	Resale Business	37	-13.96	-2 6	16	0 527754205	-11 36	11 36	1	16	12
2002	Feb	Customer Trouble Report Rate	Resale Business	14	-21 59	-2 4	25	0 459132156	-19 19	19 19	1	25	20
2002	Feb	Customer Trouble Report Rate	Resale Business	84	-22 77	-4 3	70	0.332501517	-18.47	18 47	1	70	49
2002	Feb	Customer Trouble Report Rate	Resale Business	29	-4 63	-4 36	8	0 653769574	-0 27	0 27	0.0675	1	1
2002	Feb	Customer Trouble Report Rate	Resale Business	33	-7.12	-2 97	11	0 589564877	-4 15	4 15	1	11	5
2002	Feb	Customer Trouble Report Rate	Resale Business	65	-45 11	-3 01	117	0 284750677	-42.1	42 1	1	117	97
2002	Feb	Customer Trouble Report Rate	Resale Design	27	-7 84	-2 77	6	0.712807158	-5.07	5 07	1	6	4
2002	Feb	Customer Trouble Report Rate	Resale Design	41	-5 83	-5 68	10	0.627636324	-0 15	0 15	0 0375	1	1

Year	Month	Measure	Submetric	# Cells	Z	BCV	TIV	Delta	Parity Gap	ABS(PG)	VP_A	TAV_A	TAV LP
2002	Feb	Customer Trouble Report Rate	Resale Residence	96	-6.3	-5.74	42	0.392948302	-0.56	0.56	0.14	6	2
2002	Feb	Customer Trouble Report Rate	Resale Residence	45	-5.88	-2.66	12	0.575058702	-3.22	3.22	0.805	10	5
2002	Feb	Customer Trouble Report Rate	Resale Residence	69	-7.52	-6.41	73	0.327227642	-1.11	1.11	0.2775	20	6
2002	Feb	Customer Trouble Report Rate	UNE Combo Other	6	-28.25	-2.42	33	0.428060812	-25.83	25.83	1	33	28
2002	Feb	Customer Trouble Report Rate	UNE Combo Other	5	-6.83	-2.77	6	0.72609313	-4.06	4.06	1	6	3
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	54	-13.81	-4.44	12	0.58069557	-9.37	9.37	1	12	8
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	34	-14.37	-4.25	13	0.575266854	-10.12	10.12	1	13	9
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	20	-9.07	-6.98	13	0.576808635	-2.09	2.09	0.5225	7	3
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	11	-22.59	-7.39	26	0.457504773	-15.2	15.2	1	26	17
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	30	-26.61	-5.18	29	0.445674408	-21.43	21.43	1	29	22
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	31	-20.23	-3.09	15	0.552618531	-17.14	17.14	1	15	12
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	5	-18.42	-5.23	11	0.59019375	-13.19	13.19	1	11	8
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	12	-8.81	-5.22	5	0.753077089	-3.59	3.59	0.8975	4	2
2002	Feb	Customer Trouble Report Rate	UNE Digital Loop >= DS1	8	-10.74	-6.27	13	0.577606207	-4.47	4.47	1	13	5
2002	Feb	Customer Trouble Report Rate	UNE Loop and Port Combo	73	-3.99	-3.86	13	0.56206432	-0.13	0.13	0.0325	1	1
2002	Feb	Percent Missed Installation	LNP Standalone	89	-3.01	-2.32	5	0.13095315	-0.69	0.69	0.1725	1	1
2002	Feb	Percent Missed Repair Appointment	Resale Business	32	-1.71	-1.21	7	0.350627809	-0.5	0.5	0.125	1	1
2002	Feb	Percent Missed Repair Appointment	UNE Loop and Port Combo	5	-2.01	-0.82	2	0.682849735	-1.19	1.19	0.2975	1	1
2002	Feb	Out of Service in 24 Hrs	2 w Analog Loop Non-Design	2	-2.62	-0.73	7	0.590864482	-1.89	1.89	0.4725	3	1
2002	Feb	Out of Service in 24 Hrs	Resale Business	53	-2.32	-1.23	22	0.301910212	-1.09	1.09	0.2725	6	2
2002	Feb	Percent Provisioning Troubles within 30 days	2 w Analog Loop Design	4	-4.2	-1.37	30	0.23398016	-2.83	2.83	0.7075	21	6
2002	Feb	Percent Provisioning Troubles within 30 days	EELs	2	-2.43	-1.35	9	0.318708932	-1.08	1.08	0.27	2	1
2002	Feb	Percent Provisioning Troubles within 30 days	Resale Residence	8	-3.97	-0.8	3	0.712621752	-3.17	3.17	0.7925	2	2
2002	Feb	Percent Provisioning Troubles within 30 days	2 w Analog Loop w/LNP Non Design	10	-1.73	-0.48	3	0.80709207	-1.25	1.25	0.3125	1	1
2002	Feb	Percent Provisioning Troubles within 30 days	Resale Business	5	-3.46	-0.85	2	0.658616614	-2.61	2.61	0.6525	1	1
2002	Feb	Percent Provisioning Troubles within 30 days	UNE Line Sharing	13	-3.16	-0.89	5	0.566840183	-2.27	2.27	0.5675	3	2
2002	Feb	Percent Provisioning Troubles within 30 days	UNE Loop and Port Combo - Switch Based	16	-1.56	-1.07	3	0.44625574	-0.49	0.49	0.1225	1	1
2002	Feb	Percent Repeat Troubles within 30 days	Resale Business	18	-1.1	-1.03	6	0.440931733	-0.07	0.07	0.0175	1	1
2002	Feb	Percent Repeat Troubles within 30 days	Resale Business	3	-1.26	-0.78	2	0.754821343	-0.48	0.48	0.12	1	1
2002	Feb	Percent Repeat Troubles within 30 days	Resale Business	4	-3.76	-0.88	4	0.62949942	-2.88	2.88	0.72	3	2
2002	Feb	Percent Repeat Troubles within 30 days	Resale Residence	8	-1.41	-0.86	3	0.627953362	-0.55	0.55	0.1375	1	1
2002	Feb	Percent Repeat Troubles within 30 days	UNE Digital Loop >=DS1	14	-0.85	-0.78	6	0.561103	-0.07	0.07	0.0175	1	1
2002	Feb	Percent Repeat Troubles within 30 days	Resale Residence	6	-1.03	-0.85	2	0.651608292	-0.18	0.18	0.045	1	1
2002	Feb	Percent Repeat Troubles within 30 days	UNE Line Sharing	24	-2.13	-1	11	0.432661113	-1.13	1.13	0.2825	3	2
2002	Jan	Customer Trouble Report Rate	Local Interconnection Trunks	6	-22.87	-12.37	16	0.52	-10.5	10.5	1	16	7
2002	Jan	Customer Trouble Report Rate	Resale Business	88	-12	-3.92	33	0.42	-8.08	8.08	1	33	18
2002	Jan	Customer Trouble Report Rate	Resale Business	92	-16.01	-3.15	43	0.39	-12.86	12.86	1	43	28
2002	Jan	Customer Trouble Report Rate	Resale Business	16	-19.35	-3.02	32	0.42	-16.33	16.33	1	32	23
2002	Jan	Customer Trouble Report Rate	Resale Business	14	-7.75	-2.54	7	0.68	-5.21	5.21	1	7	4
2002	Jan	Customer Trouble Report Rate	Resale Business	7	-10.72	-1.23	5	0.75	-9.49	9.49	1	5	4
2002	Jan	Customer Trouble Report Rate	Resale Business	79	-10.44	-3.28	25	0.46	-7.16	7.16	1	25	14
2002	Jan	Customer Trouble Report Rate	Resale Business	37	-12.13	-2.75	16	0.53	-9.38	9.38	1	16	11
2002	Jan	Customer Trouble Report Rate	Resale Business	14	-40.39	-1.91	47	0.38	-38.48	38.48	1	47	42
2002	Jan	Customer Trouble Report Rate	Resale Business	85	-17.85	-4.54	61	0.34	-13.31	13.31	1	61	37
2002	Jan	Customer Trouble Report Rate	Resale Business	29	-18.56	-2.7	29	0.44	-15.86	15.86	1	29	22
2002	Jan	Customer Trouble Report Rate	Resale Business	8	-18.01	-1.07	9	0.63	-16.94	16.94	1	9	8
2002	Jan	Customer Trouble Report Rate	Resale Business	34	-6.09	-2.97	10	0.61	-3.12	3.12	0.78	8	4
2002	Jan	Customer Trouble Report Rate	Resale Business	93	-63.41	-3.18	227	0.23	-60.23	60.23	1	227	194
2002	Jan	Customer Trouble Report Rate	Resale Centrex	2	-8.85	-4.93	9	0.63	-3.92	3.92	0.98	9	4
2002	Jan	Customer Trouble Report Rate	Resale Design	43	-5.7	-4.37	8	0.66	-1.33	1.33	0.3325	3	2
2002	Jan	Customer Trouble Report Rate	Resale Design	19	-8.59	-4.51	11	0.59	-4.08	4.08	1	11	5
2002	Jan	Customer Trouble Report Rate	Resale Design	71	-9.4	-5.23	18	0.52	-4.17	4.17	1	18	7
2002	Jan	Customer Trouble Report Rate	Resale Residence	86	-6.19	-5.38	57	0.35	-0.81	0.81	0.2025	12	4
2002	Jan	Customer Trouble Report Rate	UNE Combo Other	6	-6.13	-3.44	9	0.64	-2.69	2.69	0.6725	6	3
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	50	-10.83	-4.6	10	0.63	-6.23	6.23	1	10	5
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	32	-10.55	-3.72	9	0.69	-6.83	6.83	1	9	5
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	20	-8.21	-6.62	13	0.58	-1.59	1.59	0.3975	5	3
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	11	-37.13	-6.23	40	0.40	-30.9	30.9	1	40	32
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	6	-10.6	-6.09	8	0.66	-4.51	4.51	1	8	3

Year	Month	Measure	Submetric	# Cells	Z	BCV	TIV	Delta	Parity Gap	ABS(PG)	VP_A	TAV_A	TAV_LP
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	30	-11 05	-6 53	14	0 56	-4 52	4.52	1	14	6
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	28	-11 95	-3 13	8	0 67	-8 82	8 82	1	8	6
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	5	-20 12	-4 71	11	0 60	-15 41	15 41	1	11	8
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	12	-19 77	-3 6	13	0 60	-16 17	16 17	1	13	10
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	8	-11 42	-5 81	14	0 57	-5 61	5 61	1	14	6
2002	Jan	Customer Trouble Report Rate	UNE Digital Loop >= DS1	10	-9 06	-2 46	5	0 75	-6 6	6 6	1	5	3
2002	Jan	Customer Trouble Report Rate	UNE Line Sharing	62	-9 7	-5 71	76	0 32	-3 99	3 99	0 9975	76	19
2002	Jan	Customer Trouble Report Rate	UNE Loop and Port Combo	7	-8 77	-1 9	8	0 65	-6 87	6 87	1	8	6
2002	Jan	Percent Missed Installation	Resale Business	7	-4 22	-0 75	3	0 76	-3 47	3 47	0 8675	3	2
2002	Jan	Percent Missed Repair Appointment	Resale Residence	30	-3 69	-1 03	2	0 46	-2 66	2 66	0 665	1	1
2002	Jan	Out of Service in 24 Hrs	2 w Analog Loop Non-Design	2	-1 58	-0 7	3	0.56	-0 88	0 88	0 22	1	1
2002	Jan	Out of Service in 24 Hrs	Resale Business	16	-4 07	-1 06	10	0 43	-3 01	3 01	0.7525	8	4
2002	Jan	Out of Service in 24 Hrs	Resale Residence	3	-2.38	-0 82	2	0 71	-1.56	1 56	0 39	1	1
2002	Jan	Out of Service in 24 Hrs	Resale Residence	19	-1.13	-0 93	2	0.54	-0 2	0 2	0 05	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	2 w Analog Loop Design	4	-2 09	-1 33	21	0 25	-0 76	0 76	0 19	4	2
2002	Jan	Percent Provisioning Troubles within 30 days	2 w Analog Loop w/LNP Design	8	-2 43	-0 92	3	0 58	-1 51	1.51	0 3775	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	2 w Analog Loop w/LNP Design	4	-4 33	-1 13	5	0 42	-3 2	3 2	0 8	4	3
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Business	60	-1.96	-1 14	9	0 36	-0 82	0 82	0 205	2	1
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Residence	27	-1 15	-1 06	4	0 43	-0 09	0 09	0 0225	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Residence	47	-1.26	-1 15	7	0.36	-0 11	0 11	0 0275	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Residence	6	-1 56	-0 86	2	0 63	-0 7	0 7	0 175	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Business	13	-1 87	-1 09	4	0 44	-0 78	0 78	0 195	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	Resale Residence	41	-2 68	-1 83	27	0 19	-0 85	0 85	0.2125	6	3
2002	Jan	Percent Provisioning Troubles within 30 days	UNE Loop and Port Combo - Dispatch in	7	-2 04	-0 9	3	0 60	-1 14	1 14	0 285	1	1
2002	Jan	Percent Provisioning Troubles within 30 days	UNE Loop and Port Combo - Switch Based	16	-1 46	-0 97	2	0.51	-0 49	0 49	0 1225	1	1
2002	Jan	Percent Repeat Troubles within 30 days	Resale Residence	8	-1 26	-0 86	3	0 63	-0.4	0 4	0 1	1	1
2002	Jan	Percent Repeat Troubles within 30 days	UNE Digital Loop >=DS1	9	-0 98	-0 63	3	0 75	-0 35	0 35	0.0875	1	1
2002	Jan	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	59	-1 89	-1 29	19	0 31	-0 6	0 6	0 15	3	2
2002	Jan	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	3	-4.19	-0 83	4	0 71	-3 36	3 36	0 84	3	2
2002	Jan	Percent Repeat Troubles within 30 days	Resale Design	6	-2 43	-0 87	4	0 61	-1 56	1 56	0 39	2	1
2002	Jan	Percent Repeat Troubles within 30 days	UNE Loop and Port Combo	23	-1 59	-1 07	7	0 43	-0.52	0 52	0.13	1	1
Total												2193	1527