ATTACHMENT 24

CRUCIAL SHORTCOMINGS OF THE "BALANCING CRITICAL VALUE" APPROACH TO PERFORMANCE APPRAISAL

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I. Introduction

Section 271 of the Telecommunication Act of 1996 provided for ILEC entry into the long distance telephone service market if CLECs were allowed to enter the various local telephone service markets. This CLEC entry, in turn, is predicated upon the CLECs' ability to purchase from the ILEC various services crucial to their ability to compete in the local market. Consequently, the Act further requires that the ILEC provide these services to the CLECs at a quality level *at least equal* to that they provide to their own customers or affiliates. Thus, the evaluation of parity in local service provision has become a central issue in all proceedings concerning ILECs' 271 approval. Statistical means difference tests, typically based on (some version of) the LCUG Z statistic, have become the cornerstone in the evaluation of service quality provision. Indeed, test results are not only used to determine whether the ILEC has discriminated against the CLEC in service quality provision, they also enter into the determination of the magnitude of the penalty involved according to several performance assurance plans (such as those proposed by SBT, BST, and AT&T). It is this latter use that has led to the development of a "balancing critical values" approach to parity testing and performance appraisal.

When one makes a decision concerning the presence or absence of parity in service provision based on a statistical test, he or she can err in one of two possible ways. They could conclude that discrimination in service provision exists when in fact it does not, or they could conclude that discrimination does not exist when in fact it does. Because the null hypothesis of the test assumes "no discrimination," the former error involves the rejection of a true null. It is called a type I error, and the probability (or risk) of committing such an error is called α. The latter error involves the acceptance of a false null. It is called a type II error, and the probability (or risk) of committing such an error is called β. The BCV approach to parity testing amounts to determining a critical value of the test statistic called a balancing critical value (BCV), that equates α with β. This principle was first enunciated by LCUG in the early (pre 1998) stages of parity testing discussions, but the current version is the result of joint efforts of BST's statistical discussions from Ernst and Young and AT&T's (now retired) statistical expert Colin Mallows. Indeed, a BCV has become an integral part of both AT&T and BST's Performance Assurance Plans (PAPs).

In principle, an equal chance of error approach is attractive for (at least) two reasons. First, it remedies a number of difficulties encountered by the alternative approach. A number of PAPs, e.g., SBT's Texas plan, employ a fixed critical value of the test statistic and a K-table in lieu of BCV. Without going into a detailed criticism, the K-table corrects for random variation in the test statistic by allowing the ILEC to fail "k" tests per month without penalty. Many CLECs object to this approach because the table is

derived based on an unrealistic alternative (that the ILEC always provides parity service) and because it ignores type II errors. The BCV approach avoids these criticisms (and handles the random variation problem) by employing a critical value of the test statistic that equates the probabilities of committing type I and type II errors.

Second, the BCV approach dovetails neatly with the objective of unbiased penalty assessment. An optimal statistical decision would be one that equates the costs of making a type I error with the costs of making a type II error. ILEC representatives are typically more than willing to disclose how much a type I error costs them. CLECs, on the other hand, have a more difficult time determining how much a type II error costs them. These costs involve not only the foregone penalty payment and the cost to their reputation; they also entail the cost to society of having to continue monopolistic service provision while losing the benefits of competition. Since these costs are difficult to calculate, it is not reasonable to expect an optimal statistical decision. The BCV, however, accomplishes the next best thing. Since, the probability that the ILEC would have to pay a fine when it is not discriminating is equal to the probability that it will not have to pay a fine when it is discriminating, the long run expected value of inappropriate net penalty payments is zero.

It is indisputable that the BCV approach has a definite allure for parity testing and performance appraisal. Unfortunately, operationalizing the BCV approach, putting the principle into practice, exposes a major flaw which can open Pandora's Box in terms of allowing the ILEC to thwart meaningful CLEC competition at the local level. The problem relates to the key role played by a parameter δ in determining what critical values of the test statistic will lead to the rejection of parity. The flaw is that the value given to δ is arbitrarily determined; Pandora's Box is opened when δ is set equal to "large" values; and all the evidence suggests that ILECs are intent on pursuing exactly this strategy.

II. The Importance of Specifying Delta

To apply the BCV approach, one must (a) determine an expression for the value of α assuming the null hypothesis is true, (b) determine an expression for the value of β assuming the alternative hypothesis is true, and (c) set these two expressions equal to each other so as to solve for the balancing critical value (BCV) of the test statistic that equates α and β. Step (a) is easy because the CLEC and ILEC population means are assumed to be equal -- it does not matter what value they are equal to, just that they are equal to each other. The procedure becomes problematic at step (b) because we must have a specific value for the difference between the CLEC and ILEC population means in order to compute β. This is the point in the argument at which statisticians typically cop out. Ideally, we would like to compute β based on a means difference that is only just large enough to be marginally "competitively significant." Statisticians argue that they are in no position to gauge how large means differences should be in order to be marginally competitive significant, this matter should be left to "telephony experts." But given a measure of this difference, they can easily compute the BCV and hence implement an equal probability of Type I and Type II errors. The AT&T/BST statisticians capsulize the problem as follows:

$$H_0: \mu_C = \mu_I ; \sigma_C^2 = \sigma_I^2$$
$$H_A: \mu_C = \mu_I + \delta * \sigma_I ; \sigma_I^2 = \lambda \sigma_C^2 \qquad (1)$$

(Clearly, parity service provision requires both equality of means and equality of variances. The second set of equalities in H_0 and H_A above allow for discrimination in the form of the CLEC variance exceeding the ILEC variance by a multiplicative factor λ, $\lambda>1$; i.e., the ILEC provides the CLEC more variable service than it provides itself. While this is certainly an important source of discrimination, it is of only tangential importance to the problem at hand. Thus, in what follows, the variances are assumed to be equal; i.e., $\lambda=1$.) In this view, the CLEC and ILEC means are equal under H_0 and differ by an amount equal to $\delta * \sigma_I$ under H_A. Analytically, under these assumptions, steps (a), (b), and (c) lead to the formula

$$BCV = \frac{\text{Expected Value of Test Statistic Assuming Means Differ by } \delta \cdot \sigma_I - \text{Expected Value of Test Statistic Assuming Means do not Differ}}{\text{Variance of Test Statistic Assuming Means Differ by } \delta \cdot \sigma_I + \text{Expected Value of Test Statistic Assuming Means do not Differ}} \qquad (2)$$

Thus δ is a measure, in units of the ILEC standard deviation, of the extent to which the ILEC mean exceeds the CLEC mean (or, conversely). As such, specifying δ specifies the difference between the CLEC and ILEC means that would be marginally competitively significant in affecting local service competition. Further, specifying delta is integral to determining the BCV. It follows immediately that, since parity is rejected if the computed value of the test statistic "exceeds" the BCV, the value chosen for δ can determine the outcome of the test.

While the statistician may not be in a position to accurately specify δ, he or she is certainly able to evaluate the impact of choosing a particular δ on parity testing. Before turning to this question, however, let us examine briefly the ability of "telephony experts" to specify δ. In the past, BST "experts" have suggested that δ should equal 1; more recently (in the Florida Strawman proposal) a value of 0.5 has been put forward. No explanation has been offered as to how these numbers were derived. The following scenario is not out of the question: One day the chief ILEC negotiator phones one of his engineers and asks, "Hey Joe, suppose our average service provision was about one standard deviation better than what we provide the CLECs on average. Would that difference be competitively significant?" Joe thinks for a minute and responds, "Yeah, it probably would be, but let me check with Bill to see what he thinks. Hey, Bill..." To make a long story short, let's suppose that Bill and whoever else he consults concur. The value of δ has now been established, in the ILEC's mind, as 1. Admittedly, there is no real evidence to support this conjecture; but equally, there is no real evidence refuting it, either. That is one of the problems, ILECs provide no evidence from their "telephony experts" at all.

Charitably, the ILEC may simply have asked its experts the wrong question. It is probably true that selecting $\delta=1$, produces a means difference, $1*\sigma$, that is competitively significant. But the important question is whether this is the least possible means difference that would be competitively significant. If one is willing to accept values of δ that lead to inframarginal differences in competitive significance, then there is an infinity of equally legitimate values that δ could take on. For example, if $\delta=1$ results in a competitively significant means difference ($1*\sigma$), then so would values of $\delta=2,3,4, \ldots$, because they would lead to larger means differences than that given by $\delta=1$ (i.e., $2*\sigma$.

$3*\sigma$, $4*\sigma$, ...). Thus, specifying inframarginal values for δ becomes completely arbitrary, so that such values can contribute nothing to the solution of parity testing problems. The real question is how *small* can δ be made and the resulting means difference be competitively significant. Is it possible for means differences resulting from δ values of 0.5, 0.25, or 0.1 to be competitively significant differences? It is the value of δ that leads to the marginally competitively significant means difference that we require, because it is the only unique, unambiguous, meaningful value to assign to δ if competitive significance is to be the criterion by which we determine Type II error. *For this reason, establishing the δ that leads to marginally competitively significant means difference should be the subject of considerable research on the part of economists and statisticians as well as engineers and other "telephony experts."* The CLECs are aware of no models that have been estimated, no experiments that have been conducted by the ILECs. Indeed, the ILEC is typically in a uniquely poor position to conduct tests and experiments to establish the extent of marginally competitively significant differences in the provision of local telephone service because, generally speaking, it does not "compete" in local markets. In fact, a sound argument can be made that it is not possible at this time to accurately establish such values, because up to now, local telephone markets in the U.S. have not seen vigorous competition between the CLECs and the ILEC. Until such competition is the rule of the day, determining "competitive significance" can be based on nothing but conjecture.

III. The Statistical Consequences of Choosing a δ That is "Too Large"

Now consider the impact on parity testing of the ILEC's choice of δ=1 rather than some, more appropriate, smaller number. The answer, in a nutshell, is this: the larger δ, the more extensive is the ILEC's carte blanche to thwart local competition. The rationale is as follows: (i) Larger values of δ indicate larger differences in SQM means. (ii) The larger the means difference, the less likely the commission of a type II error, i.e., the lower is β. (iii) Smaller values of β require smaller values of α to balance the two risks. (iv) Since α is not only the probability of committing a type I error but also the level of significance of the test, smaller values of α imply larger critical values of the test statistic. (v) Since larger means differences imply greater discrimination and since larger critical values of the test statistic make rejection of parity less likely, larger values of δ permit greater discrimination by the ILEC without its incurring a penalty. To see points (i)- (iv) more clearly, consider the Figure 1. The figure contains three sets of graphs with two graphs in each set. For each set, the upper graph can be considered as the distribution of ILEC sample means and the lower graph, as the distribution of CLEC sample means. The service being analyzed is assumed to be one in which larger numbers mean worse performance. Thus, in accordance with equations 1, the mean of the ILEC distribution is μ and the mean of the CLEC distribution is $\mu+\delta*\sigma$. In the upper set of graphs, δ=1, in the middle set, δ=0.5, and in the lowest set, δ=0.25.

Graphically, determining the balancing critical value is easy. The probability of a type I error is simply the area under the ILEC curve to the right of X* (ILEC sample means so large that they give the appearance of non-parity when parity is in fact the case), and the probability of a Type II error is the area under the CLEC curve to the left

of X* (CLEC sample means so small that they give the appearance of parity when it is not truly the case). Determining the balancing critical value simply amounts to adjusting the dashed vertical line -- the one labeled BCV and the one that defines X* -- so as to equalize these two areas. Also note that even though the distributions are not normalized, it still follows that larger α (=β) areas imply smaller (in absolute value) critical values, and conversely.

Now consider the upper set of graphs which have been constructed under the hypothesis that δ=1. Here, the CLEC mean is a relatively large distance above the ILEC mean. Thus the BCV will determine α and β errors that are relatively small, indicating that the BCV itself will be relatively large in absolute value. Intuitively, since the CLEC mean is a relatively large distance above the ILEC mean, we are not very likely to commit a Type II error, that is, βis likely to be small. Consequently, α must also be small to equal β, and small α's correspond to large (in absolute value) critical values of the test statistic.

In comparison, consider the middle set of graphs. All factors are assumed to be the same as in the upper set except that now the CLEC mean is closer to the ILEC mean, δ=0.5 rather than δ=1. Relative to the first case, this increased proximity will lead to an increased β-risk and a BCV that cuts off larger areas in the tails of both distributions. Note that the larger α would correspond to a smaller (in absolute value) critical value of the test statistic.

Finally, note that the lowest set of graphs reinforces these notions. Again, everything is assumed to be the same as in the two earlier cases except that now the CLEC mean is closer still to the ILEC mean, δ=0.25. Again, because of this increased proximity, the α- and β-risks are higher and the resulting BCV lower (in absolute value) than in the previous cases.

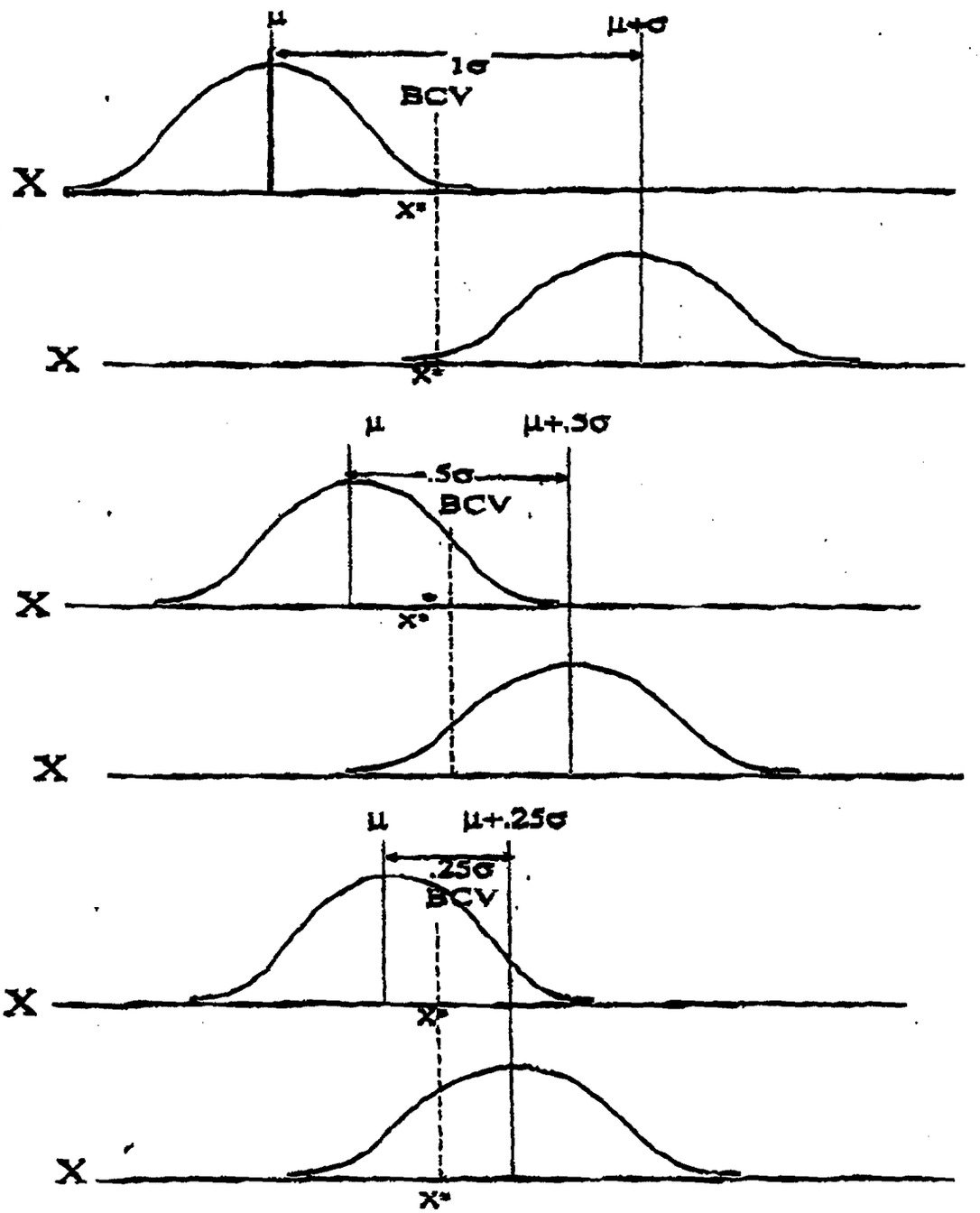
This analysis clearly demonstrates that, in general, the larger δ, the larger the critical value of the test statistic associated with the rejection of parity, ***ceteris paribus.*** **Based on this result, it would not be difficult to accept a value of δ of 1 if the α- and β-risks were of a reasonable size; i.e., if the critical values of the test statistic were of reasonable magnitudes. Unfortunately, this is not the case for δ=1, nor even for δ=0.5.** ***The problem is that the AT&T/BST approach guarantees that, given δ, the α-risk will equal the β-risk, but it has nothing to say about the magnitude of risk at which they will be equal. As a result, many tests have critical values that balance risks, but at infinitesimal risk levels. In fact, these levels of significance are so small as to make a mockery of parity testing.***

Based on the hypothesis test defined in (1)

$$H_0: \mu_C = \mu_I; \sigma_C^2 = \sigma_I^2$$
$$H_\lambda: \mu_C = \mu_I + \delta * \sigma_I; \sigma_I^2 = \lambda \sigma_C^2 \qquad (1')$$

Begin by assuming that λ=1. BST has suggested a simplified formula for approximating the BCV for the truncated Z statistic. (It should be noted that what BST calls the truncated Z is in fact a standard normal variate -- the truncated Z minus its mean and divided by its standard deviation -- so that its critical values are those of a traditional Z statistic).

FIGURE 1



$$BCV = \frac{-\delta}{2\sqrt{\frac{1}{n_C}+\frac{1}{n_I}}} \qquad (3)$$

Let us begin by assuming that $\delta=1$, and let us assume that the ILEC sample size is sufficiently large so that the term $(1/n_I)$ in the denominator of (3) can be taken to be zero. Under these assumptions, the BCV depends only on δ and the CLEC sample size. Consider some typical CLEC sample size values, and note the implied values of BCV and the concomitant level of significance α (=β):

$n_C = 50 \Rightarrow BCV = -3.54 \Rightarrow \alpha = \beta = .0002$
$n_C = 100 \Rightarrow BCV = -5.00 \Rightarrow \alpha = \beta = .0000003$
$n_C = 300 \Rightarrow BCV = -8.66 \Rightarrow \alpha = \beta = 2.3*10^{-16}$
$n_C = 500 \Rightarrow BCV = -11.18 \Rightarrow \alpha = \beta = 2.5*10^{-28}$
$n_C = 1000 \Rightarrow BCV = -15.81 \Rightarrow \alpha = \beta = 1.3*10^{-56}$

It should be clear that, for very reasonable CLEC sample sizes, when $\delta=1$, the AT&T/BST BCV approach yields unacceptably large (in absolute value) critical values and unacceptably small levels of significance. Put into perspective, the FCC has suggested that $\alpha=0.05$ (CV=-1.645) is a reasonable significance level to undertake statistical tests of parity. Some ILEC proposals have suggested $\alpha=0.025$ (CV=-1.96) or even $\alpha=0.01$ (CV=-2.365). But no *bona fide* statistician could honestly recommend that it would be reasonable to conduct a simple means difference test at anything smaller than the $\alpha=0.01$ level of significance -- that is, until now. By requiring $\delta=1$, BST has implicitly required that the level of significance be 1/50th of the minimum acceptable level and 1/250th of an appropriate level -- in their best case scenario ($n_C = 50$). For more reasonable sample sizes, the implications are even more outrageous. And these results are not an artifact of the simplifying assumptions used in the above analysis. BST analyzed 84 parity tests on two SQMs using April 1999 data for the state of Louisiana, with $\delta=1$. They report a minimum BCV of -73 (!) and a median BCV of -3.74, implying that half of the tests were undertaken at a level of significance less than .00009. Indeed, roughly 3/4th s of the tests were undertaken at less than the recommended .05 level of significance. These results indicate that, regardless of the opinion of the "telephony experts," the idea that $\delta=1$ can be rejected based on its statistical implications alone.

These same conclusions also obtain in the case of $\delta=0.5$, although to a lesser degree. Recall that this is the value of δ that BST has put forward in their Florida "Strawman" proposal. If we repeat the above experiment with $\delta=0.5$, we find the following:

$n_C = 50 \Rightarrow BCV = -1.77 \Rightarrow \alpha = \beta = .038$
$n_C = 100 \Rightarrow BCV = -2.50 \Rightarrow \alpha = \beta = .0062$
$n_C = 300 \Rightarrow BCV = -4.33 \Rightarrow \alpha = \beta = .000007$
$n_C = 500 \Rightarrow BCV = -5.59 \Rightarrow \alpha = \beta = .00000001$
$n_C = 1000 \Rightarrow BCV = -7.91 \Rightarrow \alpha = \beta = 1.3*10^{-15}$

Again, except for the $n_C=50$ case, all significance levels are less than the minimum acceptable level, and even for the $n_C=50$ case, the significance level is less than the recommended .05 level. Thus, for the reasons mentioned above, $\delta=0.5$ must be rejected

on the grounds of its statistical implications as too big. (We acknowledge that these numbers do not dovetail with those in examples found in Appendix D of the BST proposal. They do, however, dovetail with the numbers we compute using that same data but appropriate, exact, formulae from other sources.)

Finally, prior to his retirement, AT&T's Colin Mallows recommended a value of 0.25 for δ. Replicating the above experiment for δ=0.25 yields

$$n_C = 50 \Rightarrow BCV = -0.88 \Rightarrow \alpha = \beta = .19$$
$$n_C = 100 \Rightarrow BCV = -1.25 \Rightarrow \alpha = \beta = .106$$
$$n_C = 300 \Rightarrow BCV = -2.16 \Rightarrow \alpha = \beta = .015$$
$$n_C = 500 \Rightarrow BCV = -2.80 \Rightarrow \alpha = \beta = .0026$$
$$n_C = 1000 \Rightarrow BCV = -3.95 \Rightarrow \alpha = \beta = .00004$$

Judged by the implied level of significance of the test, these results are considerably more credible than the two previous cases. Still, for instances where n_C>100, the levels of significance are just too low. This inference is particularly important since both AT&T and BST plans recommend aggregating the test statistics up through many deep testing categories before comparing them to the BCV, so that large CLEC sample sizes are to be expected. (To illustrate, the relevant sample sizes in the previously mentioned BST examples are in excess of n_C=300.)

IV. Implications for Parity Testing, Performance Appraisal, and the Prospects for Operationalizing Equal Risk

The practical import the above statistical results concerning parity testing should be obvious: The larger the value of δ, the greater the means difference, i.e., the greater the extent of discrimination against the CLEC, permitted the ILEC before it is subject to a penalty payment. An example will illustrate: The ILEC owes a penalty when the computed value of the test statistic exceeds the BCV. For simplicity, assume the test statistic is the LCUG Z and that $n_{ILEC} \rightarrow \infty$. Thus a penalty is owed if

$$\frac{\bar{X}_{CLEC} - \bar{X}_{ILEC}}{\sigma_{ILEC}\sqrt{\frac{1}{n_{CLEC}}}} \geq BCV \qquad (3)$$

Substituting equation (2) for BCV and rearranging terms, a penalty will be owed if

$$\bar{X}_{CLEC} \geq \bar{X}_{ILEC} + 0.5 \cdot \delta \cdot \sigma_{ILEC} \qquad (4)$$

Now suppose the ILEC mean repair interval is, say 3 days with a standard deviation of 8. If δ = 1, the CLEC mean repair interval would have to be ***more than 7 days*** (as compared to the ILEC's 3 days) before the ILEC would owe a penalty. Indeed, if δ = 0.5, as suggested in the Florida Strawman, the CLEC mean repair interval would have to be ***more than 5 days*** (as compared to the ILEC's 3 days) before the ILEC would owe a penalty. Interestingly, if δ = 0.15, the implied means difference would be 0.6 days, about the same as that implied by the critical Z value of 1.645 (with n_{CLEC} = 400) suggested by the FCC (0.67 days).

This example should make it clear why ILECs want large values of δ and CLECs want small values of δ. It should also make it clear why δ has become such an important bargaining chip in 271 negotiations. *It is impossible to emphasize strongly enough how*

regrettable this outcome is. The value of δ is not something to be bargained over any more than the value of π is something to be voted on. As pointed out in section II, δ is the difference between mean CLEC and ILEC performance levels, measured in units of the ILEC standard deviation, that would be marginally competitively significant. Ideally, its value for many different SQMs would be the subject of serious study by statisticians, economists, engineers, and industry experts. To make δ subject to negotiation is to destroy the logical underpinnings of parity testing and performance appraisal – to make these underpinnings rest on the relative bargaining power of the participants rather than statistical science. Yet this result is as inevitable as night following day. Because we have not seen at the local level the kind of vigorous competition among providers that would allow an appropriate calculation of δ, the only methods available for specifying δ are conjecture and negotiation, hopefully tempered with a little statistical sanity.

Problems arising from the acceptance or rejection of parity are not the only practical problems arising from attempts to apply the BCV approach. Such problems are magnified when the BCV approach enters into the determination of the magnitude of penalties. Consider for example the penalty structure in the Florida Strawman proposal. In that plan, the computed value of the (truncated) Z (call it Z*) and the BCV (the parity gap) is divided by 4 and the resulting percentage (called the "volume proportion," it cannot be >=1) which is then multiplied by the number of impacted CLECs to determine the "Affected Volume." This number multiplied by the per-occurrence penalty determines the payment to the CLEC for discriminatory service. Since penalties are owed only when Z*>BCV, increases in δ increase the BCV, which decreases the parity gap (for a given Z*), which decreases the volume proportion, which decreases the affected volume (for a given number of impacted CLECs), and hence lowers the penalty payment -- or the likelihood of a penalty being owed. *This means that by manipulating δ, the ILEC can manipulate penalty payments in such a way as to circumvent the intent of even the most adroit state oversight agencies.* Other plans involving δ and the BCV (e.g., AT&T's), while more reasonable, have similar potential of not reflecting the harm of disparity in a real world environment.. CLECs like WorldCom have agreed in joint CLEC remedy proposals to .25 as a generous trial as a BCV individual CLEC results. But WorldCom is becoming increasingly alarmed, as it should well be, that regulators are splitting the difference between ILEC and CLEC proposals for BCV's without any considered analysis of the impact of this "guess" of competitive significance on the marketplace.

V. Can Equal Risk Be Made Operational?

In principle, the BCV approach is indeed a beautiful dream. It eliminates the problem of random variation, and it reduces to zero the expected value of inappropriate penalty payments. Unfortunately, the crucial parameter δ cannot be unambiguously determined, there is an incentive on the part of the ILEC (CLECs) to inflate (deflate) δ, and making the value of δ a bargaining chip destroys the statistical legitimacy of parity testing and performance appraisal. The ILEC cannot be expected to make an enlightened choice of δ because it has scant experience with competition. The CLECs cannot be expected to make an enlightened choice of δ because they have limited experience in terms of contracting with the ILEC and with providing services in the local market. Since the kind of research needed to obtain an enlightened choice of δ is not possible at

the present time, and since conjecture and negotiation clearly incorporate incentives to game the system, some CLECs (in particular, WorldCom) ***worry that a one-size-fits-all BCV can ever be made operational.***

For a moment, let us suspend disbelief and suppose that a BCV -- even with all its potential pitfalls -- is adopted. Would this be a good thing for the CLECs, the ILECs, the state regulatory agencies, or society as a whole? Even ignoring all of the problems brought to light up to now, the answer is still, "No!" Here is why: Suppose that in spite of all the impediments that the various BCV plans place before it, competition still develops. Increased competition implies larger CLEC orders, and larger CLEC orders imply lower probabilities if type II errors, *ceteris paribus*. But lower values of β imply lower balancing values of α, which in turn imply larger BCVs. Consequently, under the BCV approach, increased competition will make it less likely to judge a given means disparity as indicative of discrimination. This consequence is clearly unacceptable. A given difference in the quality of services provided by the ILEC to its own customers versus what it provides to those of the CLEC is either discriminatory or it is not. The extent of CLEC/ILEC competition should have nothing to do with this inference. For this reason, the long run acceptability of BCVs is even more uncertain than its short run acceptability.

It remains but to conclude that implementing a BCV approach is a risky strategy indeed. The CLECs support AT&T's proposal of a BCV approach only to the extent that it's proposed value of $\delta = 0.25$ is taken to be a ***maximum*** acceptable trial value of that parameter for individual CLEC results. This position is based on statistical sanity; conjecture, bargaining, or further alterations to increase the BCV are not acceptable. If state regulatory commissions find this position too intransigent, then some method other than the BCV approach must be found to deal with random variation and competitive significance.

ATTACHMENT 25

BellSouth

RELEASE DATE	TOTAL # of CRs	PRIORITIZED CRs					
		TYPE 2	TYPE 4	TYPE 5	TYPE 6		
2000	9	0	2	6	1	0	26
Jan-01	11	0	1	0	0	10	
Feb-01	4	0	0	0	0	4	
Mar-01	2	0	1	0	0	1	
Apr-01	1	0	0	1	0	0	
May-01	0	0	0	0	0	0	
Jun-01	10	0	0	0	0	10	
Jul-01	5	0	0	1	0	4	
Aug-01	0	0	0	0	0	0	
Sep-01	6	0	0	0	0	6	
Oct-01	2	0	0	0	0	2	
Nov-01	3	0	0	2	0	1	
Dec-01	0	0	0	0	0	0	
Jan-02	5	1	1	0	0	3	
TOTALS	**58**	**1**	**5**	**10**	**1**	**41**	**26**
						67	

Verizon

RELEASE DATE	TOTAL # OF CRs	TYPE 5	TYPE 4	TYPE 3	TYPE 2	TYPE 1
Oct-00	**20**	**3**	14	0	3	0
Nov-00	**1**	**0**	0	0	1	0
Dec-00	**10**	**0**	0	0	10	0
Jan-01	**1**	**0**	1	0	0	0
Feb-01	**15**	**3**	4	0	8	0
Mar-01	**3**	**0**	0	1	2	0
Apr-01	**11**	**0**	3	0	7	1
May-01	**0**	**0**	0	0	0	0
Jun-01	**32**	**3**	3	1	24	1
Jul-01	**5**	**0**	1	0	4	0
Aug-01	**13**	**2**	2	0	8	1
Sep-01	**2**	**0**	0	0	2	0
Oct-01	**42**	**0**	4	23	13	2
Nov-01	**0**	**0**	0	0	0	0
Dec-01	**15**	**3**	3	1	8	0
TOTALS	**170**	**14**	**35**	**26**	**90**	**5**

NOTE: As of 10/09/01, only 1 CR needed to be priortized per the Priotization Working Group.

****There were no non-prioritized CRs implemented by Verizon.***

****All Change Requests are voted on and priortized regardless of TYPE.***

ATTACHMENT 26

CRITERIA	DESCRIPTION
TYPE OF TEST ENVIRONMENT	DEDICATED - EDI & CORBA
INTERFACES SUPPORTED	PRE ORDER - UBL & UNE-P ORDER - UBL & UNE-P ACCESS xDSL expressTRAK Ordering (New Billing System)
REQUIREMENTS FOR TEST ACCESS	Test plan two weeks prior to test execution date. Review of test plan and approval by Verizon test team prior to execution date.
TEST ACCTS	Verizon provides via test decks and builds based on CLEC request
TEST DECKS	For each release - Provides typical Wholesale Pre-Order and Order scenarios for a given release using the most current LSOG version for Pre-Order and Order. For the Pre-Order scenarios, a sample inbound request and outbound response are provided. For the Order scenarios, the LSR, the inbound request, and the outbound response are provided.
PURPOSE OF CTE	CLEC Testing allows new entrant and new release testing of application to application interfaces. This creates a safe harbor for testing without impacting production. Verizon will use regression test decks to simulate production scenarios. Testing includes help with your: Initial EDI, CORBA business processes. Migration from different access methods or software levels (LSOG verisons) New system releases (impacts to the interface and or business rules between Verizon & CLECs)
SYSTEM HOURS OF AVAILABILITY	New Entrant Testing Monday-Friday 8:00am-8:00pm Eastern New Release Testing Monday-Friday 8:00am-5:00pm Eastern **NOTE: Extended hours are available during release testing and through special request by CLEC.* *Available for outside of release testing cycles for CLEC regression testing if necessary.*
STATES SUPPORTED	Maryland, New York, Pennsylvania, Massachussetts, and New Jersey
FLOW-THROUGH CAPABLE	YES - Mirrors production flow-through NOTE: AVG turnaround time on EDI responses: PRE ORDER = 5-7 seconds ORDER = 3 mins NON -Flowthrough = less than 24 hours

DESCRIPTION
Dedicated Front End Server - Interfaces with Production Servers EDI, RoboTAG, and CONNECT:Direct
Pre Order - UBL & UNE-P Order - UBL & UNE-P
Provide test plan at least two weeks prior CLEC must sign and adhere to separate test agreement document *NOTE: Failure to agree and sign test agreement will result in CLEC not permitted to test.* CLEC must meet with BST Test Team for testing kick off meeting
BST must build and provide based on type of testing conducted NOTE: BST claims that CAVE is not scenario or State specific thus it must run each test scenario in CLECs test plan before test accounts are provided.
NONE
To provide CLECs with an environment to test other than straight production testing
Monday - Friday 8:00 AM - 5:00 PM EST *NOTE: Extended hours are not supported* *CAVE is only available for new release testing ONLY - not intended for regression testing by CLECs outside of release testing cycle.*
NON-State Specific
BST claims it mirrors prodution: PRE ORDER = 5-7 seconds ORDER = 1-2 days for flowthrough orders NON-Flowthrough = 2-3 days *NOTE: Rejects/Clarifications are returned in less than 24 hours.*

ATTACHMENT 27

1 LOUISIANA PUBLIC SERVICE COMMISSION

2 ADMINISTRATIVE HEARINGS DIVISION

3

4 LOUISIANA PUBLIC SERVICE COMMISSION, EX PARTE

5

6 DOCKET NO. U-24714-A

7

8

9 IN RE: FINAL DEAVERAGING OF BELLSOUTH

10 TELECOMMUNICATIONS, INC., UNE RATES PURSUANT

11 TO FCC CC 96-45 9TH REPORT AND ORDER ON 18TH

12 ORDER ON RECONSIDERATION RELEASED 11/2/99.

13

14 Hearing held in the above-captioned

15 cause on Tuesday, April 24, 2001 before the HONORABLE VALERIE MEINERS.

16

17 VOLUME II

18

19

20

21

22 REPORTED BY:

23 BETTY D. GLISSMAN

24 CERTIFIED COURT REPORTER

25 STATE OF LOUISIANA

1 request from the CRSG, this is the time that
2 it takes to get the request and also we are
3 logging them so we can keep track of them
4 because there is always the question as to
5 was it sent? Was it gotten? And then in
6 turn, the time that it takes to get the loop
7 make-up and populate it back to the CRSG.
8 Q. And how are you getting that
9 information from the CRSG? Is that coming
10 electronically or is that coming in a manual
11 fashion by facsimile?
12 A. They are moving to an e-mail
13 availability, an e-mail method also for that.
14 Q. Okay. And does this time reflect
15 the time that it would take for an e-mail or
16 for a manual facsimile?
17 A. I think this is based upon using an
18 e-mail method.
19 Q. Is it?
20 A. I believe it is.
21 Q. Are you sure?
22 A. No, because there was some
23 transitions being made. It sometimes depends
24 upon the area. Again, BellSouth has the
25 flexibility within different turfs, different

1 districts, to do things differently. So you
2 have to take into account that volume and
3 other driving factors determine the final
4 methodology of doing things.
5 Q. Okay. Do BellSouth's individual
6 turf managers then have the authority to do
7 something in a way that is not efficient?
8 A. Very opposite, they have the
9 authority to do things as they see to be the
10 most efficient for their organization.
11 Q. Okay. Is there any reason that you
12 can think of that would be more efficient to
13 receive something via facsimile than via
14 e-mail?
15 A. It could be possible that the
16 volume wasn't there so it didn't suffice to
17 have terminals available to the people to do
18 e-mail. I mean, there are possibilities.
19 Q. Now this SAC center has electronic
20 terminals already, correct? And those folks
21 are already on e-mail, correct?
22 A. Don't know if the same clerical
23 people that we are talking about that take
24 this are necessarily. I am just pointing out
25 that it is left to the individual

1 organization to make those determinations.
2 Q. Well, I am confused. I mean, how
3 many SAC centers are there?
4 A. Typically one in each turf
5 district.
6 Q. Okay. And there is a computer in
7 those centers that is connected to BellSouth
8 internal e-mail or not?
9 A. I don't know.
10 Q. So then it is possible that there
11 are some SAC centers out there that are
12 not connected in any way electronically to
13 BellSouth?
14 A. It is possible. I don't know who
15 within the SAC would have it and whether or
16 not the clerical people would have it. Now I
17 am proposing that there are alternative
18 methods based upon volume and need.
19 Q. Well, should we base our times
20 and the assumptions for task times in this
21 proceeding on a system in which BellSouth may
22 have an outlying SAC center that it is not
23 connected to e-mail that can't receive this
24 information via e-mail, and for whatever
25 reason BellSouth has chosen to do that?

ATTACHMENT 28

Paul E. Patton, Governor

Ronald B. McCloud, Secretary
Public Protection and
Regulation Cabinet

Thomas M. Dorman
Executive Director
Public Service Commission

COMMONWEALTH OF KENTUCKY
PUBLIC SERVICE COMMISSION
211 SOWER BOULEVARD
POST OFFICE BOX 615
FRANKFORT, KENTUCKY 40602-0615
WWW.psc.state.ky.us
(502) 564-3940
Fax (502) 564-3460

Martin J. Huelsmann
Chairman

Edward J. Holmes
Vice Chairman

Gary W. Gillis
Commissioner

April 30, 2001

RECEIVED
MAY 15 2001
WORLDCOM

Mr. Creighton E. Mershon, Sr.
BellSouth Telecommunications, Inc.
Post Office Box 32410
Louisville, Kentucky 40232

Re: Case No. 2001-105, RFP for Price Waterhouse Coopers' Audit

Dear Mr. Mershon:

The Commission Staff appreciates your submission of the request for proposal (RFP), which BellSouth issued and which resulted in a contract with Price Waterhouse Coopers (PWC) for an audit of BellSouth's systems and procedures in the Georgia performance measurement testing. The RFP has been filed in the record in Case No. 2001-105.

Commission Staff has reviewed the scope of work performed by PWC and evaluated it in light of information needed by the Commission in order to render an advisory opinion to the FCC regarding BellSouth's provision of non-discriminatory access to its telecommunications network. While the RFP, and presumably the audit report generated pursuant thereto, contains useful information, Staff does not believe that the type of information contained in the audit report will substitute for end-to-end testing and analysis of CLEC orders in Kentucky to ascertain how the SONGS software actually performs.[1]

In short, it is the opinion of Staff that the PWC audit report is not sufficient to enable the Commission to make a reasoned decision about issues on which the Commission will be required to advise the FCC. Staff advises you, as it will advise the Commission, that end-to-end volume testing involving Kentucky-specific software, such as that conducted in Georgia and Florida, involving the software used to access the SOCS systems in those states, is the type of evidence that will enable this Commission to render a decision concerning the sufficiency of BellSouth's OSS in Kentucky.

[1] In a recent Public Notice by the Federal Communications Commission dated March 23, 2001, at page 5, the FCC discussed the content of Section 271 applications, in particular applications covering multiple states, stating, "[t]he applicant must make state-specific evidentiary showings and separately identify each state's relevant performance data."

EDUCATION
FAVS

As a final matter, Staff notes that your filing of April 25, 2001 contains a cover note indicating that certain documents contained in the filing are proprietary. Staff assumes that you wish these documents to be accorded confidential treatment. Accordingly, those documents will not be placed in the public record of his case for 20 days from the date of this letter, pending receipt from you of a Petition for Confidential Treatment filed pursuant to 807 KAR 5:001. If no such petition is filed, the documents will be placed in the public record with the remainder of the filing.

This letter represents the legal opinion of the Commission Staff. This opinion is advisory in nature and not binding upon the Commission should this issue arise in a formal proceeding. If you have further questions, please don't hesitate to contact Deborah Eversole or Bonnie Kittinger of my staff at (502) 564-3940.

Sincerely,

Thomas M. Dorman
Executive Director

cc: All Parties of Record

EDUCATION PAYS

AN EQUAL OPPORTUNITY EMPLOYER M/F/D

TAB B

Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Joint Application by BellSouth Corporation,	)	
BellSouth Telecommunications, Inc.	)	CC Docket No. 01-277
and BellSouth Long Distance, Inc, for	)	
Provision of In-Region, InterLATA	)	
Services in Georgia and Louisiana	)	
	)	

DECLARATION OF CHRIS FRENTRUP
ON BEHALF OF WORLDCOM, INC.

Based on my personal knowledge and on information learned in the course of my duties, I, Chris Frentrup, declare as follows:

I. INTRODUCTION AND SUMMARY

1. My name is Chris Frentrup. I am employed by WorldCom, Inc. ("WorldCom") as a Senior Economist in the Public Policy Analysis Group of the Federal Advocacy organization. In that position, I am responsible for analyzing economic issues relating to telecommunications industry regulation and public policy, and assisting in the development and advocacy of WorldCom's public policy positions. I have participated in the development and advocacy of the HAI Model, a model used in the estimation of telecommunications network costs. I have also worked extensively on the assessment of local exchange carrier productivity in the Commission's price cap proceedings.

2. The purpose of my Declaration is to demonstrate that BellSouth's current unbundled network element ("UNE") rates in Georgia and Louisiana are not based on total

element long run incremental cost ("TELRIC"), despite BellSouth's claims to the contrary in its recently filed section 271 application. See BellSouth Brief at 40.

3. First, BellSouth incorrectly uses different technologies to model loop costs, depending on the intended use of the loop. This approach means that the cost model does not capture all the economies of scale inherent in the network, and results in excessive loop rates. This approach also fails to use integrated digital loop carrier (IDLC) which meets the GR-303 industry standard, which is the forward-looking technology.

4. Second, BellSouth uses unsupported and excessive "in-plant" factors to determine the cost of engineering, furnishing and installing its plant. The development of these factors is not adequately described in BellSouth's documentation, so it is impossible to determine whether they are computed correctly. It is clear, however, that they add significantly to the cost of UNEs, and that they exceed reasonable levels.

5. Third, BellSouth uses several inputs that are inconsistent with TELRIC principles. BellSouth uses fill factors for distribution and feeder cable that are below the levels used by the Commission in its Synthesis Model ("SM"). The assumed drop lengths used to set loop rates imply an implausibly large average lot size. Furthermore, the mix of residence and business lines that BellSouth uses to compute the statewide average loop costs is inconsistent with the mix reported by BellSouth in ARMIS, and with the mix used in the SM.

6. Fourth, BellSouth double-recovers shared and common costs. BellSouth assess Optional Daily Usage Files ("ODUF") and Access Daily Usage Files ("ADUF") charges on competitive local exchange carriers ("CLECs") that need to obtain certain billing information. However, the costs that are recovered in these charges are already recovered in other UNE rates.

Thus, the ODUF and ADUF charges should be set to zero, or alternatively the other UNE rates should be reduced to remove this double recovery.

7. For all of these reasons the Commission should reject BellSouth's application. Until these errors are fixed, CLECs will be required to pay excessive UNE rates, to the detriment of competition and the harm of consumers.

II. BELLSOUTH'S UNE RATES IN GEORGIA AND LOUISIANA DO NOT COMPORT WITH TELRIC PRINCIPLES

8. In setting its rates for UNEs, BellSouth and the Georgia and Louisiana Public Service Commissions ("PSC") made a number of methodological and input choices that fail to comport with TELRIC principles. Because correcting some of these errors would require redesign of certain aspects of the cost models, WorldCom is not able to quantify the precise effect of all of these errors. Other errors, however, can be corrected by an input change, and the effect of correcting these errors is quantified in the discussion infra. The net effect of all these errors is that UNE rates are set significantly above their TELRIC levels.

III. THE METHODOLOGIES USED TO SET UNE RATES IN GEORGIA AND LOUISIANA ARE NOT TELRIC-BASED

9. WorldCom has identified several input and model design issues that result in an overstatement of costs in both Georgia and Louisiana.

A. Shifting Methodologies

10. BellSouth improperly uses multiple scenarios with different mixes of integrated and universal digital loop carrier ("IDLC" and "UDLC" respectively) to compute different rate elements. For example, incorrectly claiming that unbundled loops cannot be served by IDLC, BellSouth runs its loop model using all UDLC for stand-alone loops, while using a mix

of UDLC and IDLC for UNE platform loops.[1] In addition, BellSouth performs runs of its models with no DLC at all to price asymmetric digital subscriber loops (ADSL).

11. This approach is inconsistent with a TELRIC methodology for two reasons. First, it fails to use the forward-looking technology, which is IDLC. In fact, even when BellSouth does use IDLC, it does not use only IDLC that meets the current industry GR-303 protocol. Contrary to BellSouth's assertion, unbundled loops can readily be provisioned from IDLC that uses the GR-303 protocol, and failure of its cost model to do so means that the model does not meet TELRIC requirements. In addition, by running different scenarios with different mixes of IDLC and UDLC, BellSouth is not following the TELRIC requirement that a model reflect all uses of the network. Modeling different networks for different purposes results in loss of the economies of scope that occur in a multi-use network. Thus, the cost models that BellSouth uses to develop its loop rates clearly violate cost-based TELRIC principles.

12. It is not possible to quantify exactly the effect of this error but it is substantial. Correcting the error would require re-designing BellSouth's cost model so that all digital loop carrier used was GR-303 compliant IDLC. It is clear that use of IDLC would significantly lower the cost of a loop. For example, in Louisiana, the unbundled stand-alone loop price that is computed by the BellSouth model is about one dollar a month more than the same loop when it is sold as part of a UNE platform.[2] If the UNE platform loop were provided using

1 See Caldwell Affidavit at 22 for Georgia and at 30 for Louisiana.
2 The prices for a stand-alone loop in the three zones in Louisiana are $12.90, $23.33, and $48.43. The corresponding prices for the platform loop are $11.77, $22.39, and $48.26. See Caldwell Affidavit, Exhibit DDC-5, pages 1 and 5. The percentages of lines in the three zones are 72, 23, and 6 percent, respectively. See id. at 56. This results in weighted average prices of $17.30 for stand-alone loops, which have no IDLC, and $16.27 for platform loops, which include some IDLC.

only GR-303 compliant IDLC, this difference would be even greater, and the UNE platform loop cost would be even lower.

B. Loading Factors

13. Further, the BellSouth cost models fail to comply with TELRIC in their computation of total plant investment through the application of "in-plant" or loading factors to the material investment. The equipment prices that are used as inputs in the cost models are only the price of the materials themselves – the switch, copper cable or fiber cable itself. The engineered, furnished, and installed ("EF&I") cost of the equipment is then determined by applying factors to that material cost.

14. The manner in which these factors were developed is not described in BellSouth's documentation of its cost models. Until BellSouth adequately describes the development of these factors, it is impossible to determine whether they accurately reflect legitimate costs of designing and placing the equipment, or are designed merely to inflate the forward-looking costs of the equipment to match BellSouth's embedded costs.

15. These factors add a significant amount to the total cost of the UNEs. For example, in Georgia the cost of an unbundled loop is more than doubled by use of these factors. Despite the fact that they are designed to reflect the cost of labor to install and engineer the plant, the factors vary substantially from state to state. The factors vary far more between BellSouth states than can be explained by any labor or other cost differences. In addition, because BellSouth applies the same loading factors to all sizes of equipment, these factors add a great deal more total cost to areas that are served by large switches or cable sizes, i.e., primarily the more densely populated areas of the state. This difference occurs despite the fact that the cost for

laying a cable or placing a switch does not vary linearly with size; e.g., it does not require twice as much expense to lay a 2400 pair cable as it does to lay a 1200 pair cable. Thus, the application of a single factor to determine EF&I costs overstates BellSouth's UNE costs, especially in more densely populated areas.

IV. SEVERAL OF THE INPUTS SELECTED TO SET UNE RATES IN GEORGIA ARE NOT COST-BASED

16. In addition to these methodological problems with BellSouth's cost models, which apply in both Georgia and Louisiana, there are a number of input values selected in Georgia that are inconsistent with TELRIC principles.

A. Loop Fill Factors

17. The BellSouth model uses a fill factor of 48 percent for copper distribution. This is well below the fill factors adopted in the Commission's Synthesis Model (SM), of 50 to 75 percent, depending on the density zone. Use of this unreasonably low fill factor causes the BellSouth cost model to employ too much cable, resulting in inflated costs. Use of a 62.5 percent fill factor for copper distribution would reduce loop costs in Georgia by $0.64.[3]

18. Similarly, the BellSouth cost model employs fill factors for copper feeder of 69.5 percent and for fiber feeder of 74 percent. The SM used copper feeder fills of 80 percent in all but the two lowest zones, while the fiber feeder fill was 100 percent. The 100 percent fill factor is based on the fact that fiber cable can be "resized" simply by changing the electronics at

3 This quantification and the others given infra are derived from BellSouth's cost models filed with this 271 application. The inputs were changed in Loop Model version 1.2, and then the results from that model were run through TELRIC Calculator 1.3. The differences reported in every case are for 2-wire Copper Loops up to 18000 feet.

the end of the fiber and, therefore, does not require additional fibers to accommodate growth or spares. Using a 100 percent fill factor for fiber feeder and a 78 percent fill factor for copper feeder would reduce loop costs in Georgia by $0.68.

B. Drop Lengths

19. BellSouth assumed an aerial drop length of 250 feet and a buried drop length of 300 feet. These lengths are unreasonably long. The BOC Notes on the LEC Network reports a national average drop length of 73 feet. The SM used drop lengths of 150 feet in the two most rural zones, and 50 feet in the more urban zones. Thus, the drop lengths used in setting UNE rates are unreasonably long.

20. This is made even more apparent by computing the average lot size implied by these drop lengths. BellSouth states that its cost model assumes that the drop runs from the corner of the lot to the customer's location.[4] Assuming that the house or business is in the middle of the lot, one can compute the lot size implied by the assumed drop lengths.[5] A drop length of 250 feet implies an average lot size of 2.9 acres if the lots are square, and 2.3 acres if the lots are twice as deep as they are wide. It is not plausible that the average lot size in Georgia for all businesses and residences is over two acres. Use of these excessive drop lengths inflates the computed cost of the loop, and results in excessive UNE loop rates. Resetting drop lengths to 73 feet would lower loop rates by $0.34.

C. Mix of Residence and Business Lines

4 Id. at 21, fn 5.
5 Application of the Pythagorean Theorem will derive the lot frontage and depth, given a drop length, D, and an aspect ratio (the ratio of lot width to lot depth), A. The lot size can be derived as 4 * A * D^2 / (1 + A^2).

21. In Georgia, BellSouth determined the cost of residential and business loops, and then determined the statewide average cost by taking a weighted average of these types. The weighting used was approximately 78 percent residence and 22 percent business.[6] These weights are not consistent with the mix of residence and business lines used in the SM, or with the latest line data filed in ARMIS by BellSouth. Both those sources reflect a weighting of about 67 percent residence and 33 percent business. BellSouth acknowledges that the residence lines are the higher cost lines, so the statewide average computed by BellSouth is overstated. Using the residence and business weightings from ARMIS lowers loop rates by $0.32.

D. Net Effect of Input Changes

22. Making all these input changes together reduces the loop cost reported by the model by $1.72.[7] This reduction does not include the effect of either of the methodological flaws regarding the treatment of IDLC and the use of excessive loading factors. Correcting these two additional errors would further reduce BellSouth's loop costs, in both Georgia and Louisiana.

V. DAILY USAGE FEED RATES ARE EXCESSIVE

23. BellSouth proposes to assess ODUF and ADUF charges on CLECs to provide them with usage records for billable call events recorded by BellSouth's central offices. However, BellSouth does not typically charge other local exchange carriers for the same information, using a "bill-and-keep" arrangement instead. Apparently recognizing the excessive

6 Id. at 21.
7 This is less than the sum of the individual changes because of interactions between the input changes.

nature of its current charges, BellSouth has recently proposed to reduce these charges in Georgia substantially.[8]

24. These excessive charges add significantly to the cost of serving a customer. Assuming that these charges are assessed only for the originating side of a call, WorldCom estimates that the monthly charge for an average customer for these charges will be at least $1.12.

25. BellSouth should completely eliminate these charges, because the costs recovered in these rates are already reflected in the shared and common costs that BellSouth adds on to the direct costs of its other UNEs to develop those UNE rates. Retaining the ODUF and ADUF charges would double-recover these costs and should not be permitted. At an absolute minimum, the costs for ODUF and ADUF should be completely removed from the shared and common costs recovered in the other UNE rates.

VI. CONCLUSION

26. The problems with the BellSouth cost models and the inputs indicate that the resulting UNE costs are clearly not cost-based, although the full magnitude of the error cannot be determined on the partial information provided in BellSouth's application. Unless BellSouth corrects its UNE rates to adjust for the problems outlined here, the Commission should reject BellSouth's section 271 application for Georgia and Louisiana.

27. This concludes my Declaration on behalf of WorldCom.

---

8 The sum of ADUF processing and transmission charges was cut from $0.007994 to $0.0019808, while the sum of ODUF processing, transmission, and recording charges was cut from $0.0046986 to $0.0026147. See Exhibit CKC-1, filed October 1, 2001 in GPSC Docket No. 14361, page 14 of 38. These rates are roughly half the current rates in

I declare under penalty of perjury that the foregoing is true and correct. Executed on October 22, 2001.

Chris Frentrup

Louisiana.

Attachment A

DOCUMENT OFF-LINE

This page has been substituted for one of the following:

o An oversize page or document (such as a map) which was too large to be scanned into the ECFS system.

o Microfilm, microform, certain photographs or videotape.

● Other materials which, for one reason or another, could not be scanned into the ECFS system.

The actual document, page(s) or materials may be reviewed by contacting an Information Technician at the FCC Reference Information Center, at 445 12th Street, SW, Washington, DC, Room CY-A257. Please note the applicable docket or rulemaking number, document type and any other relevant information about the document in order to ensure speedy retrieval by the Information Technician.

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