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State of Florida

Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: JANUARY 22, 2004

TO: DIRECTOR, DIVISION OF THE COMMISSION CLERK & ADMINISTRATIVE SERVICES (BAYÓ)

FROM: DIVISION OF COMPETITIVE MARKETS & ENFORCEMENT (SIMMONS, HARVEY, K. KENNEDY) SAS
OFFICE OF THE GENERAL COUNSEL (KEATING, DODSON)

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

AGENDA: FEBRUARY 3, 2004 - REGULAR AGENDA - PROPOSED AGENCY ACTION - INTERESTED PERSONS MAY PARTICIPATE

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: NONE

FILE NAME AND LOCATION: S:\PSC\CMP\WP\000121ASR.RCM

CASE BACKGROUND

- **Previous Commission Actions**

The Commission opened Docket No. 000121-TP to develop permanent performance metrics for the ongoing evaluation of operations support systems (OSS) provided for competitive local exchange carriers' (CLECs) use by incumbent local exchange carriers (ILECs). Associated with the performance metrics is a monitoring and enforcement program to ensure that CLECs receive nondiscriminatory access to the ILEC's OSS. Performance monitoring is necessary to ensure that ILECs are meeting their obligation to provide unbundled access, interconnection, and resale to CLECs in a nondiscriminatory manner. Additionally, it establishes a

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standard against which CLECs and this Commission can measure performance over time to detect and correct any degradation of service provided to CLECs.

By Order No. PSC-01-1819-FOF-TP (Final Order), issued September 10, 2001, the Commission established permanent performance measures and benchmarks, as well as a voluntary self-executing enforcement mechanism (Performance Assessment Plan) for BellSouth. As part of Order No. PSC-01-1819-FOF-TP, the parties stipulated that, within the first two years of implementation, BellSouth would participate in six-month review cycles to discuss any proposed changes to the Performance Assessment Plan. By Order No. PSC-02-0187-FOF-TP, issued February 12, 2002, as amended by Order No. PSC-01-0187A-FOF-TP, issued March 13, 2002, BellSouth's Performance Assessment Plan was approved.

By Order No. PSC-02-0503-PCO-TP, issued April 11, 2002, Docket No. 000121-TP was divided into three subdockets: (1) 000121A-TP, in which filings directed toward the BellSouth track would be placed; (2) 000121B-TP, in which filings directed toward the Sprint track would be placed; and (3) 000121C-TP, in which filings directed toward the Verizon track would be placed.

By Order No. PSC-02-1736-PAA-TP, issued December 10, 2002, the Commission adopted the proposed changes to BellSouth's Performance Assessment Plan that were agreed upon by the parties participating in the six-month review process set forth in Order No. PSC-02-0187-FOF-TP in Docket 000121A-TP. By Order No. PSC-03-0529-PAA-TP, issued April 22, 2003, the Commission adopted changes to BellSouth's Performance Assessment Plan that were <u>not</u> agreed upon by the parties participating in the six-month review process.

- **Nature of this Recommendation**

This recommendation addresses how the voluntary Self-Executing Enforcement Mechanism (SEEM) should be modified to incorporate the severity of a performance measure failure in setting the size of the remedy payment. A summary of the key features of the current SEEM is provided below.

The SEEM involves payments to individual CLECs for non-compliant performance and also payments to the state in the event aggregate performance to CLECs is below standard. Standards are expressed as either parity with BST retail performance or, where there is no retail analog, a numeric benchmark that would afford an efficient carrier a meaningful opportunity to compete. The first level of payments is referred to as Tier 1 remedies, which are payments made to CLECs when BST fails to meet the standard. The second level of payments is referred to as Tier 2 remedies, which are payments made to the State of Florida when BST fails to meet the standard for three consecutive months. The remedy payments under both tiers vary according to the type of performance measure failure. Performance measures are classified by domain, such as pre-ordering, ordering, provisioning, maintenance and repair, and billing, and are subject to different remedy payments. For Tier 1, payments escalate if the performance measure failure is repeated in subsequent months, with the maximum payment being reached after six consecutive months of failing to meet the standard for a given performance measure.

While acknowledging the importance of including a severity component in SEEM, the Commission did not originally incorporate this feature due to serious concerns with the proposals presented by BellSouth and the CLECs. Since then, the parties have submitted additional proposals and worked with staff in an attempt to negotiate a compromise. Staff filed a recommendation on August 7, 2003; however, that recommendation was deferred at the parties' request to enable further evaluation. While progress has been made, no agreement has been reached, and staff offers this revised recommendation in an attempt to resolve this issue.

JURISDICTION

The Commission is vested with jurisdiction over this matter pursuant to Sections 364.01(3) and (4)(g), Florida Statutes. Pursuant to Section 364.01 (3), Florida Statutes, the Florida legislature has found that regulatory oversight is necessary for the development of fair and effective competition in the telecommunications industry. To that end, Section 364.01 (4) (g), Florida Statutes, provides, in part, that the Commission shall exercise its exclusive jurisdiction in order to ensure that all providers of telecommunications service are treated fairly by preventing anticompetitive behavior. Furthermore, it is noted that the FCC has encouraged the states to implement performance metrics and oversight for purposes of evaluating the status of competition under the Telecommunications Act of 1996.

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DISCUSSION OF ISSUES

ISSUE 1: How should BellSouth's voluntary Self-Executing Enforcement Mechanism (SEEM) be modified to incorporate the severity of a performance measure failure?

RECOMMENDATION: BellSouth should be required to modify the SEEM plan for Tier 1 and Tier 2 to incorporate the severity of a performance measure failure in the manner recommended in the Staff Analysis. BellSouth's modified SEEM plan should be submitted within 60 days from the date of the Order from this recommendation. **(SIMMONS, HARVEY, K. KENNEDY)**

STAFF ANALYSIS: Since the first six-month review began in September 2002, the parties and staff have attempted to resolve the issue of how best to incorporate the severity of a performance measure failure in the remedy payment plan (i.e., SEEM). In issuing its Final Order, the Commission explained that a severity feature was not being incorporated at that time since there were serious concerns with the proposals offered by BST and the CLEC Coalition. In particular the Commission noted:

> . . . the BellSouth plan is predicated on parity gap and affected volume calculations that are very questionable, and the [C]LEC Coalition plan confuses statistical certainty with severity.
> (Final Order, p. 162)

Numerous efforts (workshop, conference calls, and formal and informal submissions) have been made by the parties and staff to address these concerns, although no resolution has been reached.

Given the extensive amount of information that has been exchanged, staff will strive to summarize the pre-August 2003 proposals of BST and the CLECs, and the associated criticisms, without going through a chronology of developments. In turn, staff will provide its own characterization of the strengths and weaknesses of the parties' proposals and make an independent recommendation which draws upon elements of these proposals and input received since staff's August 7, 2003 recommendation. This issue is very technical in nature, but every effort has been made to minimize use of statistical terminology and formulas, and provide general explanations of technical terms and equations that are essential to the recommendation.

- **BST's Proposal/Support**

Consistent with its position in the earlier hearing phase of this docket, BST's primary proposal is the current Georgia Plan, which relies on a parity gap calculation to estimate the number of "failed" transactions on which payments should be made. "Failed" transactions are those that would need to be corrected in order for BellSouth to satisfy the parity standard. As an alternative, BST does offer to use the current, more extensive, Florida disaggregation with the same parity gap approach. Under this alternative, BST proposes a maximum payment of $25,000 per failed sub-measure and a minimum payment of $500 per failed sub-measure. These maximum and minimum payments would apply for Tier 1 (per CLEC) and Tier 2. BellSouth observes that the existing measure-based fee schedule for Florida would not be appropriate for a transaction-based plan and would need to be converted if BST's primary or alternative proposal is adopted.

Since the Commission's Final Order was issued, BST has concentrated on trying to demonstrate that the parity gap approach produces a conservative estimate of "failed" or disparate transactions. Using the generally accepted operations research technique of linear programming, BST has reportedly shown that the parity gap calculation is a reasonable surrogate which tends to overstate the number of disparate transactions. Further, BellSouth has explained through examples that the parity gap does increase as the level of disparity increases, if CLEC volumes are held constant. Finally, BellSouth has taken the position that its transaction-based plan inherently captures the severity of a performance failure since payments are made in accordance with the number of disparate transactions.

In the earlier hearing phase of this docket, there was no agreement on the validity of the disparate transactions concept, and much disagreement on whether disparate transactions should be estimated using the "detection point" or "parity point" as a base of reference. Under the "detection point" approach, disparate transactions are those that require correction in order for BST to pass the statistical test of parity. Under the "parity point" approach, disparate transactions are those that required correction in order to equalize average BST retail and wholesale performance.

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To illustrate this distinction, the parties have often used a speeding analogy. Consider a situation where a driver is stopped for speeding, traveling 77 miles per hour in a 65 miles per hour zone. Further, assume that speeders will not be stopped unless they are going at least ten miles per hour over the limit. In this example, the driver would be considered 2 miles per hours out of compliance under the "detection point" approach and 12 miles per hour out of compliance under the "parity point" approach.

While BST continues to advocate use of the "detection point" as the penalty assessment point, BST has indicated a willingness to consider the "parity point" approach, if the fee schedule is adjusted downward to compensate for the higher volume of transactions which would be assumed disparate under this approach. In fact, BST did provide illustrative fees, using one month of data, which would coincide with the "parity point" approach. Fundamentally, however, BellSouth believes that the "parity point" approach remedies some transactions that are considered "failed," yet would not be detected as disparate under a statistical test for parity.

While perhaps seeming unrelated to the issue of incorporating a severity feature, BST states that the current level of disaggregation in Florida is too fine, resulting in many sub-measures[1] with little or no activity. This situation, in turn, generates a high probability of statistical error of the type where BellSouth is found to be providing disparate service when it is actually providing parity service. According to BST, the existing level of disaggregation in Florida is too detailed, particularly if used in conjunction with its transaction-based plan. With its transaction-based plan, once a determination has been made that a sub-measure has failed, a second calculation is needed to estimate the number of "failed" transactions. BST states that disaggregation should be at a level that results in sample sizes that enable statistically reliable comparisons, and recommends that the level of disaggregation used in Georgia (and with minor differences, in some other BellSouth states)should be adopted in Florida.

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[1] The term "sub-measure" is used to denote a Commission required product disaggregation for an enforcement measure.

- **CLECs' Criticism of BST's Proposal/Support**

The CLECs offer several criticisms of BST's parity gap approach, which range in scope from fundamental, conceptual concerns to rather specific, technical points. Taking BST's plan as a whole, the CLECs do not believe that it measures the severity of a performance measure failure.

First, the CLECs question the parity gap approach in concept, asserting that the harm caused by poor performance is not limited to "failed" transactions, but can also include anticompetitive behavior. According to the CLECs, remedy payments need to be sufficient to provide an incentive for BST to fix poor performance and ensure there is no incentive to keep CLEC volumes down. In essence, incentives need to be adequate at small volumes. The CLECs point to BST's admission that the impact on a CLEC can go beyond the immediate transactions. Also, the CLECs argue that BST lacks a valid method for quantifying the value of a "failed" transaction. Staff notes, however, that quantifying the value of a failure, regardless of how defined, is inherently difficult.

Even if the parity gap approach did measure "failed" transactions, the CLECs argue that by using the "detection point" as the penalty assessment point, BST fails to remedy all "failed" transactions. In particular, the CLECs argue that the concept of "failed" transactions does not make any sense for interval measures, which are expressed as the average amount of time to complete a task. Since an infinite number of distributions can produce the same mean (i.e, average), there are an infinite number of solutions to the question of how many transactions require correction in order for BST to pass the parity test (regardless of whether the test is based on the "detection point" or the "parity point"). While the concept of "failed" transactions does make sense for proportion (i.e., percentage) measures, the CLECs note that BST relies on the parity gap approach to estimate disparate transactions in this instance, when the number of disparate transactions could be readily calculated without use of the parity gap surrogate. The CLECs also argue that there is something intrinsically wrong with the parity gap formula since the result is arbitrarily limited to a value of four. If the formula produced accurate results, the CLECs argue that there would be no need to truncate. According to the CLECs, proving that the parity gap produces a useful approximation in some cases (a reference to BST's linear programming exercises), does not make the methodology

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credible. There may be other methods that would overstate the number of disparate transactions.

Through use of the parity gap approach, the CLECs maintain that BST relies on a statistical decision rule in determining remedy payments. In its Final Order, the Commission rejected use of a z-score (a statistical decision rule) to measure the severity of a performance measure failure. The Commission found that the z-score could be used to judge the certainty with which BST was providing disparate service, but was not indicative of the severity of the failure.[2] The CLECs observe that the parity gap is little more than a z-score and retains all the properties of the statistical decision rule, thereby measuring the statistical certainty of discrimination, rather than the severity of the failure. While the CLECs' disparity measure does not consider the sample size and standard deviation, the parity gap does. Finally, the CLECs maintain that BST's attempt to count "failed" transactions is counter to the principle of basing remedy payments on the difference in average performance.

With respect to BST's concerns about the level of disaggregation being too fine to enable statistically reliable comparisons, the CLECs indicate that reducing the level of disaggregation would be dangerous. Consistent with the CLECs' testimony in the earlier hearing phase of this docket, instances of non-compliant performance may be concealed if unlike sub-measures are combined.

[2] "We agree with BellSouth's witness Taylor's assessment that the statistical decision rule is not helpful in assessing severity." (Final Order, p. 162)

- **CLECs' Proposal/Support**

Under the CLECs' proposal, disparity is defined as the percentage difference between BellSouth's retail and wholesale average performance levels.[3] As a result, this disparity measure contains no statistical components, other than sample means.

Under the CLECs' base fee schedule, the payment is a function of disparity (d), scaled for the number of CLEC transactions. The minimum payment (P_{MIN}) is the Month 1 value in the current Tier 1 and Tier 2 fee schedules; the maximum payment (P_{MAX}) is dependent on CLEC volume (n_{CLEC}) and the size of the minimum payment.[4] The CLECs' base remedy payment function is shown below:

$$Payment = P_{MIN} + (P_{MAX} - P_{MIN}) \times d$$

$$P_{MAX} = \sqrt{n_{CLEC}} \times P_{MIN}$$

By incorporating the CLEC volume, the CLECs believe that this gives their plan a "transactional" nature. The square root is used to temper the effect of volume, whereby the maximum payment grows at a lower rate than the CLEC volume.

The CLECs propose that payments vary according to the number and duration of non-compliant episodes. The payment would escalate according to the duration of each non-compliant episode, increasing by 50% for each successive month of non-conformance. As the number

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[3] For interval measures, disparity is defined as:

$$\text{Disparity Interval} = \frac{\text{CLEC Mean}}{\text{BST Mean}} - 1,$$

and for proportion measures, disparity is defined as:

$$\text{Disparity Proportion} = \frac{w - \text{CLEC Proportion}}{w - \text{BST Proportion}} - 1$$

where w is 1.0 if performance closer to 100% is desirable, and w is 0.0 if performance closer to 0% is desirable. The "w" adjustment is used to normalize disparity for percent measures, where low values are desirable in some cases and high values are desirable in other cases.

[4] The current payment varies according to the type of sub-measure.

of episodes of non-conformance increases, under the CLECs' plan BST would be required to provide compliant service for more months before applicable payments return to base levels.

The CLECs believe that their plan can be readily adjusted based on performance results. By specifying a different root of the CLEC volume, payments can be made more sensitive or less sensitive to the number of transactions. In addition, the payment function can be shifted up or down by changing the minimum payment.

The CLECs characterize their proposal as one based on differences in average performance, while they state BST's attempt to count "failed" transactions is counter to this principle. In addition, the CLECs emphasize that their disparity measure does not rely on a statistical decision rule since the sample size and standard deviation are not considered. Finally, the CLECs believe their proposal is consistent with the spirit of the Final Order, wherein there was a reference to the possibility of evolving to a transaction-based system, with a minimum payment.

- **BST's Criticism of CLECs' Proposal/Support**

BST argues that the CLECs' proposal makes no attempt to identify disparate transactions, creating high penalty payments when there may be only a few disparate transactions and a high probability of statistical error. From BellSouth's perspective, the sample size adjustment is also arbitrary in two respects: (1) payments are based on the total number of CLEC transactions, rather than the number of "failed" transactions, and (2) the sample size adjustment is the square root of the CLEC volume. BST criticizes the CLECs' plan as not being truly transaction-based. According to BellSouth, only "failed" transactions adversely affect CLECs and should be subject to remedy payments. BST does not believe that a large disparity between average retail and wholesale performance levels is necessarily indicative of the number of "failed" transactions and the extent of competitive disadvantage.

BST also observes that there are some confusing aspects of the CLECs' remedy payment function. Literally interpreted, the formula indicates that the payment would equal the maximum when the disparity is one. This is illogical and perhaps the intent is that the maximum payment is reached when the disparity is "1.0" in the sense of a decimal equivalent to 100%. If that interpretation is correct, there is another issue, namely whether the maximum is a true limit if the disparity exceeds one. Finally, BST complains that the CLECs' proposed payment function uses the current remedy payment as the minimum, resulting in exorbitant payments compared to the damage caused by a performance failure. If the formula is interpreted literally, the minimum payment applies only if the disparity is zero. BellSouth goes on to explain that the remedy payment can be incredibly high compared to the monthly rate for the wholesale offering(e.g., assuming 1% disparity, $4,550 for a single UNE-P line installation, when the monthly rate is slightly more than $12). Staff notes, however, that it may be unlikely that a sub-measure would fail at such a low value of "d." Remedy payments are only applicable if a sub-measure fails.

Staff's Assessment and Recommendation

In reviewing the proposals and associated criticisms, staff believes that both BellSouth and the CLECs make some persuasive points. Unfortunately, as in the earlier hearing phase of this docket, staff finds that all the proposals fall short of providing a reasonable method for incorporating the severity of a performance measure failure in the remedy payment plan (i.e., SEEM).

Philosophically, staff agrees with the CLECs that the harm caused by poor performance is not necessarily confined to "failed" transactions, a point which BellSouth even acknowledges. In practice, however, quantifying the effect of poor performance is inherently difficult and judgmental. Therefore, as a practical matter, staff would not be opposed to basing payments on "failed" transactions if such transactions could be reliably quantified. In order to ensure that there would be adequate incentives at small volumes, a minimum payment would likely be needed.

Quantifying the number of "failed" transactions is very problematic, in staff's opinion. Aside from the ongoing debate on whether to use the "parity point" or the "detection point" as a base of reference, staff believes that the CLECs raise very genuine concerns. From staff's perspective, the CLECs argue persuasively that the concept of "failed" transactions does not make any sense for interval measures, since there is no unique solution. An infinite number of distributions can produce the same mean, which implies that various combinations of transactions could be "corrected" to meet the parity standard. For example, a few

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egregious transactions from a wide distribution could be "corrected" or several less egregious transactions from a narrow distribution could be "corrected," with the resulting average interval being the same with either set of distributions and corrections. Staff also notes the CLECs' argument that the concept of "failed" transactions does make sense for proportion (i.e., percentage) measures, yet BellSouth has typically relied on the parity gap approach as a surrogate when the number of "failed" transactions could be calculated directly. To illustrate, consider a measure with 100 CLEC transactions, and 90 are completed in a compliant manner. If the standard is that 95% will be completed in a compliant manner, the number of "failed" transactions should simply be five. The answer is a unique, calculated number, which should not require estimation of any kind.

Since staff's August 7, 2003 recommendation, BellSouth has acknowledged that for measures with numeric benchmarks, disparate transactions can be calculated without use of an estimation process. On this basis, BST believes that disparity should be defined in terms of disparate transactions for purposes of measures with benchmark standards, even if such an approach is rejected for measures that are subject to the parity standard. While staff acknowledges that such an approach is technically acceptable, defining disparity differently for measures with benchmark standards and measures with parity standards would be conceptually inconsistent in staff's opinion.

The CLECs also stress that BST relies on a statistical decision rule (a z-score derivative) to estimate the severity of a performance measure failure. In its Final Order, staff notes that the Commission rejected use of a z-score to measure the severity of a performance measure failure. The Commission found that the z-score could be used to judge the certainty with which BST was providing disparate service, but was not necessarily indicative of the severity of the failure.

From staff's perspective, the CLECs' proposal is not without its own issues. As BellSouth correctly points out, the CLECs' remedy payment function has certain confusing aspects. Staff believes that the maximum payment is reached when the disparity is "1.0" in the sense of a decimal equivalent to 100% disparity. Assuming this is correct, staff is uncertain whether the maximum is a true limit if the disparity exceeds 100%. While noting these confusing aspects, staff believes that the CLECs have proposed a reasonable definition of disparity (d), namely the percentage difference between BellSouth's retail and wholesale average performance levels, expressed in the form of a decimal equivalent.

Although staff believes that the CLECs' recommended definition of disparity is reasonable, some clarification is needed. In the case of measures with benchmark standards, staff would clarify that the numeric standard should take the place of the BST value used in the calculation of "d" and, where applicable, the benchmark should be adjusted in accordance with the small sample size table.

Staff notes that the CLECs' payment function incorporates CLEC volume, yet in a way that is somewhat arbitrary. The sample size adjustment within the CLECs' remedy payment function is the square root of the CLEC volume. Staff observes that intuitively, the remedy payment should be scaled for transactions in some manner, and the square root is used to soften the relationship.

The most troublesome aspect of the CLECs' proposal from staff's perspective is that the payment function uses the current payment as the minimum. Staff believes that the severity of a performance measure failure should be incorporated in the remedy payment plan in a way that provides BellSouth an opportunity to pay more and less, compared to the current situation. When BellSouth's Tier 1 and Tier 2 payments in Florida are compared to those in other states, BellSouth's total Florida payments seem to fall in a reasonable range compared to the others.[5] Therefore, staff believes the objective should be to differentiate the current Florida payments based on the severity of the performance measure failure. If BellSouth's level of performance improves, the payments should decrease. Similarly, if BellSouth's level of performance declines, the payments should increase. This is the fundamental premise behind the staff's recommended payment function which is described in the following paragraphs.

Staff's recommendation is a conceptual one, which will necessitate that BellSouth estimate certain parameters using current data for each sub-measure. The term "sub-measure" is used

[5] For the three months ending with October 2003, the average monthly payments were as follows: GA - $1.32M, LA - $.19M, KY - $.28M, FL - $2.63M, NC - $.36M, AL - $.44M, TN - $1.34M, MS - $.11M, SC - $.12M

to denote a Commission required product disaggregation for an enforcement measure; each sub-measure is subject to a compliance test, with remedy payments in the event of a performance failure. Measures vary to some extent between Tier 1 (Individual CLECs) and Tier 2 (CLEC aggregate)

Fundamentally, staff's recommendation is to differentiate future payments based on (1) the relative change in disparity (where disparity is defined as the percentage difference between BellSouth's retail and wholesale average performance levels) compared to present[6], and (2) the relative change in CLEC volume compared to present. If there is no change in these factors, staff's recommended payment function should produce a dollar-neutral result as compared to what BellSouth has been paying under the existing SEEM. Staff will apply this concept equally to Tier 1 and Tier 2 , although the mathematical formulations will differ somewhat since Tier 1 is at the individual CLEC level, while Tier 2 is at the aggregate CLEC level.

The starting point for staff's recommendation is the existing situation in which remedy payments do not vary according to the extent of the disparity. For the most recent 12 months of data that are available, staff believes that BellSouth could calculate by sub-measure, the average disparity (using the CLECs' definition of *d*), but only for CLECs that experienced a performance failure for the sub-measure. Staff will refer to this current, average disparity as $\bar{d}_O$. Given this average disparity and the current remedy payment (P_O) from the Tier 1 fee schedule for Month 1, a parameter "*a*" could be estimated as follows for Tier 1:

$$P_o = a\bar{d}_o$$

In this simple equation, the parameter "*a*" captures the relationship between the current, average disparity and the current remedy payment.

For purposes of calculating the value of "a," a question arises as to how to handle instances where there was a performance failure for a sub-measure, yet the value of "d" is zero or

[6] "Present" is defined as the most recent 12 months of data available at the time the order from this recommendation is issued.

negative, suggesting there was no disparity. While seemingly counterintuitive, these situations will arise for measures with parity standards because the sub-measure failure is determined first, and then the disparity is calculated in a subsequent step. The first determination is based on a statistical decision rule, while the second calculation is not.

There are several options for handling these situations, although staff would stress that the chosen option should be applied consistently during the current or baseline period and in the future. The options include excluding these data points on the basis of no disparity, including these data points and adjusting negative values to zero, or including these data points without adjustment. Since a zero or negative "d" value in the future will obviate the need to make a remedy payment, staff believes the first option is the most defensible. There is a very plausible counter argument, however, that these data points should not be excluded for purposes of calculating the "a" value since remedy payments were in fact made during the baseline period. After much consideration, staff believes that a stronger argument can be made for excluding these data points and ensuring absolute consistency in treatment during the baseline and future periods.

Tier 2 could be handled in a similar way to that used for Tier 1. With Tier 2, since the disparity at issue is for the CLEC aggregate, the average disparity should be calculated across all CLECs, without regard to whether a given CLEC experienced a performance failure. In addition to calculating the average disparity differently for Tier 2, the current remedy payment is different for Tier 2. As a result, different values of "a" would be estimated for Tier 1 and Tier 2. The result would be two simple equations, one for Tier 1 and one for Tier 2, for each sub-measure, showing that the current, Month 1 payment is a certain multiplier of the current average disparity.

Going forward, the actual value of "d" in a future month could be substituted into the appropriate equation, in place of the current average disparity. Mathematically, this would be shown as follows:

$$P_{t,i} = ad_{t,i}$$

where $P_{t,i}$ = Payment in future month "t" for CLEC "i"
$d_{t,i}$ = Disparity in future month "t" for CLEC "i"

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Substituting for "a" would yield the following:

$$P_{t,i} = P_o\left(\frac{d_{t,i}}{\bar{d}_o}\right)$$

This substitution process would incorporate the change in disparity, either up or down, in the amount of the remedy payment, but would not consider the change in CLEC volume.

While staff is comfortable with the concept that the remedy payment should vary in direct proportion to the disparity, staff does not believe there should be a direct, proportional relationship between the size of the payment and the CLEC volume. While CLEC volume should influence the size of the remedy payment, staff believes that remedy payments should not grow inordinately high as volume increases, nor drop inordinately low if volume decreases. In addition, staff believes that concerns expressed by BellSouth after staff's August 7, 2003 recommendation was filed deserve careful consideration. BellSouth is concerned that its incentive to lower disparity, and thereby its payments, may be stifled by growth in volume over which BellSouth has no control. Notwithstanding, if the CLEC's volume grows, and there is no change in observed disparity, the adverse effect on the CLEC is greater in absolute terms. Thus, these two countervailing concerns must be weighed quite carefully.

For Tier 1, staff recommends incorporating the relationship between a CLEC's volume in a future month and the present average CLEC volume (for those companies that experienced a performance failure), calculated over the most recent 12 months of data. This relationship would be included as follows:

$$P_{t,i}=P_o\left(\frac{d_{t,i}\sqrt[3]{n_{t,i}}}{\overline{\overline{d_o\sqrt[3]{n_o}}}}\right)$$

where
$P_{t,i}$ = Payment in future month "t" for CLEC "i"
$d_{t,i}$ = Disparity in future month "t" for CLEC "i"
$n_{t,i}$ = Volume in future month "t" for CLEC "i"
n_0 = Present (month "0") CLEC volume

For measures that are expressed as proportions, there is a possibility that the denominator of the ratio used to calculate baseline and future "d" values may be zero, which would lead to an undefined value. Staff believes that this issue can be largely resolved by retaining the numerator and denominator of each ratio for use in the payment function.[6]

Incorporating volume in the ratio has the effect of adjusting the remedy payment, both up and down, based on changes in CLEC volume. By taking the cube root of the baseline and future volumes, the relationship between CLEC volume and the size of the remedy payment is tempered. To illustrate, if the volume ratio is 8, the remedy payment would double. If the volume ratio is 1/8, the remedy payment would be cut in half. Staff has modified the square root concept from the CLECs' proposal, and applied a cube root concept in a ratio fashion. Staff's recommended approach should help ensure that there are adequate incentives at small volumes, while also helping to ensure that incentives are not unreasonably high at large volumes. Use of the cube root, rather than the square root, should help ensure that BST's incentive to lower disparity, and thereby its payments, will not be stifled by growth in volume over which it has no control.

In staff's August 7, 2003 recommendation, the recommended payment function included a "d" ratio and an "n" ratio; however, these two ratios were independent factors in the formula. The CLECs observed, and staff agrees, that this independent treatment may violate the dollar-neutral concept that was integral to staff's August 2003 recommendation. To the extent that disparity and volume are inversely related (i.e., lower disparity with higher volume), failure to account for this relationship in the formula would generate payments that are too low and inconsistent with the dollar-neutral concept. The CLECs and staff both observed this inverse relationship in the baseline data that BellSouth provided in September and October 2003, when the parties and staff were engaged in an empirical evaluation of staff's August 2003 recommendation. Also, from a conceptual standpoint, a sub-measure failure with a low value for disparity is likely to have a high volume. In this revised recommendation, staff has adopted the

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[6] Where the baseline and future period ratios used to calculate "d" have a zero in the respective denominators, the zeros will cancel in staff's recommended payment function.

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CLECs' proposed change to account for this dependency. Staff notes that accounting for this dependency should in no way bias the calculation for any instances where the dependency does not exist.

For Tier 2, a similar approach can be used, although the volume portion of the ratio needs to be defined differently. Instead of comparing a future, individual CLEC volume to the present average CLEC volume, the aggregate CLEC volumes, future and present, should be compared. Mathematically, this would equate to substituting $\sum n_{t,i}$ for $n_{t,i}$ and $\sum n_{0,i}$ for n_0.

The net effect of staff's recommendation is to adjust remedy payments both downward and upward from present levels through scaling, based on changes in disparity and CLEC volume. Over time, based on performance results, the scaling could be adjusted, subject to Commission approval, as necessary to raise or lower incentives. Adjustments should be relatively easy, albeit possibly iterative, since the scaling consists of just two elements for each tier, the value of "a" and the specified root applied to the volume portion of the ratio.

Through the empirical review that occurred after staff's August 7, 2003 recommendation, both BellSouth and the CLECs observed instances where the degree of variability in "a" and "d" values between and within related sub-measures was unreasonably high. Although both sides were hopeful that use of 12 months of data would help address the issue, this concern largely remains. The CLECs and BellSouth appear to agree that a "family" approach would be needed whereby related sub-measures would be grouped, solely for purposes of developing remedy payments. This "family" approach would also address BellSouth's concerns regarding sub-measures with little or no activity, and instances where a given sub-measure may have no volume or no failures during the baseline period, making it impossible to implement staff's recommended payment function.

To develop these groupings, staff recommends the following:

1. Eliminate the circuit volume component of Provisioning sub-measures.
2. Collapse the current six levels of Resale disaggregation into Resale - POTS and Resale - Other

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3. Collapse the current level of disaggregation for the UNE 2-wire analog product and the UNE Other category by eliminating the design/non-design and INP/LNP components.

If any additional changes to the disaggregation are essential to reach the volume level necessary to perform a meaningful remedy calculation, BellSouth should justify any such changes. In this event, staff also believes that BellSouth should be required to maintain the following disaggregations: dispatch/non-dispatch, fully mechanized/partially mechanized/non-mechanized, and with/without conditioning. Once again, staff emphasizes that sub-measures should be grouped solely for purposes of developing remedy payments, with no change in the disaggregation used for determining a sub-measure failure.

Presently, Tier 1 payments escalate if the sub-measure failure is repeated in subsequent months, with the maximum payment being reached after six consecutive months of failing to meet the standard for a given sub-measure. The CLECs have recommended a more complicated approach which depends on the number and duration of non-compliant episodes, with substantial escalation for each successive month of non-conformance. Staff prefers the current, simpler approach and recommends that payments escalate in the same manner (i.e., at the same rate) as presently for repeat failures.

In conclusion, staff recommends that BellSouth should be required to modify the SEEM plan for Tier 1 and Tier 2, to incorporate the severity of a performance measure failure in the manner recommended in the Staff Analysis. BellSouth's modified SEEM plan should be submitted within 60 days from the date of the order from this recommendation. After reviewing BellSouth's modified SEEM plan for compliance with the order, staff will file a recommendation for a subsequent Agenda Conference to address approval of the plan.

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__**ISSUE 2:**__ Should this docket be closed?

__**RECOMMENDATION:**__ No. If the Commission approves staff's recommendation in Issue 1, the resulting Order will be issued as Proposed Agency Action. The Order will become final upon issuance of a Consummating Order if no person whose substantial interests are affected timely files a protest within 21 days of the issuance of the Order. Staff recommends that this Docket should remain open thereafter to address approval of BellSouth's modified SEEM plan filed in response to Issue 1 and to conduct periodic reviews of the Performance Assessment Plan. **(DODSON)**

__**STAFF ANALYSIS:**__ If the Commission approves staff's recommendation in Issue 1, the resulting Order will be issued as Proposed Agency Action. The Order will become final upon issuance of a Consummating Order if no person whose substantial interests are affected timely files a protest within 21 days of the issuance of the Order. Staff recommends that this Docket should remain open thereafter to address approval of BellSouth's modified SEEM plan filed in response to Issue 1 and to conduct periodic reviews of the Performance Assessment Plan.