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RECOVED-FPSC

May 30, 2001

Ms. Blanca Bayo, Director Records and Reporting Florida Public Service Commission 2540 Shumard Oak Blvd. Tallahassee, Florida 32399-0850

Re: Docket No. 000121-TP

Dear Ms. Bayo:

On behalf of Z-Tel Communications, Inc., I am enclosing for filing the original and 15 copies of Z-Tel's Post-Hearing Brief in the above docket.

I am also enclosing an extra copy, which I ask that you stamp and return to me.

Thank you for your assistance.

Yours truly,

Men

Joseph A. McGlothlin

JAM.hes Enclosures



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MCWHIRTER, REEVES, MCGLOTHLIN, DAVIDSON, DECKER, KAUFMAN, ARNOLD & STEEN, P.A.

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# BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Investigation into the Establishment of Operations Support Systems Permanent Performance Measures for Incumbent Local Exchange Telecommunications Companies

Docket No.: 000121-TP Filed: May 30, 2001

### POSTHEARING BRIEF OF Z-TEL COMMUNICATIONS, INC.

Z-Tel Communications, Inc. ("Z-Tel"), through its undersigned counsel, hereby submits its Posthearing Brief in the above docket.

#### INTRODUCTION

With respect to all issues other than the choice of a statistical test for discrimination, Z-Tel participated with, and actively supported, the ALEC Coalition. For that reason, Z-Tel's post-hearing brief will be limited to a discussion of the statistical test, including the proper definition of parity; and a late-filed exhibit to Dr. George Ford's deposition that describes the parameters of a suggested "hybrid" penalty mechanism.

Z-Tel wishes to point out that, with respect to both the choice of a statistical methodology and the hybrid approach to the penalty mechanism specified in Dr. Ford's latefiled exhibit, Z-Tel's proposals effectively provide the Commission with approaches that have been consciously designed to accommodate the differing positions taken by the parties in this case. For instance, while the primary purpose of the "Delta Function" described in the discussion of the statistical test (Issues 11 and 12) is to preserve the ability of the test to detect discrimination, Dr. Ford purposely designed it to accommodate the full range of delta values proposed by the ALEC Coalition and BellSouth (even though incorporating BellSouth's proposed value of delta causes the maximum balancing critical values to exceed

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06762 MAY 30 5 FPSC-RECORDS/REFORTING the range that Dr. Ford personally believes is appropriate). Similarly, while Z-Tel actively supported the ALEC Coalition's measurement-based approach to the design of a penalty mechanism, at Staff's request Dr. Ford demonstrated in a late filed exhibit that it is possible to marry components of the plans of BellSouth and the ALEC Coalition in a way that ameliorates the chief flaws that each saw in the plan of the other.

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For the reasons discussed below, Z-Tel commends to the Commission the statistical methodology and the "hybrid" penalty mechanism developed by Dr. Ford. With respect to all other issues, Z-Tel adopts the positions of the ALEC Coalition. (See Appendix).

# **ISSUES TO BE ARGUED**

Z-Tel will develop a single argument in response to several subparts of the issue on statistical methodology. While the issue of the appropriate remedy calculation is incorporated within the overall statistical issue, for purposes of organizing the presentation Z-Tel will develop that subject as a separate argument.

**ISSUE 11a:** What is the appropriate methodology that should be employed to determine if BellSouth is providing compliant performance to an individual ALEC? (Tier 1)

<u>Z-TEL</u>: \*\*For measures without retail analogs, benchmarks should be used and evaluated on a stare-and-compare basis. If retail analogs are specified, then a statistical method should be used that assesses whether or not the service levels are equal.\*\*

**ISSUE 11b:** How should parity be defined for purposes of the Performance Assessment Plan?

<u>Z-TEL</u>: \*\*In the context of a performance assessment plan, as in the 1996 Act, parity means no difference in the quality of a service provided by an ILEC to its retail customers and the quality of the corresponding service that it provides to ALECs.\*\*

**ISSUE 11c:** What is the appropriate structure?

1. What is the appropriate statistical methodology?

**<u>Z-TEL</u>:** \*\*Z-Tel supports the modified Z test, including the "Delta Function" advocated by Dr. Ford. The "Delta Function" is needed to ensure that the statistical test, which is highly sensitive to changes in delta and sample size, retains the ability to detect disparities in the quality of service provided to ALECs.\*\*

2. What is the appropriate parameter delta, if any?

<u>Z-TEL</u>: \*\* To reflect Congress's mandate of equality of service, the test must employ meaningful significance levels. Only Z-Tel's "Delta Function" appropriately sets Delta, by allowing Delta to vary with sample size, to ensure this crucial result. \*\*

3. What is the appropriate remedy calculation?

<u>Z-TEL:</u> \*\* Z-Tel supports the measurement based approach described by the ALEC Coalition. As a compromise, Z-Tel proposes the hybrid approach described in Dr. Ford's late - filed deposition exhibit.\*\*

4. What is the appropriate benchmark table for small sample sizes?

<u>Z-TEL</u>: \*\* Z-Tel does not object to the use of the log-odds statistical method for percent and rate measures, as long as the implied Delta value (defined as Lamda for this test) of the that method does not exceed the Commission's choice of Delta. \*\*

5. Should there be a floor on the balancing critical value?

<u>Z-TEL:</u> \*\*The Delta Function alleviates the need for a floor on the balancing critical value. However, if a fixed critical value is used, a floor should be

specified so that the statistical procedure is a meaningful test of the null hypothesis of equality. Z-Tel recommends a floor not to exceed 3.73.\*\*

# ARGUMENT

The 1996 Telecommunications Act requires incumbent local exchange companies

("ILECs") to provide to alternative local exchange companies ("ALECs") non-discriminatory

access to their network facilities. The actual language of the 1996 Act appears at 47 U.S.C.

§251(c)(2)(c), which imposes on ILECs:

The duty to provide, for the facilities and equipment of any requesting telecommunications carrier, intercommunication with the local exchange carrier's network (c) that is at least equal in quality to that provided by the local exchange carrier to itself..."

Unmistakably, the statutory standard is equality of service. The witnesses of all

parties agree. For instance, BellSouth witness William Taylor stated:

. . . It is important to understand what would constitute a failure on BellSouth's part. A performance or service quality disparity would occur in the following two circumstances:

- 1. The quality of a wholesale service provided to an ALEC falls short of that provided by BellSouth to its own retail operations.
- 2. Where BellSouth does not use a wholesale service in its own retail operations, the quality of the service provided to an ALEC falls short of a predetermined benchmark level.

(TR-1216-1217). Similarly, Staff Witness Paul Stallcup said:

The plan is designed to help promote a competitive market environment for local exchange services by helping to ensure that Alternative Local Exchange

Carriers (ALECs) receive non-discriminatory access to BellSouth's Operational Support Systems (OSS). The plan achieves this goal by establishing a penalty payment mechanism designed to encourage BellSouth to provide ALECs access to its OSS at the same level of service BellSouth provides to itself. (TR-47).

\* \* \* \*

The level of service BellSouth provides to itself becomes the standard for the level of service BellSouth provides to ALECs (this level of service is referred to as "parity"). (TR-54).

BellSouth witness Mulrow opined:

The question is whether BellSouth is favoring its retail operations in the provision of the particular service, or whether it is providing the same level of service to its competitors as its (sic) provides to itself. (TR-606).

The purpose of a Performance Assessment Plan is to provide an incentive to the ILEC

to meet this standard of equality by imposing penalties when it fails to do so. A critical aspect of any such plan is the mechanism used to detect whether service quality provided the ALECs by BellSouth is equal to that provided to its own retail customers. The most direct manner by which to assess the equality of service is to compute the average level of service for both the ALEC and BellSouth and compare these averages to see if they are, in fact, equal. To make such comparisons, a retail service BellSouth provides to its own customers (a retail analog) must be compared to the service BellSouth provides the ALECs. Further, because the data collected each month for comparison are interpreted to be samples, rather than populations, of actual performance, a statistical procedure must be employed to evaluate equality. Statistical testing is required because if two samples are drawn from the same

population, the means of the two samples likely will differ to some extent, particularly if the sample sizes are small. (TR-1141). A statistical test establishes the level of confidence with which it can be concluded that service levels are unequal.

If no such "retail analog" exists, a direct comparison between the quality provided to ALECs and the corresponding quality provided to BellSouth's retail customers is not possible. Approximately 40% of all of the measures proposed in this case have no retail analog. In the absence of a retail analog, BellSouth and the ALECs recommend that the Commission establish "benchmarks" against which to compare the quality of service provided to ALEC. Further, BellSouth and the ALECs propose to use a "brightline" or "stare and compare" approach to benchmarks. (TR 55;1137). Under this mechanism, the acceptable level of service is quantified; the performance provided to ALECs is then compared directly to the benchmark standard on a pass/fail basis. No statistical test is required. Significantly, no party proposed to establish an "acceptable" level of inferior performance that would escape a penalty where benchmarks are involved.

If it were possible to measure every instance in which BellSouth provides the service to its retail customers, and compare the average of the universe of all such instances to the corresponding average of the entire universe of instances of which it provides the same service or feature to ALECs, the "stare and compare" approach would be applicable to retail analogs as well. As a practical matter, however, this approach is not possible. Instead, monthly samples are drawn (from the population) and the service levels for these samples, measured as averages or means, are compared.

The statistical test typically employed for the purpose of comparing sample average or mean service levels is a "means difference test," and all parties (the ALEC Coalition, BellSouth, and Z-Tel) have agreed to the use of the modified z-test as the foundation for such comparisons. (TR-1139). Further, all parties agree, at least formally, that the null hypothesis (that is, the hypothesis the statistical procedure is testing) is equality of service between BellSouth's own retail customers and those of the ALEC, as required by the Telecommunications Act. All parties also agree to the use of the "balancing" statistical procedures developed jointly by AT&T and BellSouth. (TR-1145). How exactly this "balancing" should be implemented is subject to debate. Specifically, balancing of statistical errors requires the specification of a parameter called "Delta, " and the practical impact of the choice of Delta on the statistical evaluation of service quality is considerable.

The balancing statistical procedure is an effort to remedy the errors intrinsic to statistical testing. These errors include false findings of equality (a Type II error) and false findings of inequality (a Type I error). It is undesirable to have either BellSouth pay a remedy due to a false finding of inequality or to avoid paying a remedy due to a false finding of equality. Because the statistical errors cannot be eliminated, the balancing procedure attempts to equate the error probabilities so that the expected value of the overpayments due to Type I error. (TR-1146). To this end, the balancing procedure seems a reasonable extension of the more

traditional means difference tests, which does not incorporate the balancing of errors. This extension is desirable, however, only if it does not impede the statistical tests ability to reliably detect unequal service levels.

Balancing statistical errors does have its costs. Because Type II error can be large at small sample sizes, balancing implies large Type I errors at small sample sizes. Generally, Type I error is controlled at a 5% or 1% rate. (TR-1143). With balancing, Type I error can get much larger than the more traditional levels (as does Type II error, by definition). Alternatively, at large sample sizes Type II error is very small, and balancing requires that the Type I error is also equivalently small. Unfortunately, small Type I errors bias the statistical test against a finding of discrimination. This bias is positively related to the Delta value, so that larger Delta values weaken the statistical test's ability to detect discriminatory service. In fact, as BellSouth witness Dr. Mulrow points out, the statistical test has very little "power" to find discrimination that is of an amount less than one-half Delta. (TR-651). Thus, the choice of the Delta value is of utmost importance. If large values of Delta are chosen and applied to all sample sizes, then the possibility exists that numerous acts of genuine discrimination (i.e., unequal service) will go undetected. Unsurprisingly, BellSouth has proposed larger Delta values and the ALEC Coalition has proposed smaller Delta values. As discussed later, Z-Tel proposes a compromise position that incorporates the Delta values proposed by both BellSouth and the ALEC Coalition. The compromise also maintains the integrity of the statistical test across all sample sizes, and recognizes the inherent difficulty in setting a single value for the Delta parameter.

Because the balancing procedure weakens the statistical test's ability to detect discrimination at larger sample sizes (where large depends on the specification of Delta), both BellSouth and the ALEC Coalition argue that Delta should represent the degree of disparity associated with a material impact on the ALEC Coalition's ability to compete with the ILEC. By specifying Delta in this manner, the weakening of the statistical test of equality caused by balancing procedure should not result in undue harm to CLECs. Unfortunately, the standard of materiality is extremely subjective, and all of the analysts who sponsored methodologies in this case agree that delta is an abstract, arbitrary assumption. For example, BellSouth witness Mr. Coons noted, "Although the parties have proposed different values for Delta, there is little in the way of hard information upon which this business judgment can be made." (TR-270). Dr. Mulrow, BellSouth's statistical expert, concurred by stating, "While statistical science can be used to evaluate the impact of different choices of these parameters, there is not much that an appeal to statistical principles can offer in directing specific choices." (TR-622)." ALEC Coalition statistician Dr. Bell stated, "Resolution of this question (value of Delta) cannot be based solely on a theoretical statistical analysis. Ideally, this decision should be based on business judgment ...." (TR-107). Dr. Ford, Z-Tel's witness on the subject, said, "There is no methodology of which I am aware that allows one to theoretically or empirically determine the value of Delta. It is an assumption." (TR-1148). Z-Tel believes it is unreasonable to introduce bias into the statistical test based on what is recognized by all parties to be nothing more than a purely arbitrary selection of the Delta parameter.

The bias introduced by the balancing procedure depends critically on sample size. Given the relatively large sample sizes for BellSouth for most measures, the bias depends primarily on ALEC sample size. Thus, by introducing sample size into the specification of Delta, the inherent bias of the balancing procedure can be reduced. Z-Tel witness Dr. Ford proposes a specific formula for choosing Delta, where the value of Delta depends on ALEC sample size. The "Delta Function" increases Delta at small sample sizes, thus reducing the Type I error rate relative to the alternative fixed Delta specifications of BellSouth and the ALEC Coalition, and reduces Delta at larger sample sizes, thus keeping the Type I error rate from getting so small that detecting discrimination is virtually impossible. (TR-1175).

For example, consider the impact of the choice of Delta given ALEC sample sizes of 10 and 1,000 (assuming BellSouth sample size is arbitrarily large), and applying the formulas for balancing critical value and Delta Function contained in Dr. Ford's direct testimony. For BellSouth's proposed Delta value of 1.00, the Type I error rate at a sample size of 10 is 0.06, which is reasonably close to the more traditional significance level for the means difference test of 0.05 (or 5%). At a sample size of 1,000, however, the Type I error rate is so small that it cannot be computed by even the most powerful statistical packages. (See TR-1172). Thus, the test essentially is immeasurably biased against a finding of discrimination. For the ALEC Coalition's proposed Delta of (no more than) 0.25, The Type

I error rates are 0.35 and 0.00004 for the two sample sizes (respectively). If Z-Tel's Delta Function is used to compute Delta, the Type I error rates are 0.17 and 0.01 for the two sample sizes. Clearly, the Delta Function produces more reasonable Type I error rates and limits the bias introduced by the balancing procedure. Notably, the Delta Function produces a range of Delta values (dependent on sample size), including 1.00 as recommended by BellSouth and 0.25 as recommended by the ALEC Coalition. (TR-1155).

Dr. Mulrow of BellSouth disputed the notion that Delta should be related to sample size. Rather, Dr. Mulrow's priority was to effect a perfectly symmetrical balancing of Type I and Type II errors. He would allow the balancing critical value to fluctuate without bounds, even if the Type I error rates became absurdly small (or large in the case of small samples). This disagreement between Dr. Mulrow and Dr. Ford relates fundamentally to the interpretation of the task at hand. Dr. Mulrow believes that the objective of balancing is to abandon the standard of <u>equality</u> between BellSouth's retail customers and ALEC's and supplant that standard with one that regards unequal performance as acceptable. Further, Dr. Mulrow acknowledged that the fixed Delta value he proposed abandons the concept of equality and replaces it with an arbitrarily determined "materiality" standard:

Those levels of disparity that are lower than the materiality threshold, which is defined by the choice of delta, will not be considered discriminatory. However, levels of disparity beyond the materiality threshold will be detected as discriminatory with a high likelihood (TR-652)....A mean measure test based on balancing and large sample sizes has a high likelihood of detecting disparity beyond the materiality threshold, but a low probability of detecting disparity that falls under the threshold. (TR-651).

Dr. Mulrow asserted that his version of the balancing critical value approach would have the "power" to detect "material" discrimination. In the passage quoted above, he acknowledged that the approach would have a poor ability to detect a departure from equality. The "ability" to detect the "allowed discrepancy" in his approach would effectively replace the null hypothesis of equality that is fundamental to the "means difference test" in this proceeding. Yet, the law has not changed to accommodate the excesses of an unfettered balancing mechanism, and the definitions in his own exhibit demonstrate that the basic premise being tested (i.e., the null hypothesis) of the "means difference" test does not change when Type I and Type II sampling errors are balanced. Exhibit 20; EJM - 1, at p. 24 of 39. Clearly, by BellSouth's own admission, the specification of Delta proposed by BellSouth and Dr. Mulrow is not an effective tool with which to detect deviations from equal service.

In his testimony, Dr. Mulrow employed unrealistic assumptions in an attempt to trivialize the role of delta. (TR-1179). Further, when arguing that his version of the statistical test would have the "power" to detect material discrimination, Dr. Mulrow ignored the fact that by his own admission the quantification of "materiality" was an assumption on his part. The table in which Dr. Mulrow purported to make his point with references to "true" disparities is "truly" misleading. "Materiality," in the context of the balancing critical value, is simply a theoretical construct created to satisfy the necessity of an alternative distribution to deal with Type II error. Regardless of the value selected for Delta, the ability of the test to detect this very different measure of "discrimination" *will be a function of that* 

*value*. In other words, the "power" to detect the "material" discrimination that Dr. Mulrow describes is a self-fulfilling prophecy.

Dr. Mulrow's assertion that Delta should be unrelated to sample size conflicts with his own analysis as set forth in the Statisticians's Report included with his testimony. With respect to the choice of Delta, the Statisticians's Report, of which Dr. Mulrow was an author, states, "Sample size matters here, too." (TR-670). In context, the clear implication of this portion of his study is that steps should be taken to moderate the impact of sample size on the critical value and, as a consequence, Type I error rates. (TR-670). During the hearing, Dr. Mulrow attempted to deny the relevance of this statement to the choice of Delta by describing its inclusion in the document as a poorly executed cut-and-paste editing effort. (TR-670). Notably, Dr. Mulrow made no effort to correct his exhibit prior to crossexamination. Because the Statisticians' Report was initially filed on February 28, 2000, there has been adequate time to correct the report prior to March 1, 2001 -- the date testimony was filed in this proceeding. In any case, sample size <u>does</u> matter and the testimony of Z-Tel witness Dr. Ford clearly illustrates why.

In fact, the decision in Louisiana -- which Dr. Mulrow urges the Commission to emulate (TR-270) -- clearly demonstrates that sample size matters. The Louisiana PSC approved BellSouth's proposal of a balancing mechanism based on BellSouth's assurances that the resulting z-scores would not exceed a level consistent with a five percent (5%) significance level (i.e., Type I error probability) (TR-680). In fact, while in this case Dr. Mulrow denied the importance of maintaining a significance level of this magnitude, in Louisiana he actively helped BellSouth make the opposite case. BellSouth submitted a study, authored in part by Dr. Mulrow, which supported BellSouth's contention that its plan would yield balancing critical values with an average of 1.67. As Dr. Mulrow had to acknowledge, a critical value of 1.67 translates (approximately) into a 5% significance level and Type I error probability. (TR-680). Dr. Mulrow's proposals in this case stand in stark contrast to the decisions of the Louisiana PSC that he helped mold.

Additionally, the Louisiana Commission chose a smaller Delta value for Tier II measures because of the because the larger sample sizes in Tier II produced unacceptably small Type I error rates (or very large critical values). (TR-1176-1177; Exhibit 12, Deposition of Dr. George Ford, Late-filed Exhibit 5). Dr. Mulrow's contention that the Louisiana Commission's choice of a smaller Delta value for Tier II was based on the masking of discrimination is not only disingenuous, but senseless by his own standards. If (one-half) Delta defines the acceptable level of discrimination, as Dr. Mulrow asserts, then reducing Delta for Tier II only changes the definition of materiality or discrimination. The reduced Delta does nothing to alter the masking of "material" discrimination.

Even BellSouth's own witness refuted Dr. Mulrow's assertion that the significance level of the test is irrelevant. Dr. William Taylor explicitly agreed with Z-Tel's witness, Dr. Ford, that the balancing mechanism must result in statistically reasonable implications, including significance levels. (TR-1235; Exhibit 7, Deposition of William Taylor, at p. 43). Dr. Taylor is "comfortable" with balancing critical values of about 1.5, which correlate with significance levels of five percent (5%). (TR-1222; 1257). By contrast, some of the examples that Dr. Mulrow approvingly offered would yield significance levels ten billion times smaller than Dr. Taylor's 5%. (TR-1172).

By treating Delta as a function of sample size, Z-Tel's "Delta Function" preserves the objective of a meaningful significance level for the means difference test and takes sample sizes into account. Type I error rates are better controlled at both small sample sizes and large sample sizes, keeping the critical values and Type I error rates within a reasonable range. Further, if this Commission seeks to follow the example of the Louisiana PSC, as Dr. Mulrow recommends, then incorporating the Delta Function into the statistical analysis accomplishes this task.

#### SUMMARY

To allow an unrestrained balancing statistical procedure (which was intended to refine the standard "means difference" test) to gut the ability of the statistical test to detect a difference in means would be to let the tail wag the dog. In light of the requirements of the statute, and of the record developed in this case, Z-Tel submits that the Commission should:

- 1. Recognize that the "null hypothesis" of the "means difference" test is simply a restatement of the standard of equality that is embedded in the 1996 Act;
- 2. Recognize that "Delta" is an assumption, chosen as a matter of expediency, that bears no pre-determined or measurable relationship to of materiality in the real world;

- 3. Minimize any necessary departure from a reasonable test of the null hypothesis of parity when accounting for Type II error;
- 4. Recognize the high sensitivity of the statistical test and balancing procedures to sample size; and
- 5. Adopt Dr. Ford's "Delta Function" to ensure the ability of the statistical test to detect the type of discrimination contemplated by the law under a broad range of scenarios.
- **ISSUE 12a:** What is the appropriate methodology that should be employed to determine if BellSouth is providing complaint performance on a statewide ALEC-aggregate basis? (Tier 2)

<u>Z-TEL:</u> \*\*If the Delta Function is used, the statistical procedures used for individual CLEC data transfer directly. If a fixed Delta value is used, a floor on the Delta value of 3.73 must be established to maintain the integrity of the means difference test for aggregate data with large sample sizes.\*\*

**ISSUE 12b:** How should parity be defined for purposes of the Performance Assessment Plan?

**<u>Z-TEL</u>:** \*\*Parity means equality. For measures with retail analogs, parity is defined in terms of a null hypothesis of zero means difference. For benchmarks, parity is defined in terms of a bright-line, stare-and-compare method of evaluating service equality.\*\*

**ISSUE 12c:** What is the appropriate structure?

- 1. What is the appropriate statistical methodology?
- 2. What is the appropriate parameter delta, if any?
- 3. What is the appropriate remedy calculation?
- 4. What is the appropriate benchmark table for small sample sizes?
- 5. Should there be a floor on the balancing critical value?

<u>Z-TEL</u>: \*\*Z-Tel adopts the position and arguments advanced in response to Issue 11, above, and 11(c)(3), below.\*\*

**ISSUE 11(c)(3):** What is the appropriate remedy calculation?

<u>Z-TEL</u>: \*\*The measure-based approach by the ALEC Coalition has numerous advantages over BellSouth's transaction-based method. As a compromise, the hybrid plan prepared by Dr. Ford at Staff's request successfully incorporates aspects of both.\*\*

#### ARGUMENT

An additional area of disagreement is how incentive payments should be levied. BellSouth proposes that payments be based on the number of occurrences. The ALEC Coalition, by contrast would employ a measure-based payment approach that bases the total payment on the difference between BellSouth and the ALEC's average service quality.

The occurrence-based payment scheme proposed by BellSouth suffers from numerous flaws. First, it is impossible to measure the number of occurrences for measures defined in terms of service intervals (e.g., days to provision). (TR-1156). Second, for measures where the number of occurrences can be measured, the severity of the deviation from equality cannot be assessed. Third, the number of occurrences is only a symptom of BellSouth's decision to provide unequal service. It is the decision not to provide parity service that is the disease, and the performance plan will be more effective if the disease is treated, rather than just the symptoms. (TR-1160). Unlike the BellSouth proposal, the ALEC Coalition's measure-based system treats the disease rather than the symptoms. (TR-1159). The payments are based on deviations from equality (TR-1160), and ignore sample sizes.

BellSouth is critical of the ALEC Coalition's measure-based plan because it ignores sample size. The ALEC Coalition is critical of the BellSouth occurrence-based scheme because of the perverse incentives the occurrence-based approach has at small sample sizes (i.e., very small penalties are generated even at large disparity levels). Z-Tel, in a late filed exhibit, offers a compromise payment approach that is a hybrid of the measure-based and occurrence-based systems. (Exhibit 12, Deposition of Dr. George Ford, Late-filed Exhibit 2, Part 2). This hybrid approach adjusts the measure-based payments according to sample size. Sample size does not, however, exert an undue influence on the payments, as in the BellSouth plan. Furthermore, rather than having a single range of payment levels as in the JALEC plan,<sup>1</sup> the proposed payments of the hybrid plan mimic the variety of payment levels proposed by BellSouth. As with the choice of Delta, Z-Tel offers a compromise or hybrid position between the payment formulas of BellSouth and the ALECs.<sup>2</sup>

### CONCLUSION

The most critical aspect of this proceeding is the selection of the tool with which to detect discrimination. For the reasons stated above, Z-Tel urges the Commission to adopt the Modified Z-test with Dr. Ford's "Delta Function."

<sup>&</sup>lt;sup>1</sup>The JALEC plan's payment function easily could be adjusted to reflect differences in the actual or alleged importance of particular measures.

<sup>&</sup>lt;sup>2</sup>While Z-Tel proposes specific formulas for the disparity level, the payment function proposed by Z-Tel can be used for any definition of the disparity level.

The measure-based penalty approach is superior to BellSouth's transaction approach. Z-Tel's hybrid provides the Commission with an alternative that reflects the best aspects of each party's presentation.

Joseph Q. Mc Det Klen

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ATTORNEYS FOR Z-TEL COMMUNICATIONS, INC.

## APPENDIX

As Z-Tel stated in the Introduction, except for the points argued in this Brief Z-Tel adopts

the positions of the ALEC Coalition. For the Staff's use in preparing the recommendation

in this case, Z-Tel has responded to each of the remaining positions below.

- **ISSUE A:** How should the results of KPMG's review of BellSouth performance measures be incorporated into this proceeding? (Stipulated)
- **ISSUE 1a:** What are the appropriate service quality measures to be reported by BellSouth?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 1b:** What are the appropriate business rules, exclusions, calculations, and levels of disaggregation and performance standards for each?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 2a:** What are the appropriate Enforcement Measures to be reported by BellSouth for Tier 1 and Tier 2?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 2b:** What are the appropriate levels of disaggregation for compliance reporting?

Z-TEL: \*\* Z-Tel adopts the position of the ALEC Coalition.\*\*

- **ISSUE 3a:** What performance data and reports should be made available by BellSouth to ALECs?
  - **Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*
- **ISSUE 3b:** Where, when, and in what format should BellSouth performance data and reports be made available?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 4a:** Does the Commission have the legal authority to order implementation of a self-executing remedy plan?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 4b:** With BellSouth's consent?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 4c:** Without BellSouth's consent?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 5a:** Should BellSouth be penalized when BellSouth fails to post the performance data and reports to the Web site by the due date?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 5b:** If so, how should the penalty amount be determined, and when should BellSouth be required to pay the penalty?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 6a:** Should BellSouth be penalized if performance data and reports published on the BellSouth Web site are incomplete or inaccurate?

**<u>Z-TEL:</u>** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 6b:** If so, how should the penalty amount be determined, and when should BellSouth be required to pay the penalty?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 7:** What review process, if any, should be instituted to consider revisions to the Performance Assessment Plan that is adopted by this Commission?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 8:** When should the Performance Assessment Plan become effective?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 9:** What are the appropriate Enforcement Measurement Benchmarks and Analogs?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 10:** Under what circumstances, if any, should BellSouth be required to perform a root cause analysis?

**Z-TEL:** \*\* Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 13:** When should BellSouth be required to make payments for Tier 1 and Tier 2 noncompliance, and what should be the method of payment?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition\*\*

**ISSUE 14a:** Should BellSouth be required to pay interest if BellSouth is late in paying an ALEC the required amount for Tier 1?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 14b:** If so, how should the interest be determined?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 15:** Should BellSouth be fined for late payment of penalties under Tier 2? If so, how?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 16:** what is the appropriate process for handling Tier 1 disputes regarding penalties paid to an ALEC?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 17:** What is the appropriate mechanism for ensuring that all penalties under Tier 1 and Tier 2 Enforcement Mechanisms have been paid and accounted for?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 18:** What limitation of liability, if any, should be applicable to BellSouth?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 19a:** What type of cap, if any, is appropriate for conclusion in the Performance Assessment Plan?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 19b:** What is the appropriate dollar value of a cap if applicable?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 20:** What process, if any, should be used to determine whether penalties in the excess of the cap should be required?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 21:** If there is a cap, for what period should the cap apply?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 22:** Should the Performance Assessment Plan include a Market Penetration Adjustment, and if so how should such an adjustment be structured?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 23:** Should the Performance Assessment include a Competitive Entry Volume Adjustment, and if so how should such an adjustment be structured?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 24a:** Should periodic third-party audits of Performance Assessment Plan data and reports be required?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 24b:** If so, how often should audits be conducted, and how should the audit scope be determined?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 25:** If periodic third-party audits are required, who should be required to pay the cost of the audits?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 26:** Who should select the third-party auditor if a third-party audit is required?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 27a:** Should an ALEC have the right to audit or request a review by BellSouth for one or more selected measures when it has reason to believe the data collected for a measure is flawed or the report criteria for the measure is not being adhered to?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

ISSUE 27b: If so, should the audit be performed by an independent third party?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 28:** Should BellSouth be required to retain performance measurement data and source data, and if so, for how long?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 29:** What is the appropriate definition of "affiliate" for the purpose of the Performance Assessment Plan?

**Z-TEL:** \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

**ISSUE 30a:** Should BellSouth be required to provide "affiliate" data as it relates to the Performance Assessment Plan?

Z-TEL: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

- **ISSUE 30b:** If so, how should data related to BellSouth affiliates be handled for purposes of:
  - 1. Measurement reporting?
  - 2. Tier 1 compliance?
  - 3. Tier 2 compliance?

**<u>Z-TEL</u>**: \*\*Z-Tel adopts the position of the ALEC Coalition.\*\*

## **CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing Posthearing Brief of Z-Tel Communications, Inc. has been furnished by hand delivery(\*) or U.S. mail on this 30th day of May, 2001 to:

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