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BELLSOUTH

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S. C. PUBLIC SERVICE COMMISSION
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SC PUBLIC SERVICE COMMISSION

March 5, 2003

The Honorable Gary E. Walsh
Executive Director
Public Service Commission of SC
Post Office Drawer 11649
Columbia, South Carolina 29211

Re: Application of BellSouth Telecommunications, Inc. to Provide In-Region InterLATA Services Pursuant to Section 271 of the Telecommunications Act of 1996
Docket No. 2001-209-C

Dear Mr. Walsh:

Enclosed for filing please find the original and twenty-five copies of the Direct Testimony of Alphonso J. Varner and the Direct Testimony of William E. Taylor, Ph.D. in the above-referenced matter on behalf of BellSouth Telecommunications, Inc.

By copy of this letter, I am serving all parties as reflected by the attached Certificate of Service.

Sincerely,

Patrick W. Turner by nml

Patrick W. Turner

PWT/nml
Enclosure
cc: All Parties of Record

POSTED 03/5/03

ON BEHALF OF BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF WILLIAM E. TAYLOR, Ph.D.

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

DOCKET NO. 2001-209-C

MARCH 5, 2003

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I. INTRODUCTION AND PURPOSE

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND CURRENT POSITION.

A. My name is William E. Taylor. I am Senior Vice President of National Economic Research Associates, Inc. ("NERA"), head of its Communications Practice, and head of its Cambridge office located at One Main Street, Cambridge, Massachusetts 02142.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL, PROFESSIONAL, AND BUSINESS EXPERIENCE.

A. I have been an economist and statistician for over thirty years. I earned a Bachelor of Arts degree from Harvard College in 1968, a Master of Arts degree in Statistics from the University of California at Berkeley in 1970, and a Ph.D. from Berkeley in 1974, specializing in Industrial Organization and Econometrics. For the past thirty years, I have taught and published several papers in statistics and theoretical and applied econometrics, which is the study of statistical methods applied to economic data. I have also taught and published research in microeconomics and telecommunications policy at academic and research institutions. Specifically, I have taught at the Economics Departments of Cornell University, the Catholic University of Louvain in Belgium, and the Massachusetts Institute

1 of Technology. I have also conducted research at Bell Laboratories and Bell
2 Communications Research, Inc. I have participated frequently in telecommunications
3 regulatory proceedings before state public service commissions. Before the Public Service
4 Commission of South Carolina ("Commission"), I have appeared in Docket No. 97-101-C
5 (on probable economic benefits from BellSouth's entry into long distance
6 telecommunications) on behalf of BellSouth Long Distance, Inc., and in Docket Nos. 97-
7 374-C (on economic principles for costing and pricing interconnection and unbundled
8 network elements), 97-124-C (on economic principles for pricing interconnection services
9 to payphone providers), 1999-259-C (ITC^DeltaCom arbitration), and 2001-209-C
10 (Section 271 application and performance measurement) on behalf of BellSouth
11 Telecommunications, Inc.
12 I have also filed testimony before the Federal Communications Commission
13 ("FCC"), the Canadian Radio-television Telecommunications Commission, and the New
14 Zealand Commerce Commission on matters concerning incentive regulation, price cap
15 regulation, productivity, access charges, local competition, interLATA competition,
16 interconnection and pricing for economic efficiency. I have twice been chosen by the
17 Mexican Federal Telecommunications Commission and Telefonos de Mexico ("Telmex")
18 to arbitrate the renewal of the Telmex price cap plan in Mexico.
19 My curriculum vita is attached as Exhibit WET-1.

20 **Q. PLEASE DESCRIBE NERA, YOUR PLACE OF EMPLOYMENT.**

21 A. Founded in 1961, National Economic Research Associates or NERA is an internationally
22 known economic consulting firm. It specializes in devising economic solutions to

1 problems involving competition, regulation, finance, and public policy. Currently, NERA
2 has 430 professionals (mostly highly experienced and credentialed economists) with 10
3 offices in the U.S. and overseas offices in Europe (London, Brussels, Madrid, and Rome),
4 Tokyo, Japan, and Sydney, Australia. In addition, NERA has on staff several
5 internationally renowned academic economists as Special Consultants who provide their
6 professional expertise and testimony when called upon.

7 The Communications Practice, of which I am the head, is a major part of NERA. For
8 over 30 years, it has advised a large number of communications firms both within and
9 outside the U.S. Those include the regional Bell companies and their subsidiaries,
10 independent telephone companies, long distance companies, cable companies, and
11 telephone operations abroad (e.g., Canada, Mexico, Europe, Japan and East Asia,
12 Australia, and South America). In addition, this practice has provided testimony or other
13 input to governmental entities such as the FCC, the Department of Justice, the U.S.
14 Congress, state regulatory commissions and legislatures, and courts of law. Other clients
15 include industry forums like the United States Telephone Association. In 2000, the NERA
16 Communications Practice received the International Business Leadership Award from the
17 Center for International Business Education and Research at the University of Florida,
18 citing our work on incentive regulation, transfer pricing, technological convergence and
19 opening new markets to competition.

20 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

21 A. My purpose is to address, on behalf of BellSouth Telecommunications, Inc. ("BellSouth"),
22 one of the issues under consideration in this proceeding, namely, whether, in the context of

1 BellSouth's Incentive Payment Plan ("IPP"), "the [penalty] payment should be calculated
2 from the estimator (mean) as opposed to the edge of the confidence interval." In South
3 Carolina, the IPP contains the terms and conditions governing BellSouth's provision of
4 wholesale services to competitive local exchange carriers ("CLECs") and to its own retail
5 operations. Specifically, the IPP states the methodology for (1) detecting when the
6 incumbent local exchange carrier ("ILEC"), namely, BellSouth, fails to meet set
7 performance standards and (2) determining the penalty for each failure. The Commission's
8 issue under discussion here concerns exactly how that penalty should be calculated.

9 **Q. WHAT ARE YOUR PRINCIPAL CONCLUSIONS?**

10 A. I have three principal conclusions. First, the "edge of the confidence interval" (frequently
11 termed the "detection point") should be the sole basis for both (1) detecting lack of parity
12 in wholesale service quality performance and (2) setting the penalty for that lack of parity.
13 My testimony explains why the unpredictable effects of chance events on service quality
14 outcomes makes it necessary at the outset to determine whether a performance disparity
15 that is merely suspected amounts, in fact, to an actual lack of parity. The edge of the
16 confidence interval provides the means to make that determination. Hence, only observed
17 disparities that lie beyond the edge of the confidence interval (detection point) should be
18 considered to be instances of lack of parity in fact, and should be used as the basis for the
19 assessment and measurement of penalties.

20 Second, the adverse and unjustified consequences of opting instead to measure
21 penalties from the "estimator (mean)" (frequently termed the "parity point") are twofold.
22 First, doing so would treat any errors of measurement and chance events differently when

1 *detecting* lack of parity than when *penalizing* it. Using statistical methods to reduce the
2 effect of chance or measurement error is just as important for determining the amount of a
3 penalty as it is for determining whether the ILEC is providing parity service. Ignoring
4 chance or measurement error in the penalty calculation would raise the ILEC's cost to
5 provide service and compete for customers as well as provide an undue windfall income to
6 CLECs. Second, even when the occurrence of a disparity is confirmed statistically (by
7 properly using the edge of the confidence interval for that purpose), any penalty payment
8 calculated from the mean (estimator)—or parity point—would be larger than it ought to be.
9 Again, this would unfairly benefit CLECs at the ILEC's expense.

10 Third, both the average service quality provided to CLECs and the average service
11 quality provided to the ILEC's own retail operations are affected by random variation
12 (including measurement error) over which the ILEC has no control. Hence, a comparison
13 of service quality averages for the purpose of detecting any lack of parity is itself likely to
14 be affected by random variation. That is why only a statistical test can offer conclusive
15 proof of lack of parity in that situation. This stands in contrast to any situation in which the
16 service quality of CLEC transactions is compared to a fixed benchmark (which is used
17 when those transactions have no retail analogs for the ILEC). In the latter comparison,
18 there is no need for the form of statistical test that is reserved for the comparisons of two
19 different service quality averages.

20 II. MEASURING LACK OF DISPARITY IN WHOLESALE SERVICE QUALITY:
21 BACKGROUND ISSUES

22 **Q. AS BACKGROUND, PLEASE FIRST EXPLAIN THE PURPOSE OF A SERVICE**

1 **QUALITY AND PERFORMANCE MEASUREMENT PLAN SUCH AS THE IPP.**

2 A. A plan such as the IPP is intended to prevent any backsliding after BellSouth's entry into
3 the in-region interLATA long distance market by protecting and preserving the integrity of
4 the competitive process in local exchange markets. This means ensuring that BellSouth,
5 the ILEC, continues to compete with CLECs on a level playing field, regardless of their
6 prior histories or current differences in size and market presence.

7 **Q. PLEASE PROVIDE A SPECIFIC CONTEXT FOR WHICH A PLAN LIKE THE**
8 **IPP IS DESIGNED.**

9 A. In the present competitive telecommunications environment, the ILEC is often the source
10 of wholesale services that both CLECs and the ILEC's own retail operations use to produce
11 retail services for end-use customers. This dependence of CLECs on ILEC-supplied
12 wholesale services raises a potential concern: could the ILEC somehow favor its own
13 retail operations over its competitors (the CLECs), e.g., by failing to supply the CLECs
14 with wholesale services that are at least of the same quality as the wholesale services it
15 provides to its own retail operations? In the FCC's terminology, such a failure is described
16 as a "lack of parity" or, simply, "discrimination." A plan like the IPP is designed to ensure
17 that the ILEC does not have any incentive to pursue an undue and unfair competitive
18 advantage at the expense of its competitors. Furthermore, if it is conclusively proved that
19 the ILEC has supplied lack-of-parity service to its competitors, then the IPP provides for a
20 compensation mechanism in the form of penalty payments from the ILEC.

21 **Q. DOES THE IPP HAVE A MECHANISM FOR DETECTING, AND**

1 **COMPENSATING FOR, SUCH ANTI-COMPETITIVE CONDUCT ON THE PART**
2 **OF THE ILEC?**
3 A. Yes. Where retail analogs apply, the IPP uses a statistical methodology for both detecting
4 lack of parity in the quality of wholesale service and determining the penalty that must be
5 paid for it. Specifically, it uses a truncated *z*-statistic to detect lack of parity and to
6 calculate the "parity gap," i.e., how far out of parity the ILEC's performance is in supplying
7 wholesale services to CLECs. The appropriate penalty payment is then calculated in
8 relation to the number of *failed* transactions (i.e., the transactions that resulted in CLECs
9 receiving less-than-parity wholesale services) which, in turn, is determined from the parity
10 gap. As explained further below, there is no need for the statistical test where benchmarks
11 apply.

12 **Q. IN PRACTICAL TERMS, WHEN IS A DEPARTURE FROM PARITY IN**
13 **WHOLESALE SERVICE QUALITY SUSPECTED?**
14 A. Over a given period, such as a month, the ILEC provides wholesale services to CLECs
15 through several individual transactions. However, the number of such transactions
16 between the ILEC and individual CLECs may differ (perhaps even widely) from the
17 number of such transactions between the ILEC and its own retail operations. This makes it
18 meaningless to compare the quality of service in each CLEC transaction with that in each
19 internal ILEC transaction. For example, the ILEC may experience five Missed Repair
20 Appointments for its own retail customers and only one Missed Repair Appointment for a
21 CLEC customer in a given month. However, if the ILEC has 200 repair appointments for
22 its retail customers and only two for its CLEC customer, it could not be said to be

1 providing service at or better than parity in this measure. The only meaningful comparison
2 then is between the *average* quality of service for the two types of transactions. The
3 average service quality is easy to calculate, and a comparison of averages makes it
4 unnecessary to compare individual (and unequal numbers of) transactions.
5 In this context, I refer to a measured departure from parity as a "suspected" or
6 "observed disparity" if the average service quality for transactions serving CLECs is lower
7 than that for serving the ILEC's own retail operations.[1] When the two averages are equal,
8 the presumption is that service quality is *at* parity for both types of transactions.

9 **Q. DOES THE VERY FACT THAT A PERFORMANCE DISPARITY IS *OBSERVED***
10 **(I.E., THE AVERAGE QUALITY IS LOWER FOR CLEC TRANSACTIONS)**
11 **MEAN THAT LACK OF PARITY HAS BEEN *PROVEN*?**

12 A. No. Observing a difference in average service quality merely raises a *suspicion* of a lack of
13 parity. There can be many factors that give rise to an observed disparity in a given
14 situation; some of those factors may be systemic (over which the ILEC has control) and
15 others may be purely random (chance events, including measurement error, over which the
16 ILEC has no control). Because of this fact, any observation of a difference of average
17 service quality between the two types of transactions must first be subjected to a test that
18 establishes that the observed disparity could *not* have arisen purely due to chance and *can*

[1] Although the term "disparity" could still apply if the average service quality for CLEC transactions were relatively *higher*, that form of disparity is not of concern to the IPP because CLECs would suffer no harm in that situation.

1 be attributed to a systemic failure.[2] By raising the bar for proving lack of parity, such a test
2 attempts to minimize the role of chance or random factors in shaping the observed
3 outcome.

4 **Q. HOW DOES THE IPP'S STATISTICAL TEST FOR DETECTING LACK OF**
5 **PARITY OVERCOME ANY UNCERTAINTY CREATED BY RANDOM EVENTS?**

6 A. In the IPP, the mere finding of a difference in average service quality for the two types of
7 transactions is *not* conclusive proof of a lack of parity. Rather, any disparity that is
8 observed must be *large enough* to overcome what may be termed a "zone of uncertainty"
9 that is created by the unpredictable effects of random events.[3] Only then would that
10 observed disparity be considered "statistically significant," i.e., established as a proven lack
11 of parity. The IPP itself and Exhibit WET-2 (attached to this testimony) explain in greater
12 detail how that zone of uncertainty is overcome.

13 The underlying principle for allowing for that zone of uncertainty is simple. Given
14 the possibility that average service quality can differ purely by chance, it follows that, as
15 the role of chance in determining average service quality increases, so does the zone of
16 uncertainty.[4] This leaves room for several instances of "small" differences in average

[2] This is standard practice in many walks of life. For example, product manufacturers routinely conduct quality control tests to rule out the possibility of significant defects. Trials of the efficacy of new pharmaceutical drugs involve tests to determine whether the observed beneficial effects of those drugs on patients are "real" or could be attributed to chance. In all of these instances, statistical tests attempt to minimize the effects of chance or other spurious factors on quality or efficacy outcomes.

[3] For example, the ILEC may be providing service precisely at parity but random errors of measurement may cause measured parity to deviate from the parity point.

[4] As explained in Exhibit WET-2, the role of chance is captured in two ways. First, if multiple (or large numbers of) average service quality comparisons are made, there is a good prospect that some of the differences in

(continued...)

1 service quality to be perfectly consistent with the presumption that wholesale services are
2 being provided at parity.

3 The fact that pure chance can affect outcomes is encountered routinely in everyday
4 situations. Buses or trains do not always arrive or leave exactly at designated times,
5 although on average over a large number of days it may appear that they do. Random
6 factors over which bus or train drivers have no control (such as traffic lights and other
7 traffic conditions, wind resistance, passenger loading/off-loading times at intermediate
8 stops, etc.) determine day-to-day arrival and departure times. Only if average actual arrival
9 or departure times systematically differed from designated times, and by enough to
10 overcome any zone of uncertainty, would one conclude that the buses (or trains) were
11 "late" for systemic reasons.

12 III. WHY IS STATISTICAL TESTING NECESSARY?

13 **Q. PLEASE EXPLAIN WHY STATISTICAL TESTING OF THE FORM**
14 **INCORPORATED IN THE IPP IS EVEN NECESSARY FOR DETECTING, AND**
15 **SETTING PENALTIES FOR, LACK-OF-PARITY SERVICE?**

16 A. The best way to understand why that form of statistical testing is even necessary is to start

(...continued)

average service quality will be quite small (perhaps zero or close to it), some of moderate size, and others quite large. This gives rise to a statistical "distribution" of average service quality differences. The more "spread out" that distribution (i.e., the greater the variation between smaller and larger values), the more statistical uncertainty there is in that distribution. Conversely, more "compact" distributions have less statistical uncertainty. If a difference of zero (representing parity) is the center of this distribution, then the more spread out is the distribution around that center (measured by variance or standard deviation), the larger an observed disparity can be purely by chance. The second way to capture the role of chance is through the selection of the balancing critical value. See details in Exhibit WET-2.

1 by asking how performance is usually evaluated relative to set goals. In most situations,
2 while performance may be variable, the goal itself is fixed. For example, a middle distance
3 runner might set a goal of running a mile in four minutes or less. However, if he runs the
4 mile every day for a month, his actual times could well vary from day to day. Only on the
5 days in which his time was four minutes or less could he be said to have achieved his goal,
6 while on the other days he would have fallen short of his goal. It is possible to draw these
7 conclusions unambiguously despite variations in his daily running times because the
8 evaluation point—four minutes or less—is fixed, immune to random influences, and
9 known in advance to the runner.

10 The situation is a lot more complicated, however, when the goal itself is variable or
11 subject to random variation. For example, suppose the runner's goal changes from running
12 the mile in four minutes or less to running it at least as quickly as the fastest time recorded
13 in the country for the mile run in the previous month. The fastest running time may well
14 vary from month to month, as runners responsible for those times face different running
15 conditions that are beyond their control. When matching or exceeding the previous
16 month's fastest time becomes the goal, there is no longer one single fixed point against
17 which to compare and evaluate our runner's performance. In this circumstance, a more
18 meaningful comparison (i.e., method to evaluate performance) may be of the runner's
19 *average* running time with the *average* fastest time over the previous, say, 12 months.
20 Once a comparison of averages is made, the nature of the test becomes purely statistical.

21 **Q. CAN YOU RELATE THIS DISCUSSION TO THE ISSUE OF SERVICE QUALITY**
22 **PERFORMANCE?**

1 A. Yes. Instead of the mile-runner's running time, consider the service quality for CLEC
2 transactions. Just like the former, the latter can vary from one transaction to the next,
3 partly for systemic reasons and partly because of chance events. Next, instead of the fixed
4 goal of "four minutes or less," consider the fixed goal that the service quality for CLEC
5 transactions must equal or exceed benchmarks that have been set ahead of time. In this
6 instance, clearly no statistical testing is necessary: either the service quality for an
7 individual CLEC transaction meets the benchmark requirement or it does not. This form of
8 performance evaluation is indeed contemplated by the IPP for wholesale services for which
9 BellSouth has no retail analogs.
10 In contrast, instead of fixed benchmarks, consider a variable goal, namely, that of
11 matching or exceeding the average service quality for an ILEC's internal transactions. This
12 is analogous to replacing the fixed goal of "four minutes or less" by a variable goal of the
13 fastest time for the mile in the previous month. Now, performance (average service quality
14 for CLEC transactions) must be evaluated relative to the goal (average service quality for
15 the ILEC's internal transactions), where *both* the performance and the goal are variable and
16 subject to random influences. In this situation, a comparison of two variable service
17 quality averages necessarily calls for statistical testing in order to properly take account of,
18 and control for, those random influences.

19 **Q. AS IT SUPPLIES WHOLESALE SERVICES TO CLECS, IS BELLSOUTH**
20 **LIKELY TO ENCOUNTER BOTH KINDS OF SITUATIONS?**

21 A. Yes. The IPP indicates that for some of its performance measures, retail analogs are
22 available while, for others, they are not. When retail analogs are not available, the sensible

1 performance evaluation method is to compare the average service quality for CLEC
2 transactions with pre-set benchmarks. When retail analogs *are* available, the only sensible
3 course of action is to conduct statistical testing in the manner discussed.

4 IV. COMMISSION ISSUE [THE "ESTIMATOR (MEAN)" OR THE "EDGE OF THE
5 CONFIDENCE INTERVAL"]: HOW SHOULD A PENALTY BE SET?

6 **Q. SHOULD PENALTIES BE PAID FOR JUST ANY OBSERVED DISPARITY?**

7 A. No. BellSouth's IPP has been designed to link the payment of penalties (and the amount of
8 those penalties) only to statistically-proven instances of lack of parity. Thus, the same
9 statistical mechanism that determines whether an observed disparity should be considered a
10 proven lack of parity is also used to determine the severity of that lack of parity and to set
11 penalties accordingly.

12 **Q. WHY DO YOU RAISE THIS ISSUE?**

13 A. This question is intimately linked to an issue that the Commission has raised for
14 consideration in this proceeding. This issue asks specifically whether "the [penalty]
15 payment should be calculated from the estimator (mean) as opposed to the edge of the
16 confidence interval." The discussion above leads to the logical conclusion that the penalty
17 payment should be calculated from the edge of the confidence interval.

18 **Q. PLEASE EXPLAIN THAT CONCLUSION AFTER FIRST DEFINING THE**
19 **TERMS USED IN THE STATEMENT OF THE ISSUE.**

20 A. The issue statement asks which of two possible reference points should be used to
21 determine penalty payments. Should it be the "edge of the confidence interval," i.e., the

1 point used to determine whether a statistically significant departure from parity has
2 occurred?[5] This reference point is often called the "detection point" because it marks the
3 dividing line between proven lack of parity and unproven (and merely suspected) disparity.
4 Or, should it be the estimator (or mean point), i.e., the point at which the measured
5 average service quality is *exactly* the same for both types of transactions?[6] This reference
6 point is often called the "parity point" because the measured average service quality is the
7 same for both types of transactions.
8 The question asked by the Commission is, therefore, whether penalties should be
9 determined by reference to the detection point (or, the "edge of the confidence interval") or
10 the parity point (or, the "estimator (mean)")—which makes no allowance whatsoever for
11 *any* divergence of average service quality, not even that due purely to chance. As noted
12 previously, chance or random events must be eliminated when we determine *whether* the
13 ILEC is providing parity service. The Commission's question effectively asks whether,
14 once we have determined that CLEC transactions have received less-than-parity service
15 (after having accounted fully for random events), we should then simply ignore those
16 random events when setting the penalty. Such a rule would obviously treat the role of
17 chance or random events inconsistently: it would explicitly control for random events
18 (such as measurement error) when *detecting* lack of parity, but simply ignore them when
19 *penalizing* that lack of parity. Just as any observed departure from the parity point is *not*

[5] See Exhibit WET-2 for an explanation of how the edge of the confidence interval acts as a reference point for finding whether or not an observed disparity is statistically significant.

[6] See Exhibit WET-2 for further explanation.

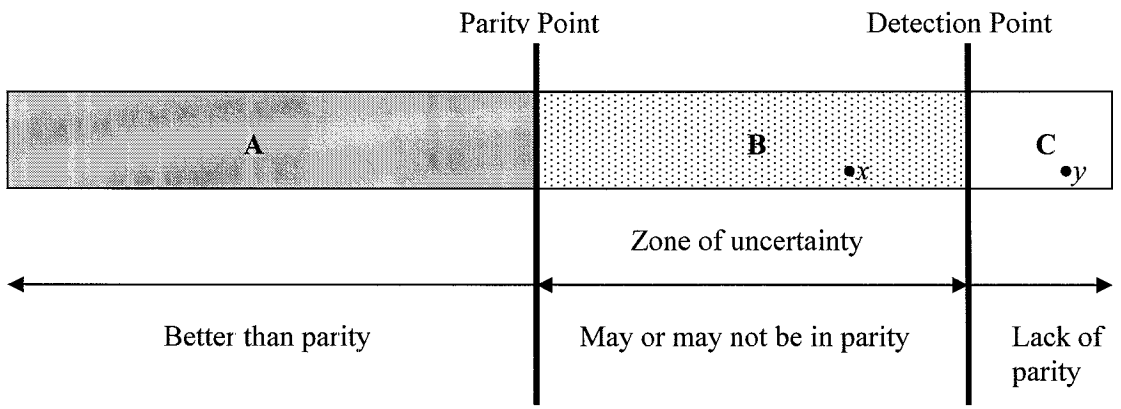
1 evidence *per se* of lack of parity, any measured departure from the parity point should not
2 necessarily lead to a penalty. Differences in average service quality that are not large
3 enough to overcome the zone of uncertainty *cannot* be equated with lack of parity.
4 Therefore, no penalties should be awarded in those instances.

5 **Q. WHAT WOULD BE THE CONSEQUENCES OF SETTING PENALTIES FROM**
6 **THE ESTIMATOR (MEAN) (OR, PARITY POINT) RATHER THAN FROM THE**
7 **EDGE OF THE CONFIDENCE INTERVAL (OR, DETECTION POINT)?**

8 A. Suppose a lack of parity is first established using the statistical test. If the associated
9 penalty is then measured from the parity point, rather than the detection point, the *size* of
10 that penalty payment would be larger than it ought to be. Effectively, the penalty
11 calculation would ignore random events and measurement error and count transactions as
12 having failed the "at or better than parity" requirement even when there is insufficient
13 statistical evidence for the conclusion that CLECs have received less-than-parity service.
14 Such a penalty calculation would impose an unfair burden on the ILEC and generate a
15 windfall payment for its competitors.

16 **Q. COULD YOU PROVIDE A SIMPLE ILLUSTRATION TO EXPLAIN THIS**
17 **POINT?**

18 A. Yes. Consider the illustration below.



The forgoing discussion implies that any comparison of average service quality of CLEC transactions to the average service quality of the ILEC's own internal transactions can lead to one of two outcomes: (1) CLECs get the benefit of better-than-parity service, i.e., the quality of service they receive is higher on average, or (2) CLECs receive less-than-parity service, i.e., the quality of service they receive is lower on average. In the illustration above, imagine that moving from left to right signifies *falling* average service quality of CLEC transactions relative to that for the ILEC's own internal transactions. Thus, the farthest left point (left edge of box A) is where CLECs receive better-than-parity service to the greatest possible degree. Conversely, the farthest right point (right edge of box C) is where the lack of parity in the service received by CLECs is also the greatest.

The shaded box A represents all outcomes in which CLECs receive better-than-parity service. These outcomes are not at issue because no penalties apply to the ILEC when CLECs receive parity or better-than-parity service. The dotted box B and the clear box C *together* represent all outcomes in which CLECs receive less-than-parity service. There is, however, one important difference between the two boxes. Although the outcomes in box

1 B represent observed disparities, they *cannot* be considered statistically proven instances of
2 lack of parity because the zone of uncertainty has not been overcome. Only the outcomes
3 in box C represent lack of parity that is confirmed statistically.

4 The dividing line between boxes A and B is the parity point (the estimator (mean)).
5 When the difference in average service quality between the CLECs and the ILEC's retail
6 operations is *zero* (i.e., shows neither better-than-parity nor less-than-parity service to
7 CLECs), then that outcome is, as would be expected, exactly at the parity point dividing
8 boxes A and B.

9 Similarly, the dividing line between boxes B and C is the detection point (the edge of
10 the confidence interval). When the difference in service quality exceeds the zone of
11 uncertainty (i.e., the outcome crosses over from box B to box C), then that outcome lies, as
12 would be expected, to the right of the detection point (or, edge of the confidence interval).

13 Therefore, the three boxes represent, respectively, better-than-parity service (box A),
14 service that may or may not be at parity (box B), and statistically confirmed lack of parity
15 (box C). Any particular point, such as point x in box B would *appear* to show less than
16 parity service (because it is to the right of the parity point). However, in reality, the best
17 that can be said is that there is no statistical way to prove that the difference in service
18 quality at point x is at less than parity. In contrast, the difference in average service quality
19 at a point like y in box C, which lies to the right of (i.e., "exceeds") both the parity point
20 *and* the detection point clearly meets the statistical test of proving a lack of parity.

21 The question then is: from where should any penalty be calculated? For reasons
22 explained above, when an outcome lies in box B, i.e., in the zone of uncertainty, lack of

1 parity cannot be confirmed and, therefore, no penalty should have to be paid. That
2 outcome—ostensibly showing a disparity—could have arisen purely because of chance,
3 and not any systemic lapse on the ILEC's part. However, once an outcome lies to the right
4 of the detection point (or, edge of the confidence interval) in box C, lack of parity is
5 confirmed and the ILEC should have to pay a penalty. The IPP proposes that the penalty
6 should be related to, or based on, the *severity* of that statistically-confirmed lack of parity.
7 In that case, that penalty must be based on the distance between an observed outcome in
8 box C (such as y) and the detection point alone.[7] That is, the penalty should *not* be based
9 on the distance between the outcome in box C (point y) and the parity point that separates
10 boxes A and B. The parity gap (for which the penalty is calculated) is the distance between
11 y and the detection point.

12 Were these rules not observed properly, the penalty payment measured from the
13 parity point would be larger than it ought to be (including being some positive amount
14 when it ought to be zero). Consider again the difference in average service quality, or
15 observed disparity, represented by the point x. As explained above, this outcome *cannot* be
16 regarded as statistically proven lack of parity. However, taking the distance between the
17 point x and the parity point (or, the estimator (mean)) would result in a positive penalty
18 payment when, in fact, it should be zero.

19 Similarly, consider the difference in average service quality represented by the point
20 y. Again, as explained above, this outcome *can* be regarded as statistically proven lack of

[7] See the explanation of this link in BellSouth's IPP or Exhibit WET-2.

1 parity. The penalty payment should then be based on the distance between the point y and
2 the detection point. Measuring that penalty instead by the distance between y and the
3 parity point would result in an unjustifiably large penalty.

4 **Q. IS THERE ANY LIKELIHOOD THAT SETTING PENALTIES FROM THE EDGE**
5 **OF THE CONFIDENCE INTERVAL, RATHER THAN FROM THE ESTIMATOR**
6 **(MEAN), WOULD UNDULY BENEFIT BELLSOUTH (SUCH AS BY OBLIGING**
7 **IT TO PAY A SMALLER PENALTY THAN IT SHOULD)?**

8 A. Not at all. When penalties are calculated from the detection point (edge of the confidence
9 interval), they are both justified (because the lack of parity is actually proven) and
10 measured properly. In contrast, calculating those penalties from the parity point (estimator
11 (mean)) would be neither justified (because lack of parity would not have been proven) nor
12 measured properly.

13 It should also be noted that the z-test embodied in the IPP for detecting lack of parity
14 and setting penalties is a *truncated* test. That means that certain values of the
15 z-statistic, namely, those indicating that CLECs receive better-than-parity service, are not
16 even considered in the test. This rules out any possibility of rewarding or giving credit to
17 BellSouth for having provided better-than-parity service for its CLEC transactions.
18 Instead, with the statistical test only considering possible instances of less-than-parity
19 service, the odds of BellSouth (or the ILEC) paying penalties are greatly increased. That is
20 because the truncated nature of the test makes it impossible for better-than-parity service
21 (for which BellSouth could claim credit—but cannot under the IPP) to offset instances of
22 less-than-parity service. Under the IPP, BellSouth is obliged to take only suspected

performance disparities into account and to pay penalties accordingly.

Q. HOW DOES THE DISTINCTION BETWEEN USING BENCHMARKS TO JUDGE SERVICE QUALITY PERFORMANCE AND USING STATISTICAL TESTING TO DO THE SAME PERTAIN TO YOUR ASSERTION THAT PENALTIES SHOULD BE DETERMINED FROM THE EDGE OF THE CONFIDENCE INTERVAL (OR, DETECTION POINT) AS WELL?

A. The distinction between using benchmarks and using statistical testing to evaluate service quality performance is important in this context. In a prior South Carolina proceeding devoted to the adoption of BellSouth's IPP, there was a suggestion that although it was acceptable to use the detection point (edge of the confidence interval) to detect and confirm lack of parity, the *penalty* for any lack of parity should be based on the parity point (estimator (mean)). This argument was justified with the help of an analogy to how speeding fines are issued by highway patrolmen to drivers who exceed the speed limit.[8] In that example, the speed limit was set at 65 miles per hour ("MPH") and the driver's actual speed was recorded at 77 MPH. Also, the detection point was set at 75 MPH (10 MPH above the actual speed limit), presumably to overcome a zone of uncertainty (because actual driving speed can be affected by a host of random factors). However, the argument went, despite only choosing to stop the speeding driver at a speed above the 10 MPH leeway, the patrolman issued a fine based on the parity point, namely, the "gap" of 12 MPH between the recorded speed of 77 MPH and the speed limit of 65 MPH.

[8] Rebuttal testimony of Robert M. Bell, on behalf of AT&T Communications of the Southern States, Inc., Docket

(continued....)

1 This analogy is *only* correct when service quality for individual CLEC transactions is
2 compared to a fixed benchmark. When applied in the context of statistical testing, i.e., to a
3 comparison of the average service quality for CLEC transactions and that for the ILEC's
4 internal transactions, however, the analogy is simply wrong and unworkable. Our earlier
5 discussion of what happens when both the performance and the goal are variable and
6 subject to random variation clearly establishes why that is so.

7 V. SUMMARY

8 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

9 A. My testimony addresses one of the issues under consideration in this proceeding, namely,
10 whether, in the context of BellSouth's IPP, "the [penalty] payment should be calculated
11 from the estimator (mean) as opposed to the edge of the confidence interval." In so doing,
12 my testimony explains that this amounts to asking whether the penalty should be
13 determined from the parity point (or, "estimator (mean)") or from the detection point (or,
14 the "edge of the confidence interval"). In this connection, I reach the following
15 conclusions:

16 1. The edge of the confidence interval (detection point) should be used to *both* confirm (or
17 prove statistically) a performance disparity and set the appropriate penalty. In
18 particular, because of the role of chance events, not every observed disparity can be
19 considered evidence of lack of parity *in fact*. Hence, a statistical test that builds in a
20 zone of uncertainty must be used to confirm the occurrence of a disparity.
21 2. There would be two adverse and unjustified consequences of setting penalties for the
22 ILEC from the parity point rather than from the detection point. First, setting penalties

(...continued)

No. 2001-209-C, July 9, 2001, at 41-42.

in that manner would be inconsistent with using the detection point to confirm any lack of parity because no penalty should be paid until lack of parity is proven. Second, even when observed disparities are confirmed statistically, any penalty payment calculated from the parity point rather than the detection point would be larger than it ought to be. Both situations would raise the ILEC's cost to provide service and compete for customers as well as provide an undue windfall income to CLECs.

3. Third, any comparison of service quality *averages* (for CLEC and the ILEC's internal transactions) for the purpose of detecting and penalizing any lack of parity is likely to be affected by random variation. In that situation, only a statistical test can offer conclusive proof of the lack of parity. This contrasts with any situation in which the service quality of CLEC transactions is compared to a fixed benchmark (used when those transactions have no retail analogs for the ILEC). In that comparison, no statistical testing is needed to evaluate service quality performance or to set penalties. For this reason, the manner in which fines are issued for highway speeding (see discussion above) is not analogous to the manner in which penalties should be set when service quality performance is evaluated through statistical testing.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

EXHIBIT WET-1

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Dr. Taylor received a B.A. *magna cum laude* in Economics from Harvard College, an M.A. in Statistics and a Ph.D. in Economics from the University of California at Berkeley. He has taught economics, statistics, and econometrics at Cornell and the Massachusetts Institute of Technology and was a post doctoral Research Fellow at the Center for Operations Research and Econometrics at the University of Louvain, Belgium.

At NERA, Dr. Taylor is a Senior Vice President, heads the Cambridge office and is Director of the Telecommunications Practice. He has worked primarily in the field of telecommunications economics on problems of state and federal regulatory reform, competition policy, terms and conditions for competitive parity in local competition, quantitative analysis of state and federal price cap and incentive regulation proposals, and antitrust problems in telecommunications markets. He has testified on telecommunications economics before numerous state regulatory authorities, the Federal Communications Commission, the Canadian Radio-Television and Telecommunications Commission, federal and state congressional committees and courts. Recently, he was chosen by the Mexican Federal Telecommunications Commission and Telmex to arbitrate the renewal of the Telmex price cap plan in Mexico. Other recent work includes studies of the competitive effects of major mergers among telecommunications firms and analyses of vertical integration and interconnection of telecommunications networks. He has appeared as a telecommunications commentator on PBS Radio and on The News Hour with Jim Lehrer.

He has published extensively in the areas of telecommunications policy related to access and in theoretical and applied econometrics. His articles have appeared in numerous telecommunications industry publications as well as *Econometrica*, the *American Economic Review*, the *International Economic Review*, the *Journal of Econometrics*, *Econometric Reviews*, the *Antitrust Law Journal*, *The Review of Industrial Organization*, and *The Encyclopedia of Statistical Sciences*. He has served as a referee for these journals (and others) and the National Science Foundation and has served as an Associate Editor of the *Journal of Econometrics*.

EDUCATION

UNIVERSITY OF CALIFORNIA, BERKELEY
Ph.D., Economics, 1974

UNIVERSITY OF CALIFORNIA, BERKELEY
M.A., Statistics, 1970

HARVARD COLLEGE
B.A., Economics, 1968
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EMPLOYMENT

NATIONAL ECONOMIC RESEARCH ASSOCIATES, INC. (NERA)
1988- Senior Vice President, Office Head, Telecommunications Practice Director.

BELL COMMUNICATIONS RESEARCH, INC. (Bellcore)
1983-1988 Division Manager, Economic Analysis, formerly Central Services Organization, formerly American Telephone and Telegraph Company: theoretical and quantitative work on problems raised by the Bell System divestiture and the implementation of access charges, including design and implementation of demand response forecasting for interstate access demand, quantification of potential bypass liability, design of optimal nonlinear price schedules for access charges and theoretical and quantitative analysis of price cap regulation of access charges.

BELL TELEPHONE LABORATORIES
1975-1983 Member, Technical Staff, Economics Research Center: basic research on theoretical and applied econometrics, focusing on small sample theory, panel data and simultaneous equations systems.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY
Fall 1977 Visiting Associate Professor, Department of Economics: taught graduate courses in econometrics.

CENTER FOR OPERATIONS RESEARCH AND ECONOMETRICS
Université Catholique de Louvain, Belgium.
1974-1975 Post Doctoral Research Associate: basic research on finite sample econometric theory and on cost function estimation.

CORNELL UNIVERSITY
1972-1975 Assistant Professor, Department of Economics. (On leave 1974-1975.) taught graduate and undergraduate courses on econometrics, microeconomic theory and economic principles.

MISCELLANEOUS

1985-1995 Associate Editor, *Journal of Econometrics*, North-Holland Publishing Company.
1990- Board of Directors, National Economic Research Associates, Inc.
1995- Board of Trustees, Treasurer, Episcopal Divinity School, Cambridge, Massachusetts.

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March 03

EXHIBIT WET-2

TECHNICAL ISSUES

I. INTRODUCTION

This exhibit contains additional technical or statistical support for the ideas and arguments presented in the Direct Testimony. Additional such support or details may be found in the attachments to BellSouth's Incentive Payment Plan ("IPP").[1]

II. REAL-WORLD IMPLICATIONS OF LACK OF PARITY IN SERVICE QUALITY

Lack of parity in service quality performance (to redress which a penalty must be paid) arises when the ILEC fails to provide a wholesale service to its competitors (the CLECs) at the same or greater level of quality than the service it provides to its own retail operations. To a first approximation, a CLEC is harmed (and the ILEC gains an undue competitive advantage) when, and only when, lack of parity in service quality affects the *transaction* between the CLEC and its retail customer in a manner that either causes the customer to switch/return to the ILEC or increases the cost to the CLEC of retaining the customer. Any lack of parity which, if left uncorrected, has no such effect on customers can confer no undue competitive advantage on the ILEC and cannot cause the CLEC to incur additional costs. From this perspective, only *failed* transactions matter and call for a penalty to be assessed. Using a penalty that is a function of failed transactions is thus (approximately) the same as a penalty that is a function of the number of customers retained by the ILEC that would have been lost to a CLEC had the ILEC supplied wholesale services to the CLEC at parity with its own retail operations.

III. MEASUREMENT OF FAILED TRANSACTIONS (AND THE PENALTY DUE): THE COMMISSION'S ISSUE

The "number of failed transactions" is shorthand for the number of wholesale transactions that would have to be improved in order for the quality of equivalent ILEC and

[1] It should be noted that some terms introduced here are intended to provide context or otherwise aid understanding of some of the issues discussed in the Direct Testimony. In the IPP, these terms may not have appeared exactly as stated, or alternative (but equivalent) terms may have been used.

CLEC *retail* services to be perceived by end-use customers as being at parity. Should the number of failed transactions be measured from the "parity point" (i.e., the "estimator (mean)" in the Commission's terminology) or from the "detection point" (i.e., the "edge of the confidence interval" in the Commission's methodology)? That is, should we count the number of failed transactions that need to be corrected in order that (1) the truncated z-test no longer rejects the null hypothesis of parity or (2) the truncated z-statistic itself has a value of zero? This is exactly the issue that the Commission has asked to be considered in this proceeding for the purpose of calculating the penalty payment.

Suppose, over a period of a month, X_i represents the quality of wholesale service provided by the ILEC on the ith transaction to a CLEC (or CLEC group). If there are N such transactions over a month, then i=1,2,…,N, and N observations of service quality (one for each transaction) are made. Similarly, suppose Y_j represents the quality of wholesale service provided by the ILEC on the jth transaction to its own retail operations. If there are M such transactions over a month, then j=1,2,…,M, and M observations about service quality (one for each transaction) are made.

Every transaction (whether with the CLEC or the ILEC's own retail operations) and its associated service quality are subject to influences from both systemic and random events. Therefore, the N CLEC transactions and the M ILEC transactions give rise to statistical distributions for the two types of transactions. The summary statistics for these distributions (principally, the mean and the variance or standard deviation) describe the characteristics of service quality with which the ILEC serves its competitor (the CLEC) and its own retail operations over the given month. They also provide a basis to compare the service quality performance between the two groups served. Taking into account the full distribution of service quality outcomes is more meaningful than conducting any comparison of the service quality of one CLEC transaction and one ILEC transaction at a time.

Let $\overline{X}$ and $\overline{Y}$ represent the mean service quality rendered to the CLEC and the ILEC's retail operations, respectively. Let s_X and s_Y represent the standard deviation of the service quality rendered to these two groups, respectively. Finally, let cv_α represent the critical value

corresponding to an α level of the test (or, level of significance). This is the critical value (typically from the standard normal variate z distribution for a large sample or the t distribution for a small sample) when the probability of Type I error is fixed at α %. Since that probability represents the chance that a null hypothesis is (incorrectly) rejected when it is, in fact, true, its complement, namely, 1-α % is the chance that a true null hypothesis is affirmed. Hence, 1-α % represents the "level of confidence" in the test of the null hypothesis.[2]

The sequence of steps in the IPP for testing for any suspected lack of parity—in the manner BellSouth (the ILEC) provides wholesale services to its competitors and to its own retail operations—can be described as follows.

Step 1: Define an "observed disparity" D as

$$D = \overline{X} - \overline{Y}$$

When $D > 0$, the average service quality received by the CLEC apparently exceeds that received by BellSouth's own retail operations.[3] This situation of the CLEC apparently receiving better-than-parity quality of service is of no interest for current purposes because there is no problem of lack of parity in service quality to penalize or correct.

When $D < 0$, the average service quality received by the CLEC is apparently lower than that received by BellSouth's own retail operations. This situation of the CLEC apparently receiving less-than-parity quality of service is of particular interest for current purposes and the reason that the IPP has been established.

When $D = 0$, the two parties apparently receive service of exactly the same average quality. This is the sample analog of the population condition of "no lack of parity" which becomes the basis for the null hypothesis (more on this in the next section). Because of the inherent randomness in the distribution of measured service quality outcomes X_i and Y_j, an observed disparity of exactly zero is likely to be a very rare event.

[2] Key terms used here and the role of the confidence interval are explained more fully in a subsequent section.

[3] The observed disparity is only an apparent indicator of actual service quality performance because it is influenced, in part, by random fluctuations. Only when the observed disparity is statistically confirmed can inferences about service quality being "better than parity" or "less than parity" be made.

Step 2: Test whether an observed disparity $D < 0$ based on a sample of CLEC and internal ILEC transactions implies that a lack of parity in service quality, in fact, exists. As explained in the Direct Testimony, a finding that $D < 0$ should not automatically be construed as evidence of a lack of parity. Rather, because of the possibility that $D < 0$ because of pure chance events, it is necessary to test whether the (absolute value) of the deviation of D from zero exceeds (or, lies outside) a confidence interval (termed in the testimony a "zone of uncertainty") constructed for a given 1-α % level of confidence. Thus,

Null hypothesis: No lack of parity

Confidence interval: $cv_\alpha \times s_D$ (where s_D is the standard deviation of the observed disparity and a function of s_X, s_Y, N, and M).

Test of null hypothesis: Test whether $|D| > cv_\alpha \times s_D$.[4] This is equivalent to the test of whether $z = |D| \div s_D > cv_\alpha$.[5]

If the answer is "yes," the null hypothesis of no lack of parity is rejected. If the answer is "no," the null hypothesis is not rejected. This test is equivalent to the truncated z-test described in the IPP with one qualification. Instead of using the critical value cv_α for a fixed Type I error probability of α %, the IPP uses the "Balancing Critical Value" or *bcv*, the critical value (from the z distribution) at which the probabilities of Type I and Type II error are equalized. With this qualified test, if the null hypothesis of no lack of parity is rejected, then the difference between the truncated z-statistic and the balancing critical value, i.e., $z - bcv$, is characterized as the "parity gap" in the IPP. The IPP also explains how and why the number of failed transactions that need to be corrected to get rid of any proven lack of parity can be calculated from that parity gap.

Given this framework, the question posed by the Commission asks which of the following two options should be chosen. Should the number of failed transactions that need to be corrected depend on reducing the observed D to the value

(1) $bcv \times s_D$ ("edge of the confidence interval," i.e., the detection point), or

(2) zero ("estimator (mean)," or the parity point)

[4] $|D|$ is the absolute value of D. Recall that only non-positive values of D are of interest for the purposes of the IPP.

[5] The truncated z-statistic is the ratio of the absolute value of the observed disparity and the standard deviation of the observed disparity.

The obverse of this question is, of course, whether any penalty for proven performance lack of parity should be based on the distance

(1) $|D| - (bcv \times s_D)$ (the excess of the observed disparity beyond the detection point, i.e., the parity gap, which is equivalently calculated up to a scale factor by $z - bcv$) or,

(2) $|D|$ itself (the excess of the observed disparity beyond the parity point).

IV. MEASUREMENT OF PENALTY FROM DETECTION POINT: RESPONSE TO COMMISSION'S ISSUE

There are at least three possible approaches to measuring the penalty payment. The first two approaches require that any such measurement be made from the detection point, and differ only in how the confidence interval (or critical value) is chosen. The third approach measures the penalty from the parity point. For reasons explained in the Direct Testimony, only the first two approaches should be entertained for the purposes of the IPP.

Under the first detection point-based approach, the test of the null hypothesis of no lack of parity (equal average service quality) would start with a conventional critical value, such as one that reflects the standard 5% level of significance for the truncated z-test. Viewed another way, this test would hold the probability of Type I error fixed at 5% and provide a 95% confidence interval around the observed difference in mean service quality. Given the z-statistic that is calculated from that observed difference in mean service quality, the next step would be to count the number of failed transactions that would have to be changed (i.e., improved) in order for the original value of the z-statistic to fall to the pre-selected critical value. The penalty payment would then be based on the number of failed transactions that would need to be so improved/changed. The justification for this approach is that the ILEC should clearly only pay a penalty for those failed transactions that are unambiguously associated with providing less-than-parity service.

For example, suppose the ILEC experienced 18 failed transactions in all. Also, suppose that if it had experienced only 15 such transactions, the truncated z-test would have affirmed the null hypothesis of no lack of parity in service quality. Any penalty linked to failed transactions

measured from the detection point would then only be based on the three transactions which makes the difference between finding no lack of parity (at 15 failed transactions) and finding a statistically significant lack of parity (at 18 failed transactions). An ILEC with only 15 failed transactions would not be providing less-than-parity service beyond a "zone of uncertainty" signified by the chosen 5% level of significance.

The second detection point-based approach is essentially similar to the first approach, and differs only in the manner in which the critical value (and level of significance or the level of confidence) is chosen. If the *bcv* is selected in place of a conventional critical value, then the number of failed transactions that would need to be corrected in order for the null hypothesis of parity service to be accepted would now depend on the *bcv*. Accordingly, the penalty calculation too would depend on the *bcv*.

The justification for this approach is the same as that for the first, except that the probabilities of making mistakes that favor the ILEC and those that favor the CLEC are first equalized. That is, instead of a 5% level for the zone of uncertainty, a different standard is employed such that the probability that an ILEC fails the truncated *z*-test despite providing parity service is the same as the probability that an ILEC passes the test despite providing less-than-parity service.

For most sample sizes, using the critical value that balances these two types of errors (namely, the *bcv*) results in a substantially higher probability of *incorrectly* rejecting the null hypothesis of no lack of parity than would be acceptable for scientific purposes or in litigation, where the standard is generally 5%. Basing a penalty calculation on the number of failed transactions that need to be corrected for the truncated *z*-statistic to just equal the *bcv* would generally result in a *larger* expected penalty than if the 5% level of significance and its associated critical value were used. Hence an ILEC providing parity service can expect, on average, to pay a higher penalty using the *bcv* than would ordinarily be assessed using conventional statistical measures and a conventional formulation of the zone of uncertainty. In this sense, measuring the penalty from the *bcv* is a middle ground between using the 5 percent level of significance and its associated critical value (as under the first approach) and the point estimate of parity (as under the third approach described next).

Under the parity point-based approach, *any* calculated z-statistic that exceeds (in absolute value) zero is considered to be evidence of disparity. In effect, the critical value chosen for the test is zero. A finding of no disparity could only occur if the ILEC's mean service quality when serving the CLEC were *identical* to its mean service quality for its own internal transactions. Given the role of chance or random variation in shaping performance outcomes, a finding of parity under this approach is an extremely unlikely event.

More importantly, calculating the penalty payment under this approach—by counting the number of failed transactions that need to be corrected so that the truncated z-statistic equals zero—applies, in effect, a *zero* zone of uncertainty (or, no confidence interval at all). By counting every failed transaction above the point estimate of parity as subject to penalty, this method counts, for penalty purposes, even the failed transactions that, from a *statistical* point of view, would be considered consistent with parity service. Thus, any expected ILEC penalty payment calculated under the null hypothesis of no disparity would be disturbingly large under this approach.

From a statistical perspective, no sensible *test* of parity service would ever be based on whether the truncated z-statistic exceeds zero in absolute value. Such a test would have a 50% probability of Type I error (finding lack of parity when there is none), and simply flipping a fair coin would do just as well. Moreover, calculating the penalty from the parity point (i.e., truncated z-statistic equals zero) would not be "statistically neutral" because some of the failed transactions counted could easily be attributed to random variation or statistical sampling error and, more importantly, need *not* be inconsistent with the ILEC providing parity service. It would also not be statistically "neutral" because random variations in the number of failed transactions around the parity point would not be treated symmetrically in the penalty calculation process. Positive random variation (where the ILEC appears to provide better-than-parity service to the CLEC) would be ignored, while negative random variation (where the reverse is true) would be penalized.

Thus, using the number of failed transactions that need to be corrected to reach (measured) parity has the undesirable characteristic of making the ILEC pay for transactions that would be observed (with reasonable probability) *even if* the ILEC were providing parity service.

To base the penalty on transactions that are consistent with parity service greatly increases the cost of Type I error to the ILEC. That is, an ILEC providing parity service would expect to pay, on average over time or across measures, a significant penalty, despite its conformance with the rules.

V. THE ZONE OF UNCERTAINTY AND THE CONFIDENCE INTERVAL

In any test of a statistically formulated hypothesis, randomness or chance plays an important role. Consider the *null* (or, maintained) hypothesis that the average service quality for CLEC transactions is equal to the average service quality for the ILEC's own internal transactions. Against this hypothesis, an *alternate* hypothesis may be either that service quality between the two types of transactions is *not* at parity or, more specifically, that the ILEC provides less-than-parity service for CLEC transactions. If the appropriate statistical test leads to the rejection of the null hypothesis, then the conclusion would be that the alternate hypothesis is likely to be true.

The problem is that no matter what the true state of affairs is, any "either-or" pronouncement about the hypothesis of parity is likely to be clouded by some uncertainty. In any given test, a judgment about parity has to be rendered based on a limited number of observations of the quality of service rendered transaction by transaction. Since any comparison of service quality only makes sense *on average*, the statistical test of hypothesis compares, in effect, only the central (or mean) points of two statistical distributions of service quality, one for CLEC transactions and the other for the ILEC's internal transactions.

Alternately, the same test of hypothesis can be thought of comparing the *difference* in average service quality between the two types of transaction (measured by D in the notation adopted above) with a value of zero, which is what would be expected if wholesale service were being provided at parity. Again, given the fact that a whole distribution of values can exist for D (i.e., not all observed values of D may be zero), the question is "how large—and negative—would D have to be before it can be inferred unambiguously that there is a lack of parity in the quality of wholesale service rendered to CLECs?" In other words, the test must be careful to rule out small negative values of D which arise purely by chance as evidence of a lack of parity. The

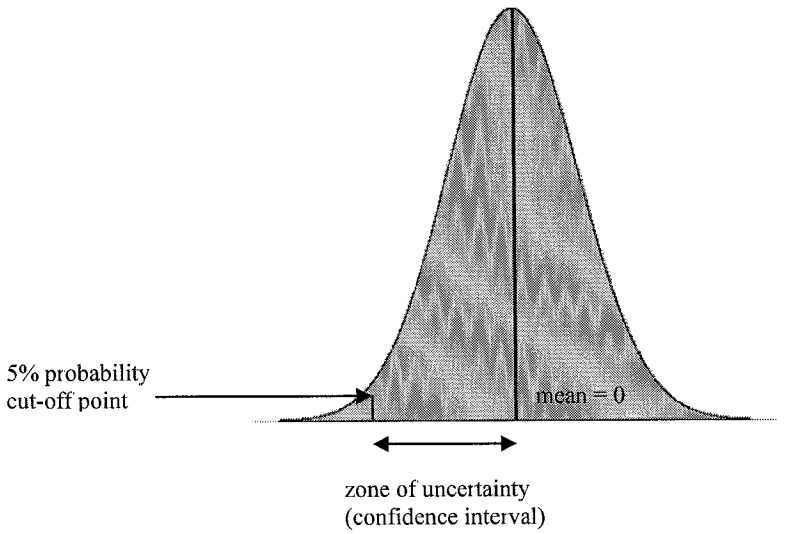
range of values of D over which the element of chance cannot be discounted is the "zone of uncertainty." Larger values of D that lie outside that zone thus provide evidence (up to some exogenously set limit on Type I error) of a lack of parity in service quality.

Viewed another way, the purpose of the statistical test is to build some degree of confidence in any conclusion about a lack of parity. The larger the allowance made for uncertainty, the greater the confidence that chance would have no part in finding any lack of parity. Thus, the confidence interval (constructed in the manner discussed above) represents exactly the width of the zone of uncertainty which must be crossed in order for the role of chance in any finding of lack of parity to be minimized.

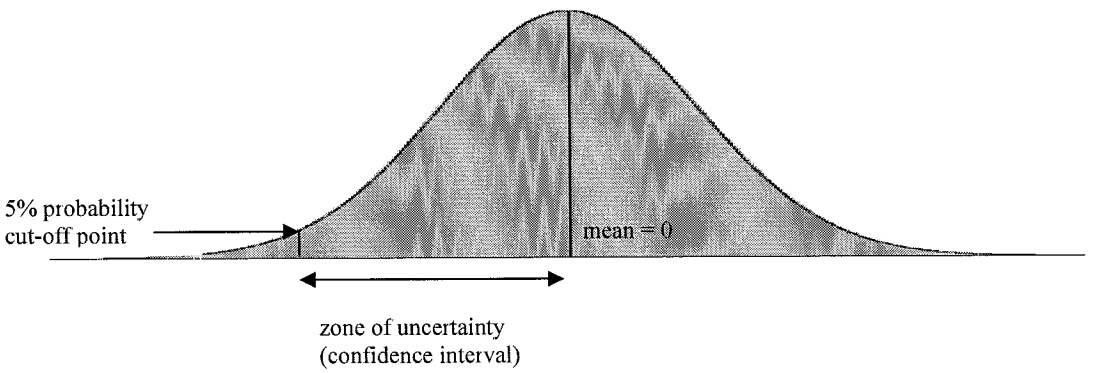
How wide this zone of uncertainty (or confidence interval) is depends on how much uncertainty exists in the distribution of D. In statistical terms, this uncertainty is captured by the standard deviation (or, square root of the variance) of D.[6] The larger is this standard deviation, the more "spread out" is the distribution of D around the mean point of zero. In contrast, the smaller is that standard deviation, the more compact is that distribution of D. This means that the zone of uncertainty that would need to be crossed to be able to declare a lack of parity (or, equivalently, the confidence interval that would need to be built for any such declaration) is necessarily larger when D has a more spread out distribution than when it has a more compact distribution. This is shown graphically below where, starting from the same mean of zero, the confidence intervals in two different distributions (with the probability of Type I error fixed at 5% in both tails of the distribution) also differ in width.

[6] If the number of CLEC transactions differs from the number of ILEC internal transactions, then the standard deviation of D is calculated as a composite of the standard deviations, respectively, of the service quality observed for CLEC and ILEC transactions, and of the numbers of such transactions. Above, these were denoted by s_X, s_Y, N, and M.

Compact distribution



Spread out distribution



While the zone of uncertainty (confidence interval) clearly varies in width as the standard deviation in the distribution varies, there can be one other source of variation. If the probability of Type I error (i.e., the probability of finding lack of parity by chance when, in fact, there isn't any) is itself fixed at some other level, e.g., as would be the case with the use of the Balancing Critical Value, then the probability cut-off point in the two distributions above would be different from the 5% shown. Again, that would affect the width of the zone of uncertainty (confidence interval).

STATE OF SOUTH CAROLINA)
) CERTIFICATE OF SERVICE
COUNTY OF RICHLAND)

The undersigned, Nyla M. Laney, hereby certifies that she is employed by the Legal Department for BellSouth Telecommunications, Inc. ("BellSouth") and that she has caused BellSouth Telecommunications, Inc.'s Direct Testimony of William E. Taylor, Ph.D in Docket No. 2001-209-C to be served upon the following this March 5, 2003:

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PC Docs # 401224

POSTED 03/5/03

BELLSOUTH TELECOMMUNICATIONS, INC.

DIRECT TESTIMONY OF ALPHONSO J. VARNER

BEFORE THE PUBLIC SERVICE COMMISSION OF SOUTH CAROLINA

FILED MARCH 5, 2003

DOCKET NO. 2001-209-C

RECEIVED 2003 MAR -5 PM 1:49 SC PUBLIC SERVICE COMMISSION

Q. PLEASE STATE YOUR NAME, YOUR POSITION WITH BELLSOUTH TELECOMMUNICATIONS, INC. ("BELLSOUTH") AND YOUR BUSINESS ADDRESS.

S. C. PUBLIC SERVICE COMMISSION RECEIVED MAR 05 2003 UTILITIES DEPARTMENT

A. My name is Alphonso J. Varner. I am employed by BellSouth as Assistant Vice President in Interconnection Services. My business address is 675 West Peachtree Street, Atlanta, Georgia 30375.

Q. PLEASE SUMMARIZE YOUR BACKGROUND AND EXPERIENCE.

A. I graduated from Florida State University in 1972 with a Bachelor of Engineering Science degree in systems design engineering. I immediately joined Southern Bell in the division of revenues organization with the responsibility for preparation of all Florida investment separations studies for division of revenues and for reviewing interstate settlements.

Subsequently, I accepted an assignment in the rates and tariffs organization with responsibilities for administering selected rates and tariffs including preparation of tariff filings. In January 1994, I was appointed Senior Director of Pricing for the

RETURN DATE: _____
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nine-state region. I was named Senior Director for Regulatory Policy and Planning in August 1994. In April 1997, I was named Senior Director of Regulatory for the nine-state BellSouth region. I accepted my current position in March 2001.

I. PURPOSE OF THIS PROCEEDING

Q. HOW WAS THIS PROCEEDING ESTABLISHED?

A. On page 119, paragraph 7, of its *Order Addressing Statement and Compliance With Section 271 of the Telecommunications Act of 1996*, Docket No. 2001-209-C, Order No. 2002-77, dated February 14, 2002 ("February 2002 Order"), the Public Service Commission of South Carolina ("the Commission") stated that it "will continue to review the SQM and the performance of the Incentive Payment Plan ("IPP") on a regular basis in order to monitor BellSouth's performance and to prevent backsliding on the part of BellSouth." Earlier in the same order, the Commission explained that the "purpose of the IPP is to prevent any 'backsliding' by BellSouth *in the level of service it offers to its competitors after it enters the long-distance market.*" *Id.* at 28 (emphasis added).

In its *Notice of Hearing*, Docket No. 2001-209-C, dated January 30, 2003, the Commission established this proceeding to serve as the first six-month review, pursuant to its February 2002 Order. This Notice identifies four issues to be addressed as part of this proceeding: (1) whether a review of BellSouth's performance data and the IPP demonstrates backsliding on the part BellSouth;

(2) whether the payment calculation of the IPP, "should be calculated from the estimator (mean) as opposed to the edge of the confidence interval"; (3) whether a Tier 1 penalty is appropriate for the metrics associated with the Change Control Process ("CCP"); and (4) the Commission Staff's proposed model mediation process to be used in conjunction with the dispute resolution component of the CCP should a dispute be escalated to the Commission. I will fully address issues (1), (3) and (4) in my testimony and address what the results of the IPP indicate with regard to issue 2. BellSouth witness, Dr. William Taylor, will address issue (2) from a statistical and more detailed standpoint in his testimony.

Q WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. My testimony addresses issues (1), (3) and (4) of the Commission's Notice as follows:

- Provides BellSouth's performance data and demonstrates that such data shows that there has been no backsliding by BellSouth in the level of service it offers to the CLECs since it entered the long-distance market. To the contrary, the high level of service that BellSouth provides to its competitors has actually improved since BellSouth entered the long-distance market in South Carolina.
- Explains why a Tier 1 penalty is not appropriate for change management measurements, *i.e.*, any penalties should continue to be Tier 2 only.
- Addresses the Commission Staff's proposed mediation process for disputes arising out of the CCP that are escalated to the Commission.
- My testimony, with respect to issue (2), will be limited to showing that the

current methodology of calculating penalties from the edge of the confidence interval would generate payments that are more than sufficient to prevent backsliding. BellSouth witness, Dr. William Taylor, will discuss this issue in his testimony from a more technical perspective based on the statistical implications.

I I. REVIEW OF BELLSOUTH'S PERFORMANCE DATA AND IPP.

Q. WITH RESPECT TO THE ISSUE OF BELLSOUTH'S PERFORMANCE, HAS ANY BACKSLIDING OCCURRED?

A. No. There has been no backsliding since the FCC's grant of Section 271 authority in South Carolina; BellSouth's performance has, in fact, improved.

Q. WHAT IS THE BASIS FOR THIS CONCLUSION?

A. BellSouth's performance analysis is based on the Monthly State Summary ("MSS") reports, which are provided to the Commission and CLECs each month, and IPP data. For purposes of this analysis, BellSouth compared performance results from the time of its initial filing in South Carolina, in April 2001, July through December 2001 and the most recent six months, July through December 2002.

Q. BEFORE DISCUSSING BELLSOUTH'S PERFORMANCE DATA AND IPP, PLEASE PROVIDE AN OVERVIEW OF THE CURRENT PERFORMANCE MEASUREMENTS REPORTING ENVIRONMENT.

A. Certainly. Over the last seven years, BellSouth has devoted a massive amount of effort and resources to the process of developing measurement and enforcement plans to ensure compliance with the requirements of the Telecommunications Act of 1996. While each of the nine states in BellSouth's region has adopted some form of the core SQM plan proposed by BellSouth, the current extensive reporting requirements and the implications of the steady increase in such requirements have resulted in certain practical problems. The problem posed is that the performance and enforcement plans in general, and as applies to South Carolina in this proceeding, contain too many measures and are too disaggregated. Specifically, when the current set of measurements is disaggregated for reporting purposes into specific sub-metrics, BellSouth is required to monitor performance at such a minute level that, for many sub-metrics, there is insufficient activity, in many cases no activity, to generate a meaningful result.

To illustrate, the plan currently in place in South Carolina contains 75 measures, which, when disaggregated, reflect about 2300 sub-metrics. The summarized results provided herein by BellSouth are based on only those measures for which a benchmark or retail analogue has been established.

There are certain measures that have been determined to be "parity-by-design" and are not included in the performance calculations and summaries. For measures that are parity-by-design, no distinction can be made between the processing of BellSouth retail and CLEC transactions. The design of the equipment associated with these measures is such that the CLEC and BellSouth retail transactions are so commingled that it is impossible to distinguish between the BellSouth Retail and the CLEC service. Measures that are parity by design do not have any established benchmarks or retail analogues and, therefore, cannot be compared for parity purposes.

Additionally, there are some measures that are reported for diagnostics purposes only. For these measures, the Commission established no benchmark or retail analogue and, therefore, they are not included in the calculations and summaries.

Q. ARE THERE ANY MEASURES THAT ARE EXCLUDED FROM YOUR ANALYSIS?

A. Yes. There are two measures excluded from this analysis based on either deficiencies in the measure or that reported results for the measure do not reflect anything meaningful about performance for CLECs. These two measures are: (1) Firm Order Confirmation ("FOC") & Reject Completeness - Multiple Responses; and (2) LNP (Local Number Portability) - Disconnect Timeliness. The FOC/Reject Response Completeness (Multiple Responses) measurement, a variation on the FOC & Reject Response Completeness (O-11) measurement,

indicates the proportion of times that multiple FOCs/Rejects for a Local Service Request (LSR) are returned. The FOC & Reject Completeness - Multiple Responses measure was not ordered by any of the State commissions. As described in each of BellSouth's 271 applications it filed with the FCC, this measure contains inherent deficiencies and does not provide any useful information to evaluate performance. This measurement can be misleading because sometimes multiple responses are required for efficient operation of the business, such as when a second FOC is returned to notify a CLEC when a jeopardy is cleared. In the six-month reviews in Georgia, Florida and Louisiana, the CLECs have agreed to eliminate this measure. Consequently, while BellSouth reports data on this measure in the Monthly State Summary, BellSouth has not included it in the calculation of performance measurements that had CLEC activity and has not addressed those sub-metrics in this testimony. Further, the FCC did not rely on this measure as a basis for long distance approval in South Carolina.

BellSouth also previously advised this Commission, and the FCC in each of its 271 applications, that the LNP Disconnect Timeliness measure does not accurately reflect the end user's experience. This measure is supposed to indicate whether BellSouth timely completes necessary number portability functions to allow CLEC end users to receive calls from their host switch. However, on the great majority of LNP orders, BellSouth creates what is referred to as a "trigger" in conjunction with the order. The trigger allows the end user customer to make and receive calls from other customers who are served by the customer's host switch at the time of the LNP activation. This ability is not

dependent upon BellSouth working a disconnect order, which is the event captured by this measure.

Additionally, on trigger orders, end user customers also can make and receive calls from customers not served by the same host switch before BellSouth works the disconnect order. Thus, the end user has the full ability to make and receive telephone calls on ported numbers involving a trigger as soon as the Local Service Management System (LSMS) message is sent to all Switching Control Points (SCPs), even though BellSouth has not yet disconnected the customer from its translations in the BellSouth host switch. However, as it currently exists, the LNP Disconnect Timeliness measure does not recognize the importance of triggers and their effect on the LNP process.

Q. HOW MANY OF THE SUB-METRICS ARE INCLUDED IN THE OVERALL PARITY CALCULATIONS?

A. As of December 2002, there were a total of 2337 sub-metrics included in the MSS. As discussed earlier, 117 sub-metrics are excluded for the FOC & Reject Completeness – Multiple Response and LNP Disconnect Timeliness Measures, leaving 2220. For the 2220 sub-metrics, there were a total of 1,494 (67%) of the sub-metrics with no activity and an additional 351 (16%) of the sub-metrics that had fewer than 30 transactions. The 30-transaction criterion is a generally accepted minimum level required to produce meaningful results.

When the sub-metrics that are classified as "diagnostic" (918) or "parity by design" (10) are subtracted from the total number (2220) of sub-metrics, there are 1292 sub-metrics remaining that are evaluated to determine if parity has been achieved based on the results for each of these sub-measures. For the month of December 2002, of these 1292 sub-metrics, 758 (59%) had no activity with another 235 (18%) had fewer than 30 transactions. This data shows that 77% (993/1292) of the sub-metrics evaluated for parity determination in December 2002 had zero or fewer than 30 CLEC transactions.

As shown, a large number of sub-metrics had no CLEC activity during the data months reviewed. Therefore, BellSouth's performance and IPP data analyses are necessarily based on only those sub-metrics that reflect some level of activity in the specified months.

Q. NOW THAT YOU HAVE PROVIDED SOME BACKGROUND CONCERNING HOW YOUR ANALYSIS WAS DONE, PLEASE DESCRIBE WHAT YOU FOUND IN REVIEWING BELLSOUTH'S SERVICE PERFORMANCE IN SOUTH CAROLINA?

A. BellSouth's performance data, based on the MSS, demonstrate that it is continuing to provide a high level of service to the CLECs in South Carolina and that there has been no backsliding since BellSouth entered the long distance market in South Carolina. BellSouth analyzed the performance data in three different ways, and each analysis produced the same result: a clear indication that BellSouth's performance is improving. The first method of analyzing the

1 data was simply to compare the percentage of measures where BellSouth met
2 the performance standard in each month. In that study, BellSouth reviewed all
3 sub-metrics that had <u>any</u> activity during the pertinent time period, April 2001
4 through December 2002. In the second method, we calculated the overall results
5 for July through December 2001 and 2002 based on a review of sub-metrics that
6 had activity in each month of the six-month period. This review also included a
7 separate assessment of BellSouth's performance for each mode of entry utilized
8 by the CLECs in their operation. In the third method, the key measures included
9 in the South Carolina IPP were calculated for July 2001 through December 2001,
10 and for the same period in 2002.
11
12 Q. WHAT WAS THE RESULT OF THE INDIVIDUAL MONTHLY REVIEW?

13 A. A review of the data was made to compare the number of sub-metrics met for
14 each of several months. The results are depicted in the table below. For each
15 month, there are two numbers in parenthesis, and a percentage. The first
16 number in parenthesis is the total number of sub-metrics with CLEC activity that
17 met or exceeded the retail analogue or benchmark that month. The second
18 number in parenthesis is the total number of sub-metrics with CLEC activity in
19 that month that was compared to a retail analogue or benchmark. The total
20 number of sub-metrics has grown from 1,753 in April 2001 to over 2,300 in
21 December 2002. As previously discussed, many of these sub-metrics have no
22 CLEC activity. The percentage is the result of dividing the first number in
23 parenthesis by the second number in parenthesis. This percentage, therefore,

represents the percent of sub-metrics for which BellSouth met or exceeded the retail analogue or benchmark for each month that had CLEC activity.

As a review of the table demonstrates, BellSouth's performance in South Carolina at the time of the initial state 271 filing (April 2001 data) was at 83%. The performance improved to 86% by year-end 2001 with an overall 85% average performance for April through December 2001. For 2002, BellSouth has exceeded the 86% performance level in every month. Moreover, for the last three months of October through December 2002, the performance levels were 90%, 91% and 90%, respectively, which is an improvement over the high level of performance results that this Commission reviewed when it supported BellSouth's 271 application for South Carolina. The overall average for BellSouth's performance measures meeting or exceeding the benchmarks or retail analogue comparisons for the 12 months of 2002 was 90%. This overall performance level indicates BellSouth's continued commitment to providing the CLECs with a meaningful opportunity to complete in South Carolina as directed by this Commission and the FCC in approving BellSouth's 271 application for interLATA relief.

Month	**2001 Results**	**2002 Results**
Jan	N/A	(590/647) 91%
Feb	N/A	(578/635) 91%

Month	2001 Results	2002 Results
Mar	N/A	(567/637) 89%
Apr	(393/472) 83%	(580/642) 90%
May	(407/502) 81%	(558/637) 88%
Jun	(399/475) 84%	(535/609) 88%
Jul	(455/541) 84%	(543/604) 90%
Aug	(514/596) 86%	(562/643) 87%
Sep	(528/617) 86%	(578/640) 90%
Oct	(568/657) 86%	(565/628) 90%
Nov	(531/621) 86%	(560/616) 91%
Dec	(548/640) 86%	(568/633) 90%

Month	2001 Results	2002 Results
AVG	(4343/5121) 85%	(6784/7571) 90%

Q. WHAT WAS THE RESULT FOR THE SECOND METHOD, WHICH WAS THE SIX-MONTH REVIEW APPROACH?

A. For the six-month review approach, I analyzed BellSouth's performance for the six-month period of July 2001 to December 2001, and compared these results to July 2002 to December 2002 results. This approach allows the Commission to focus on the sub-metrics that consistently have activity. To do this, we looked at sub-metrics that had at least some activity in every month during the six-month period.

This review showed that BellSouth met or exceeded the benchmarks or retail analogues for a minimum of four of the six months from July 2002 through December 2002 for 90% (494/547) of these sub-metrics in South Carolina. In comparison, during the six-month period of July 2001 to December 2001, BellSouth met or exceeded the benchmark or retail analogues for a minimum of four of the six months for 85% (401/470) of the sub-metrics in South Carolina.

The use of the 2 out of 3 months parity performance (4 of 6 in this case) is a generally accepted criteria by the FCC in evaluating performance. These criteria were also included with the South Carolina state filing in 2001.

Q. UNDER THIS APPROACH, WHAT WERE BELLSOUTH'S PERFORMANCE RESULTS BY CLEC MODE OF ENTRY FOR SOUTH CAROLINA?

A. I reviewed data for the last six months of 2001 and 2002 by mode of entry. First, for clarification purposes, I should point out that by "mode of entry" I mean the method by which the CLEC access BellSouth's network or OSS (Operation Support Systems). Namely, the mode-of-entry categories reflected are: Resale, Unbundled Network Element (UNE), Local Interconnection Trunks, OSS, Collocation and coordinated conversions. BellSouth's performance results continue to be equally strong for each of the major modes of entry in South Carolina. BellSouth's results in the following categories are based on the percentage of all sub-metrics that had CLEC activity for each of the last six months (July 2002 – December 2002), as well as the corresponding six month period in 2001 (July 2001 – December 2001).

Mode of Entry	**Jul - Dec 2001**	**Jul – Dec 2002**
Resale	(128/142) 90%	(132/145) 91%
UNE	(171/202) 85%	(241/262) 92%
LIT	(10/12) 83%	(25/26) 96%
OSS	(67/81) 83%	(71/84) 85%

Collocation	(3/3) 100%	(2/2) 100%
Coordinated Conversions	(1281/1289) 99%	(580/580) 100%
Average Coordinated Customer Conversions (CCC) Interval	2 min 46 sec	2 min 33 sec

As you can see from the chart, performance improved in each of the modes of entry.

Q. WHAT WERE THE RESULTS OF BELLSOUTH'S THIRD METHOD OF PERFORMANCE REVIEW?

A. Under this review, BellSouth compared its performance for measures included in the Incentive Payment Plan for the three-month period of October 2002 through December 2002, and for the same three-month period for 2001. During the three-month period of October through December 2001, BellSouth met 86% (1,108/1,290) of the SQM sub-metrics reflected in the IPP with CLEC activity. One year later, for October through December 2002, BellSouth met 90% (1,108/1,229) of the sub-metrics included in the IPP with CLEC activity. Further, if we look only at the IPP measurements related to Ordering, Provisioning, and Maintenance and Repair, there is a similar trend. Specifically, for these categories of the IPP only, from October through December 2001, BellSouth met 84% (930/1,102) of the sub-metrics with CLEC activity. For the period of October

through December 2002, BellSouth met 90% (937/1,042) of those key sub-metrics.

Q. IN ADDITION TO STATE MONITORING OF BELLSOUTH'S PERFORMANCE, ESPECIALLY WITH RESPECT TO ENSURING THAT NO BACKSLIDING OCCURS, IS BELLSOUTH ALSO REQUIRED TO PROVIDE DATA TO THE FCC?

A. Yes. Pursuant to the requirements contained in Section 271(d)(6) of the Telecommunication Act of 1996, and the enforcement powers enumerated therein, the FCC stated in its *Five State Order* ¶ 304 the following:

> Consistent with prior section 271 orders, we require BellSouth to report to the Commission all Alabama, Kentucky, Mississippi, North Carolina, and South Carolina Monthly State Summary (MSS) reports and the MSS Charts, beginning with the first full month after the effective date of this Order, and for each month thereafter for one year, unless extended by the Commission. These results and reports will allow us to review BellSouth's performance on an ongoing basis to ensure continued compliance with the statutory requirements. We are confident that the cooperative state and federal oversight and enforcement can address any backsliding that may arise with respect to BellSouth's entry into Alabama, Kentucky, Mississippi, North Carolina, and South Carolina.

BellSouth provides this data to the FCC Enforcement Bureau for each month as required by the cited order. In addition to the states referenced in the *Five State Order*, BellSouth is also required to report performance results for Georgia and Louisiana to the FCC as well. This requirement is based on the prior FCC approval for BellSouth to provide long distance service in these two states. Thus, in addition to reporting performance results for South Carolina to the FCC, BellSouth also reports the results for six other states. Also, based on FCC

approval of BellSouth's Florida and Tennessee 271 application, the Phase I review by the FCC Enforcement Bureau for Florida and Tennessee will begin with BellSouth's submission on of performance data analysis on June 19, 2003.

Q. HOW DID BELLSOUTH'S SERVICE RESULTS IN SOUTH CAROLINA COMPARE WITH THE OTHER SIX STATES INCLUDED IN THE CURRENT FCC ENFORCEMENT BUREAU REVIEW?

A. BellSouth in South Carolina has provided service to the CLECs that are equivalent to the levels provided in the other states currently under review by the FCC Enforcement Bureau. BellSouth calculated a 5-month result that includes all sub-metrics that are compared to a retail analogue or benchmark and that had activity in each of the five months of July through November 2002. (December 2002 data was not available at the time of the filing with the FCC Enforcement Bureau on February 5, 2003.) The five-month figure is not an average of the individual months. Rather, it is an analysis of those sub-metrics that had data for all five months. The five-month denominator is the total number of sub-metrics that had data in all five months. The numerator is the number of those sub-metrics where BellSouth met the performance standard as indicated by a "yes" in the parity indicator column of the MSS for any three of the five months.

Name of State	**Five-Month Results**
South Carolina	**(501/549) 91%**

Name of State	Five-Month Results
Alabama	(540/594) 91%
Kentucky	(503/544) 92%
Mississippi	(539/590) 91%
North Carolina	(605/668) 91%
Georgia	(674/745) 90%
Louisiana	(590/644) 92%

As the above table demonstrates, BellSouth's performance is at 90% or better for all states when the measures that are present each month are reviewed. South Carolina met or exceeded the equity comparison for 91% of these measures during the five-month period.

Q. BASED OF THE PERFORMANCE DATA AND IPP REVIEW THAT YOU CONDUCTED, AND DISCUSSED IN THIS TESTIMONY, DID BELLSOUTH'S SERVICE LEVELS IN SOUTH CAROLINA BACKSLIDE AFTER THE FCC GRANTED BELLSOUTH 271 RELIEF?

A. No. BellSouth's service levels in South Carolina did not backslide after the FCC granted BellSouth 271 relief. I have examined the data in several ways and each

way I looked at the data confirms the same conclusion, which is: BellSouth's service levels have not deteriorated since entry into long distance. In fact, performance has improved since entry into long distance. BellSouth has maintained high performance levels in South Carolina for all of its customers, both retail and wholesale. The overall review of BellSouth's service performance to the CLECs in South Carolina from the time it initially filed its 271 application with this Commission in June 2001 through December of 2002, indicates no backsliding. BellSouth continues to provide the CLECs with a meaningful opportunity to compete in South Carolina.

III. BELLSOUTH'S CURRENT PENALTY STRUCTURE FOR CHANGE MANAGEMENT IS APPROPRIATE.

Q. ONE OF THE ISSUES TO BE ADDRESSED IN THIS PROCEEDING INVOLVES WHETHER BELLSOUTH SHOULD PROVIDE AT LEAST ONE TIER 1 CCP METRIC IN THE IPP. BEFORE ADDRESSING THIS ISSUE, PLEASE BRIEFLY DESCRIBE THE CCP.

A. BellSouth follows a comprehensive change management process known as the Change Control Process or CCP. BellSouth's Change Control Process became effective in August 2000 as a result of a collaborative effort between BellSouth and competing carriers. The CCP was established to secure input from the CLEC community regarding future enhancements to existing interfaces and to have an organized means of securing, understanding and ranking such input. This change management process was designed to function on a region-wide

basis so that the CLECs in any of the nine states in BellSouth's region may participate. BellSouth also makes this information easily accessible by providing the CLECs with a CCP website which contains extensive documentation of the processes, forms, status information, and other relevant information.

Q. WOULD YOU NOW PROVIDE SOME ADDITIONAL BACKGROUND WITH RESPECT TO THIS CCP ISSUE?

A. Certainly. At page 119, paragraph 6, of its February 14, 2002 Order, the Commission stated: "BellSouth shall include at least one payment category under Tier 1 of the IPP for assessing the effectiveness of the CCP regarding CLECs." In the same order, however, the Commission acknowledged that this additional CCP measurement was not a requirement for Section 271 approval. *Id.* at 70.

On March 11, 2002, BellSouth filed its *Motion for Reconsideration of Order No. 2002-77*, requesting that the Commission reconsider its requirement that the new CCP measure carry a Tier 1 penalty. BellSouth's filed this motion because the measure that the Commission ordered BellSouth to implement is related to the CCP, which is an industry-wide forum in which CLECs from any of BellSouth's nine states may participate. BellSouth did not take issue with the Commission's finding requiring a new CCP measure. Rather, it was, and it remains, BellSouth's view that any penalties applicable to CCP measures should be Tier 2 rather than Tier 1, for several reasons, which I discuss later.

In *Order No. 2002-396*, Docket No. 2001-209-C, dated May 28, 2002, the Commission responded to BellSouth's motion for reconsideration and directed the Staff to resolve the issues surrounding the appropriateness of Tier 1 versus Tier 2 penalties for the required new CCP measure, through discussions with BellSouth. The Staff was further directed to present its report based on these discussions to the Commission "prior to the FCC acting on BellSouth's application for South Carolina." *Id.* at 14. On August 22, 2002, the Commission issued *Order No. 2002-594*, which clarified its prior order (Order No. 2002-396) to state that once a proposal for the required new CCP measure, as relates to Tier 1 or Tier 2 treatment, was filed, all parties would have an opportunity to respond to the proposal.

Following discussions with Staff, BellSouth filed its proposal in an August 29, 2002 letter to the Commission. BellSouth's proposal not only addressed the proper handling of any new CCP measure with respect to Tier 1 or Tier 2 treatment, but also added six new CCP measures. All commissions in BellSouth's region have adopted the six new CCP measures. All commissions have also included three of these six CCP measures in the penalty plan, and each of the three measures was included as Tier 2 only. This is what BellSouth proposes to continue in South Carolina.

On September 25, 2002, the Commission Staff filed its comments regarding BellSouth's August 29, 2002 proposal. On December 3, 2002, oral arguments were presented with respect to the proper application of Tier 1 penalties versus Tier 2 penalties for BellSouth's Change Management measurements in South

Carolina. The Commission determined that this issue should be addressed further in this six-month review. This issue was included in the January 30, 2003 *Notice of Hearing* as part of the scope of this proceeding.

Q. DOES THE COMBINATION OF BELLSOUTH'S CURRENT PERFORMANCE MEASUREMENTS REPORTING PROCESS AND IPP APPROPRIATELY CAPTURE AND ADDRESS BELLSOUTH'S RESPONSIVENESS TO CLEC REQUESTS TO THE CHANGE CONTROL PROCESS, ESPECIALLY AS IT PERTAINS TO THE APPLICATION OF TIER 1 OR TIER 2 PAYMENTS?

A. Yes. BellSouth provides a comprehensive set of measurements designed to capture its performance in addressing issues raised by CLECs through the Change Control Process. In fact, there are eleven measures in BellSouth's SQM, five of which are also in the IPP as Tier 2 payments. These measures are:

- CM-1: Timeliness of Change Management Notices
- CM-2: Change Management Notice Average Delay Days
- CM-3: Timeliness of Documents Associated with Change
- CM-4: Change Management Documentation Average Delay Days
- CM-5: Notification of CLEC Interface Outages
- CM-6: Percent of Software Errors Corrected in X (10, 30, 45) Business Days
- CM-7: Percent of Change Requests Accepted or Rejected Within 10 Days
- CM-8: Percent Change Requests Rejected
- CM-9: Number of Defects in Production Releases (Type 6 CR)
- CM-10: Software Validation

- CM-11: Percent of Change Requests Implemented Within 60 Weeks of Prioritization

Q. WHICH OF THESE CCP MEASURES ARE INCLUDED IN THE IPP AS TIER 2 PAYMENTS?

A. The IPP currently includes the following CCP measures:

- CM-1: Timeliness of Change Management Notices
- CM-3: Timeliness of Documents Associated with Change
- CM-6: Percent of Software Errors Corrected in X (10, 30, 45) Business Days
- CM-7: Percent of Change Requests Accepted or Rejected Within 10 Days
- CM-11: Percent of Change Requests Implemented Within 60 Weeks of Prioritization

Q. ARE THESE MEASUREMENTS SUFFICIENT?

A. Yes. These measurements and the associated IPP structure currently in place in South Carolina are sufficient to both detect potential poor performance and provide the incentive for good service in the Change Control Process. Even before BellSouth added six new change management measures, CM-6 through CM-11, to its performance metrics, the FCC approved BellSouth's overall plan. The FCC specifically found in the *Georgia/Louisiana Order* ¶ 1 that BellSouth provides comparable access to the CLECs and affords them a meaningful opportunity to compete.

1 The current CCP measures were included in BellSouth's Five State application to
2 the FCC. The FCC affirmed its earlier finding that BellSouth's plan was sufficient
3 in the *Five-State Order* ¶ 293, which of course included South Carolina, stating:
4 "[w]e find that each of the five plans provides sufficient incentives to foster post-
5 entry compliance."
6
7 Q THE MAIN ISSUE CONCERNING THE CCP MEASUREMENTS IS WHETHER
8 ANY OF THE MEASURES IN THE IPP SHOULD INCLUDE A TIER 1 PENALTY.
9 IS THERE ANY BENEFIT TO PAYING THE CCP PENALTIES TO THE CLECS,
10 AS TIER 1 PENALTIES, RATHER THAN PAYING THE PENALTIES TO THE
11 STATE, AS TIER 2 PENALTIES?
12
13 A. No. First, there is no need for Tier 1 penalties because the combination of the
14 current measures and Tier 2 penalties will ensure that BellSouth will be
15 responsive to CLEC initiated changes. Also, the CCP measures are secondary
16 measures, which means that a failure to perform by BellSouth would result in
17 penalties (including Tier 1 penalties) associated with the primary measurements
18 relating to ordering, provisioning, etc. Second, not only is there no real benefit to
19 Tier 1 penalties, but any attempt to assign these penalty payments to individual
20 CLECs would be artificial and arbitrary. Further, there are considerable logistical
21 problems that would arise from an attempt to do so.
22
23 Q. HOW CAN THE COMMISSION BE ASSURED THAT BELLSOUTH WILL BE
24 RESPONSIVE TO CLEC-INITIATED CHANGES SUBMITTED TO THE CCP IF
25 NO TIER I METRICS ARE INCLUDED?

1

2 A. By adding six CCP metrics to the performance measurements plan (three of the
3 six are in the IPP as Tier 2 penalties), BellSouth has more than doubled the total
4 number of metrics that monitor performance related to the CCP and more than
5 doubled the number of CCP measures in the IPP as well. While the CCP
6 measures in the penalty plan are at the Tier 2 level only, the same objective,
7 (providing an incentive for BellSouth to be responsiveness to CLEC-initiated
8 change requests) can be accomplished effectively without the logistics problems
9 associated with Tier 1 penalties. Moreover, the 50/50 approach, applied to
10 change requests, that has already been implemented by BellSouth through the
11 CCP allows BellSouth and the CLECs to share equally in the capacity available
12 in each software release. This approach should provide significant assurances
13 that BellSouth will continue to be responsive to CLECs' CCP requests.
14

15 Q. WHAT DO YOU MEAN WHEN YOU SAY THAT THE CHANGE CONTROL
16 PROCESS IS A SECONDARY PROCESS?
17

18 A. Measurements in the primary categories such as Ordering, Provisioning and
19 Maintenance and Repair, capture actual harm to specific CLECs based on
20 activities traceable to individual CLECs. Moreover, any significant problems that
21 result from failures in the CCP would be experienced downstream and captured
22 by measures to which Tier 1 penalties apply. For instance, consider CCP
23 measure CM-9 (Number of Defects in Production Releases). This measure is
24 designed to capture the quality of BellSouth's software releases based on the
25 presence or absence of defects. Let us suppose that there is a defect in one of

BellSouth's software releases that has to do with Ordering. If the defect is significant enough to affect the ordering process, when the CLEC submits an order this will cause a failure, and where appropriate, a Tier 1 penalty will be accessed.

The existing IPP contains 13 Tier 1 measures that address the primary processes that can impact individual CLECs, and are as follows:

- Firm Order Confirmation and Reject Response Completeness
- Percent Missed Installation Appointments
- Average Completion Interval
- Coordinated Customer Conversions Interval – Unbundled Loops
- Coordinated Customer Conversions – Hot Cut Timeliness Percent Within Interval – UNE Loops
- Coordinated Customer Conversions – Percent Provisioning Troubles Received Within 7 Days of a Completed Service Order – UNE Loops
- Percent Provisioning Troubles in 30 Days of Service Order Completion
- Missed Repair Appointments
- Customer Trouble Report Rate
- Maintenance Average Duration
- Percent Repeat Troubles Within 30 Days
- Trunk Group Performance
- Collocation Percent of Due Dates Missed

In short, the point is that the CCP metrics measure failures in secondary processes that, if significant, show up downstream in the primary processes

1 associated with Ordering, Provisioning, Maintenance and Repair, *etc.* The
2 measures associated with these primary processes currently have Tier 1
3 penalties, where appropriate, payable to individual CLECs. Moreover, the
4 assessment of Tier 1 penalties based on the primary processes, as opposed to
5 the secondary process of the CCP, avoids many of the problems associated with
6 artificial, arbitrary and speculative penalty calculations bearing no reasonable
7 relationship to actual harm done.
8
9 Q. YOU MENTIONED LOGISTICS PROBLEMS ASSOCIATED WITH TIER 1
10 PENALTIES FOR CCP MEASURES. WOULD YOU DESCRIBE WHAT YOU
11 MEAN BY THAT STATEMENT?
12
13 A. Certainly. Tier 1 penalties, as they have been defined in BellSouth's penalty
14 plan, and accepted by this Commission and the FCC, are designed to address
15 harm done to individual CLECs, as opposed to the industry as a whole. One
16 problem with applying a Tier 1 penalty to CCP measures arises because the
17 CCP is a collaborative process. Thus, there is no individual CLEC event that
18 triggers any potential harm. Consequently, there is no individual CLEC to trace
19 the potential harm back to for purposes of making a penalty payment to a specific
20 CLEC.
21
22 Indeed, no other state in BellSouth's region requires a Tier 1 penalty for any of
23 the CCP measures. In fact, because of the regional nature of the CCP process,
24 it is problematic to apply penalties as Tier 1 in some states and Tier 2 in other
25 states.

As an example of the inappropriateness of assessing Tier 1 penalties, consider measure CM-1 (Timeliness of Change Management Notices). This measure is designed to assess whether BellSouth gives sufficient advance notice to CLECs that a change is about to occur, so that they can plan for the change. The current standard for this measure is 95% sent at least 30 days in advance. If a notice is sent out a couple of days late, such that the measure is failed, the change notice goes to everyone in the industry late, not just specific CLECs. There is no way to tie this failure back to a single CLEC for Tier 1 penalty. This is only one clear example of measurements that affect the CLEC industry as a whole and thus should be assessed as a Tier 2 penalty only. This position is squarely in accordance with the accepted definition of and criteria for Tier 2 penalties.

Q. ARE THERE ANY OTHER PROBLEMS ASSOCIATED WITH APPLY TIER 1 PENALTIES TO THE CCP MEASURES?

A. Yes. Another problem, and in some ways it may be a more significant problem, is that it presents opportunities for gaming. Gaming is a situation that allows CLECs to receive individual penalties under circumstances which they should not receive penalties. There are two examples that may be helpful in describing this problem. The first example is related to measure CM-7 (Percent of Change Requests Accepted or Rejected Within 10 Days). When a request is made for a change, BellSouth cannot summarily refuse the request. There is a protocol that must be followed. Specifically, BellSouth must look at cost, feasibility and

industry standards. Indeed, BellSouth must look at the entire process involved. The volume of requests to this point has been reasonable and BellSouth consistently meets the standard for this measure. However, imposing a Tier 1 penalty creates a situation and incentive for CLECs to submit requests that BellSouth can't process within 10 days. That, of course, is counterproductive for the system as a whole.

There are a couple of ways this can be done. To illustrate, a couple of years ago, before this measurement was in place, AT&T requested that BellSouth make the functionality of its Trouble Analysis Facilitation Interface (TAFI), a proprietary maintenance and repair interface, available through an industry standard interface. Just to look at the feasibility of that undertaking took a long time, weeks, perhaps months, but substantially outside the 10 day standard. BellSouth ultimately found that this change would have taken millions of dollars and, at that time, there was a dispute about who would pay for it. I am certainly not suggesting that AT&T's request at that time was an attempt to game the system. In fact, that was not even a possibility because measurement CM-7 did not exist at that time. Instead, the point is, if AT&T's request had been made today, there is no way that BellSouth could have adequately responded to that request in 10 days.

As a second example, consider measure CM-11, Percent of Change Requests Implemented Within 60 Weeks of Prioritization. The way the measure works is that after a change request is made by a CLEC and after BellSouth accepts it, the CLECs meet to prioritize the request, along with any other change requests

submitted. Regardless of the priority that is assigned, if the request is not implemented within 60 weeks from prioritization, the measurement is failed. Under the CLECs' proposal, BellSouth would pay a penalty for this occurrence to the individual CLEC whose request is not implemented. The problem is that if system release capacity is sufficient to implement only 20 requests, and 50 requests are made, BellSouth would be subject to penalties to individual CLECs under a Tier 1 approach. This would occur even though the CLECs as a group prioritized the requests, and BellSouth had no control over this process. Yet BellSouth would be subject to penalties payable to the individual CLECs whose requests did not get implemented. CLECs could very easily game the system to generate individual penalties notwithstanding the fact that BellSouth has little control over the cause of the problem.

This scenario, however, as well as the others I have provided, highlights the opportunities for gaming that are created by paying Tier 1 penalties to individual CLECs on a collaborative process, that necessarily involves the entire industry.

Q. DOES BELLSOUTH APPLY TIER 2 PENALTIES TO ANY MEASURES OTHER THAN THE CCP MEASUREMENTS?

A. Yes. BellSouth does apply Tier 2 penalties to measures other than the CCP measures. In fact, all of the Tier 1 measurements in the IPP are also in Tier 2. In addition, consistent with the regional nature of BellSouth's OSS, certain measures are reported on a region-wide basis, and, consequently, are included in the IPP as Tier 2 <u>only</u>. Some additional measures are included only in Tier 2

because failure in the metric would impact the CLECs as a whole, in contrast to impacting CLECs individually. The measures, other than the CCP measures, that are included in Tier 2 only of the IPP are:

- OSS Average Response Time and Response Interval
- OSS Interface Availability (Pre-Ordering/Ordering)
- OSS Interface Availability (Maintenance and Repair)
- Loop Makeup – Response Time (Manual)
- Loop Makeup – Response Time (Electronic)
- Acknowledgement Message Timeliness
- Acknowledgement Message Completeness
- Reject Interval
- Firm Order Confirmation Timeliness
- Cooperative Acceptance Testing – Percent UNE xDSL Loops Tested
- Service Order Accuracy
- Invoice Accuracy
- Usage Data Delivery Accuracy
- Mean Time to Deliver Usage

Q. YOU DISCUSSED SEVERAL REASONS WHY THE CCP MEASURES SHOULD NOT BE APPLIED ON A TIER 1 BASIS. WOULD YOU SUMMARIZE THESE POINTS AT THIS TIME?

A. Certainly. In summary, BellSouth believes that the CCP measures should not be applied on a Tier 1 basis for the following reasons:

- The CCP is a collaborative process designed to address CLEC industry concerns, making Tier 2 penalties the appropriate enforcement mechanism.
- The CCP measurements are related to a secondary process. BellSouth's performance related to primary processes, that impact individual CLECs, is captured by measurements in areas such as Ordering, Provisioning and Maintenance and Repair, etc. These measures, where appropriate, are subject to the Tier 1 enforcement mechanism, with penalties payable to individual CLECs.
- Because the CCP is a collaborative process, any attempt to assess and pay penalties on a Tier 1 basis to individual CLECs would be artificial, arbitrary and speculative – bearing no reasonable relationship to actual harm done to specific CLECs.
- Application of Tier 1 penalties to a collaborative process such as the CCP presents both the opportunity and incentive to game the system.
- BellSouth currently has a number of Tier 2 measurements in the IPP, some of which, in addition to the CCP measures, are Tier 2 only.
- No other state in BellSouth's region applies a Tier 1 penalty to the CCP measure. Instead, penalties are assessed on a Tier 2 basis only.

IV. CHANGE CONTROL MEDIATION PROCESS

Q. DID THE SOUTH CAROLINA COMMISSION ADDRESS ANY OTHER CHANGE CONTROL PROCESS ISSUES IN ITS FEBRUARY 14, 2002 ORDER?

1 A. Yes. In its February 14, 2002 Order at 120, the Commission stated: "the
2 Commission Staff is hereby ordered to develop, in conjunction with the other
3 parties to this proceeding, a model mediation process to be used in conjunction
4 with the dispute resolution component of the CCP should a dispute be escalated
5 to the Commission." On September 19, 2002, the Commission Staff provided to
6 all the parties of record its proposed mediation process for use in settling
7 disputes under BellSouth's Change Control Process pursuant to the February 14,
8 2002 Order.
9
10 Q. HAS BELLSOUTH REVIEWED THE COMMISSION STAFF'S MEDIATION
11 PROCESS PROPOSAL AND IF SO, WHAT IS BELLSOUTH'S POSITION WITH
12 RESPECT TO THIS PROPOSAL?
13
14 A. Yes. BellSouth has reviewed the Staff's mediation proposal. In a letter dated
15 October 17, 2002, BellSouth communicated to the Staff its agreement with this
16 mediation process proposal. As previously mentioned, the Commission identified
17 the Staff proposal as one of the issues to be addressed in this proceeding (*see*
18 *Notice of Hearing*). BellSouth, for purposes of this proceeding, affirms its prior
19 support of the Staff's proposed mediation process.
20
21 **V. THE CURRENT PENALTY CALCULATION METHODOLOGY IN THE IPP IS**
22 **APPROPRIATE.**
23
24 Q. AT THE BEGINNING OF YOUR TESTIMONY YOU INDICATED THAT YOU
25 WOULD ADDRESS, FROM A PRACTICAL STANDPOINT, WHY THE

CURRENT METHOD OF CALCULATING PENALTIES SHOULD NOT BE CHANGED. WOULD YOU ELABORATE ON THIS STATEMENT?

A. Certainly. As previously indicated in my testimony, one of the issues to be addressed, as part of this proceeding, is whether the penalty payments assessed pursuant to the IPP should be calculated from the estimator (mean) as opposed to the edge of the confidence interval. Of course, I am not a statistician, and I do not purport to address the statistical implications of the change at issue. BellSouth's witness, Dr. William Taylor, will address the statistical implications in his testimony. I will, however, indicate why, from a practical perspective, this change is not necessary.

The purpose of the enforcement plan is to provide additional assurance that BellSouth will not "backslide" once it obtains interLATA relief. The practical effect of the change in penalty calculation under consideration is that it will increase the amount of penalties that BellSouth will pay. The real question then is whether the current calculation method is sufficient to allow the plan to function as it should, that is, to prevent backsliding. The answer to this question is that the current penalty calculation methodology is certainly sufficient as a deterrent to backsliding. In fact, the current methodology, in many cases, is too stringent, generating large penalties for small differences in CLEC and BellSouth retail performance. What this means is that, in some instances, BellSouth is paying significant penalties even though it is not delivering poor service to CLECs.

1 Q. YOU INDICATED THAT THE PRIMARY PURPOSE OF THE PENALTY PLAN IS
2 TO PREVENT BACKSLIDING. HAS THE CURRENT SOUTH CAROLINA
3 PENALTY PLAN, THE IPP, FAILED TO PREVENT BACKSLIDING?
4
5 A. No. The performance results provided in my testimony attests to the fact that not
6 only did BellSouth not backslide after receiving an FCC grant to provide long
7 distance service in South Carolina, but, in fact, BellSouth's performance actually
8 improved. For example, a simplistic analysis shows that BellSouth has gone
9 from meeting the benchmark or retail analogue criteria for 83% of the sub-metrics
10 reported in April 2001, the first month reported to the Commission, to meeting the
11 benchmark or retail analogue criteria for 90% of the sub-metrics reported in
12 December 2002.
13
14 The real question would seem to be whether BellSouth needs an additional
15 financial incentive, beyond the current operation of the IPP, not to backslide.
16 Based on the penalty calculation change that is under consideration, BellSouth's
17 penalty payments would increase for the level of performance provided today.
18 This approach ignores the fact that the current penalty plan methodology is
19 working, *i.e.*, BellSouth's performance did not backslide. It is contrary to the
20 intent of enforcement plans like the IPP to require BellSouth to pay more
21 penalties when no backsliding occurs or, even worse, when its performance is
22 actually improving. Increased penalties are normally a sanction for chronically
23 deteriorating poor performance. BellSouth has put a great deal of effort into
24 making performance improvements and the reward for that effort should not be
25 increased penalties. If this change were required, BellSouth would necessarily

seek a decrease in the fee schedule, to account for the additional penalty amounts that would be generated as a result of the considered change.

Given that the current IPP is generating significant penalties, automatically assessed and paid, there is no appreciable benefit to changing this methodology, which is already widely used in all other states in BellSouth's region. In short, from a purely practical perspective, the IPP penalty calculation methodology is serving its primary purpose, *i.e.*, to deter backsliding, and, therefore, the considered change should not be implemented.

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. My testimony may be summarized as follows:

- The current South Carolina performance plan measures BellSouth performance to such a detailed and granular level that many of the sub-metrics have little or no activity. In fact, 77% (993/1292) of the sub-metrics evaluated for parity determination in December 2002 had fewer than 30 CLEC transactions.
- There has been no backsliding since the FCC's grant of Section 271 authority in South Carolina; BellSouth's performance has, in fact, improved. BellSouth analyzed its performance in at least three different ways, and each of these ways confirmed that there has been no backsliding by BellSouth.
- A comparison of performance results for the six states currently reported to the FCC Enforcement Bureau, for purposes of ensuring that BellSouth does not backslide, shows that BellSouth's performance is at 90% or better for all six states when the measures that are present each month are reviewed. South

Carolina met or exceeded the equity comparison for 91% of these measures during the five-month period covered by these reports.

- The CCP measures in the IPP should not be applied on a Tier 1 basis, but should remain Tier 2 only because: (1) The CCP is a collaborative process designed to address CLEC industry concerns; (2) BellSouth currently has a number of Tier 2 measurements in the IPP, in addition to the CCP measures, that are Tier 2 only; (3) The CCP measurements are related to a secondary process. BellSouth's performance related to primary processes, that impact individual CLECs, is already covered by other measures that are subject to the Tier 1 enforcement mechanism; (4) any attempt to assess and pay penalties, related to a collaborative process, on a Tier 1 basis to individual CLECs would be artificial, arbitrary and speculative; (5) application of Tier 1 penalties to the CCP measures presents both the opportunity and additional incentive to game the system; and (6) No other state in BellSouth's region applies a Tier 1 penalty to the CCP measure. Instead, penalties are assessed on a Tier 2 basis only.
- BellSouth, for purposes of this proceeding, affirms its prior support of the Staff's proposed mediation process.
- From a purely practical perspective, the IPP penalty calculation methodology is serving its primary purpose, *i.e.*, to deter backsliding, and, therefore, the considered change should not be implemented.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. YES.

STATE OF SOUTH CAROLINA)
) CERTIFICATE OF SERVICE
COUNTY OF RICHLAND)

The undersigned, Nyla M. Laney, hereby certifies that she is employed by the Legal Department for BellSouth Telecommunications, Inc. ("BellSouth") and that she has caused BellSouth Telecommunications, Inc.'s Direct Testimony of Alphonso J. Varner in Docket No. 2001-209-C to be served upon the following this March 5, 2003:

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