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December 9, 1997

Ms. Blanca S. Bayó
Director, Records & Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Dockets Nos. 960833-TP, 960846-TP, 960747-TP & 971140-TP

Dear Ms. Bayó:

Enclosed for filing on behalf of MCI Telecommunications Corporation, MCImetro Access Transmission Services, Inc., and AT&T Communications of the Southern States, Inc. in the above dockets, are the original and 15 copies of MCI's and AT&T's Rebuttal Testimony of Don J. Wood and Tom Hyde.

By copy of this letter, this document has been provided to the parties on the attached service list.

Very truly yours,

Richard D. Melson

RDM/clp
Enclosures
cc: Parties of Record

81436.1

ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

PREFILED REBUTTAL TESTIMONY

OF

DON J. WOOD

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

AND

MCI TELECOMMUNICATIONS CORPORATION

DOCKET NOS. 960833-TP & 960846-TP

December 9, 1997

IMPLEMENTATION OF THE FEDERAL TELECOMMUNICATIONS ACT OF 1996?

A. When Congress passed the federal Act, its stated purpose was to increase the level of competition in the various markets for telecommunications services. The markets for local exchange services in Florida remain the markets which are by far the least competitive and effectively remain subject to monopoly control. As one of the steps necessary to open these markets to competition and to make the subsequent development of meaningful competition possible, Congress required that the incumbent local exchange companies ("LECs"), such as BellSouth, make unbundled network elements available to new market entrants at prices that are both based on cost and nondiscriminatory (§ 252 (d) (1) (A)). This provision of the federal Act expressly states that in order for such rates to be based on cost, they must be "determined without reference to a rate of return or other rate-based proceeding." Put simply, the cost basis for UNE rates cannot be determined by a review of embedded and/or fully distributed costs (the kinds of costs that are developed in a rate of return type proceeding, or general rate case), even if those costs have been subject to subsequent minor adjustments. The "determined without reference to" language of the federal Act is extremely important and makes it clear that cost-based rates cannot be determined by beginning with embedded/fully distributed costs and making subsequent adjustments, yet this is exactly the approach used by BellSouth in the cost studies and rate proposal that it has submitted in this proceeding.

At page 8 of his testimony, BellSouth witness Varner correctly cites to the language in the federal Act, including the requirement that the rates for UNEs be

based on cost of providing the element *determined without reference to a rate of return or other rate-based proceeding*. He then completely ignores this important language and argues that the federal Act "does not prescribe any specific cost standards." Incredibly, he then goes on to argue that "implicit in the language" of the Act is the requirement that "full actual costs" -- BellSouth's euphemism for embedded costs -- may be recovered. Such a conclusion directly contradicts the plain language of the Act cited in Mr. Varner's previous answer in his testimony, and, if adopted by this Commission and used to establish rates for UNEs, would have dire consequences for the development of competition for local exchange services. Ultimately, Mr. Varner is asking this Commission to render a rate case decision without first conducting a rate case investigation: he is asking the Commission to establish rates for UNEs based on BellSouth's books of account as if it were rate of return regulated, and asking it to simply take BellSouth's word that those booked costs are not excessive.

Undeterred by the plain language of the federal Act, Mr. Varner goes on to argue that in order for BellSouth to realize a "reasonable profit" in the rates for UNEs as permitted by § 252 (d) (1) (B), it must be permitted to collect an amount above its "full actual" (i. e. embedded) costs. Such a conclusion is wholly at odds with any accepted financial, economic, or common sense definition of the phrase "reasonable profit." In a rate of return environment, Mr. Varner's proposed "reasonable profit" would be more accurately described as "excessive earnings." In a price cap environment, Mr. Varner's proposed "reasonable profit" can only be described as the "establishment of excessive and artificially high UNE rates in order to create a significant barrier to competition". While such an outcome may

be "reasonable" to Mr. Varner and BellSouth, it is inconsistent with the requirements and clear intent of the federal Act, and is certainly not a "reasonable" outcome for competitors or Florida consumers of local exchange services.

Q. SECTION 252 OF THE FEDERAL ACT ALSO REQUIRES THAT THE RATES FOR UNES BE NONDISCRIMINATORY. WHAT IS NECESSARY FOR THIS REQUIREMENT TO BE MET?

A. In order for the nondiscriminatory requirement of the federal Act to be met, the incumbent LEC must charge the same rates for UNEs to competitors that it "charges" itself. If the rates for UNEs to be paid by competitors are set at a level that exceeds the properly calculated forward-looking economic cost, yet BellSouth is permitted to set its retail rates at any level equal to or above that same measure of cost, then a classic price squeeze is created and the UNE rates are discriminatory *per se*. In order to avoid such a scenario, there are theoretically two options available to the Commission: 1) UNE rates can be set at a level equal to the properly calculated forward-looking economic cost, or 2) an imputation standard can be set up so that BellSouth is effectively charging itself the same inflated price for UNEs. The first option is the only acceptable methodology for at least three reasons:

First, if inflated UNE prices become part of the cost structure for all competitors, the retail rates charged to end users will remain artificially high: competitive market forces will be unable to compete away these excessive costs.

Second, imputation standards that have been applied to similar pricing relationships (imputing exchange access rates into the LEC's rates for intraLATA

toll, for example) have proven to be controversial in application and extremely difficult -- if not impossible -- to effectively administer.

Third, § 254 of the federal Act mandates that universal service funding be made explicit rather than implicit, and permits state regulators to develop a means of determining and administering the intrastate portion. In order to determine how much funding will be necessary and to determine which specific areas of the state require such funding, accurate and reliable cost information must be developed.

In summary, in order to establish UNE rates that are both based on cost and nondiscriminatory pursuant to § 252, and to determine how much universal service funding is required (and where that funding should be targeted within the state) pursuant to § 254, the Commission will need to have access to the results of cost studies that it has determined to be conceptually correct (i.e. consistent with the requirements of both sound economics and the federal Act) and accurate. In other words, in order to determine if a cost study is providing a correct and accurate "answer," the Commission must first determine the correct "question" to be posed.

Q. IF A COST RESULT THAT PROVIDES THE RIGHT "ANSWER" FOR UNE PRICING AND UNIVERSAL SERVICE FUNDING MUST BE DEVELOPED FROM A COST STUDY DESIGNED AROUND THE RIGHT "QUESTION," WHAT IS THE RIGHT QUESTION?

A. In order to develop costs for use in this proceeding and in future proceedings established to determine universal service funding requirements, it will be necessary for the Commission to be provided with the answer to the following question: **What is the cost that an efficient provider would incur to provide**

the network element or service within the specific geographic area being studied?

In order to define such an approach, it is useful to define the primary constraints that will play a part in determining the cost of the element or service being studied. This process is sometimes referred to as the identification of the primary "cost drivers" of the "cost object" (a cost driver is defined as a characteristic of the relevant environment that plays a primary role in determining the cost, and the cost object is simply the network element or service being studied). Of course, when conducting this analysis it is also important to determine which characteristics should not be considered as cost drivers; in other words, it is necessary to determine whether a given characteristic should be a constraint in the cost study.

Q. ARE THE BELLSOUTH COST STUDIES AND RATE PROPOSAL A RESPONSE TO THE QUESTION YOU IDENTIFIED?

A. Not at all. Instead, BellSouth's rate proposal seeks to provide an answer to the following question: **How can BellSouth be "made whole," including the recovery of all embedded costs -- as if it were rate of return regulated but while retaining the regulatory freedom of price caps regulation -- while preventing the development of local exchange competition and seeking the further freedom of interLATA authority?** I agree with Mr. Varner that the answer to *this* question is the BellSouth rate proposal.

BellSouth witnesses Varner and Caldwell both argue that the Commission should not focus on the costs of an efficient carrier in order to determine the relevant forward-looking economic cost, but instead should utilize cost data based on

BellSouth's historic operations. Such an approach ignores the plain fact that any carrier operating efficiently would be able to provide UNEs for a given cost in a given geographic area. It is simply nonsense to assert that the cost incurred by BellSouth, if it is operating efficiently, would be different than the cost of another efficient carrier to perform the same function. Only by operating inefficiently (either by using high-cost embedded network facilities or excessive levels of overhead cost) would BellSouth have a cost that is higher than an efficient provider. *By arguing that its UNE rates should be based on a measure of cost different from that of an efficient provider, BellSouth is telling this Commission that it has an inefficient network, excessive overhead costs, or both.* By arguing that its excessive costs should for the basis for UNE rates, BellSouth is arguing that new competitors, even if they are more efficient, should nevertheless be saddled with BellSouth's excessive cost structure. In this regard, BellSouth is like an overweight and out of shape athlete that is arguing that anyone wishing to compete with it do so while wearing a ball and chain, at least until it has had all the time it wants to work itself into shape. Of course, as long as all competitors purchasing UNEs must take on a portion of BellSouth's excessive costs, BellSouth loses all incentive to get into shape. If the Commission sets UNE rates at the forward-looking economic costs that would be incurred by an efficient provider, however, BellSouth will find the motivation to begin its conditioning program. If UNE rates are established based on BellSouth's embedded network and historic operations, the clear winner will be BellSouth: it will have the luxury of continuing to operate inefficiently, because its competitors will be forced to assist in the recovery of its excessive costs. Consumers will be the clear losers, because an

artificially high price floor will have been created for the local exchange services that they purchase regardless of which provider they choose.

Q. DOES THE BELLSOUTH COST METHODOLOGY COMPLY WITH SOUND ECONOMIC COSTING PRINCIPLES GENERALLY AND THE TSLRIC METHODOLOGY SPECIFICALLY?

A. No. A review of BellSouth's "TSLRIC" methodology illustrates an example of the recurring BellSouth theme: picking and choosing among mutually exclusive cost principles in order to generate higher costs for UNEs. In an attempt to justify higher costs (and therefore higher UNE rates), BellSouth has applied a distorted version of TSLRIC principles in order to justify costs that are higher than the costs that would be produced by the incremental cost methodology that BellSouth has previously used (in cost studies filed with this and other state regulators). The methodology and assumptions used by BellSouth in its cost studies filed in this proceeding have no basis in sound economic costing principles, and BellSouth has not provided a justification to this Commission for making these changes to its previous incremental cost methodology.

Q. PLEASE DESCRIBE THE BELLSOUTH INPUTS AND ASSUMPTIONS IN QUESTION.

A. As BellSouth witness Caldwell has correctly pointed out to this Commission on a number of occasions, "for more than a decade BellSouth has developed costs based on [a] forward-looking incremental cost methodology" (For example, See Transcript of Evidence, Docket No. 960833-TP, p. 2221). While the methodology

or methodologies used by BellSouth during that period of time have not always reflected sound economics and the inputs and assumptions used have not always been justifiable, BellSouth has typically applied two correct principles in the studies produced over time: 1) The fill factors used in a forward-looking incremental cost study should reflect the level of fill at relief (the so-called "objective fill"), and 2) a forward-looking incremental cost study should not include costs that do not bear a causal relationship to the cost object being studied; in other words, costs should not be allocated in order to ensure full recovery of the historic level of expenses, as would be done in a so-called "fully-distributed" study (BellSouth has argued in similar proceedings in other states that it is not producing fully distributed costs because the historic books of account of the company have been reviewed and adjustments (however slight) have been made. Such an approach still uses historic costs as the presumed-valid starting point however; whether a study is fully-distributed or just "mostly-distributed" as BellSouth is presenting here does not change the fact that an allocation of costs is taking place. Allocations of historic expenses simply have no place in a study of forward-looking economic costs).

BellSouth has referred, at least in recent years, to a methodology that applies these assumptions as Total Service, Long Run Incremental Cost, or TSLRIC. While there are a number of ongoing problems with the way that BellSouth's studies have been conducted that render them noncompliant with a TSLRIC methodology (such as the use of embedded investments described previously), these two assumptions are part of a valid TSLRIC methodology and should be applied in any study of forward-looking economic costs.

Q. HOW DOES BELLSOUTH JUSTIFY MAKING SUBSTANTIVE CHANGES TO ITS PREVIOUS TSLRIC METHODOLOGY WHEN CONDUCTING THE STUDIES PRODUCED IN THIS PROCEEDING, WHICH ARE ALSO LABELLED AS "TSLRIC"?

A. BellSouth has made changes to the basic assumptions described above that were previously used in the methodology that it claimed to be TSLRIC purportedly in order to comply with the FCC's requirements for a TELRIC study -- even though it is not claiming to produce TELRIC studies in this proceeding. Two of these changes and the reported rationale are as follows:

BellSouth has changed the fill factors used in its study from a projection of the facility's fill at relief (its objective fill) to a level that represents a measurement of the current level of fill in BellSouth's embedded network. In doing so, BellSouth cites language at paragraph 682 of the FCC Interconnection Order which requires the use of "reasonably accurate" fill factors. Of course, the phrase "reasonably accurate" may refer to a projection of the fill at relief; it need not refer to a measurement of the embedded level. In fact, this same paragraph of the FCC Order goes on to state that fill factors should be based on "a *reasonable projection* of the actual total usage of the element" (emphasis added). As I will describe later my testimony, BellSouth simply ignores the "reasonable projection" requirement, and develops the fill factors to be used in its purportedly forward-looking study by measuring the current level of fill associated with embedded plant. This type of measurement will almost always result in a significant understatement of the appropriate fill level for a facility. By using factors determined in this way, BellSouth is effectively trying to charge current ratepayers (competitors

purchasing of UNEs and end users purchasing retail services) for costs that are caused by future -- not existing -- ratepayers. By doing so, BellSouth has violated established TSLRIC principles (that it has used in previous cost studies presented to this Commission), has violated the requirements of the FCC rules that it uses as a justification for making the change, and in doing so has inflated the reported cost of UNEs.

BellSouth has added historic levels of overhead costs to its "TSLRIC" results, and by doing so has violated the principle of cost causation that must be applied in any study of forward-looking economic costs. BellSouth has added to the results of what it has labelled as "TSLRIC" studies an allocation of its historic levels of shared and common costs based its books of account. This process violates also established TSLRIC principles. Fundamental economic costing concepts permit only efficient, forward-looking shared and common costs to be considered (BellSouth's reliance on the FCC as an "excuse" for adding in the historic levels of these costs is also ill-conceived: Part (d) of Rule 51.505 makes it clear that embedded costs, defined as "costs that the incumbent LEC incurred in the past and that are recorded in the incumbent LEC's books of accounts" may *not* be considered). BellSouth has nevertheless engaged in just such a prohibited process: as BellSouth witness Walter S. Reid describes in detail in his testimony, BellSouth has not conducted a study of the level of forward-looking shared and common costs that would be incurred by an efficient carrier, but instead has utilized the company's Cost Allocation Manual to allocate costs based on the 1995 books of account (Minor revisions made by Mr. Reid to the level of these 1995 costs do not change the fact that these costs represent historic operations that may

not be efficient, or that the FCC clearly stated that these costs "may not be considered" as a starting point for determining the forward-looking efficient level of common costs).

As a result of these clear violations of established economic costing principles and the TSLRIC methodology, it is both inappropriate and misleading to refer to the results of the BellSouth cost studies as "TSLRIC" costs as the term has been used by this Commission (and BellSouth in previous cost studies). In order to make this distinction, I will refer to BellSouth's process as the BellSouth Total Service Incremental Cost Methodology, or BS-TSLRIC, and to the conceptually correct version of this methodology as simply TSLRIC.

However denominated, BellSouth's methodology inflates the level of UNE costs above the level that would have been produced if it had followed its previous methodology, and well above the level that is produced if the established a sound economic cost methodology is used. By picking and choosing among mutually exclusive assumptions, including at least two that are based on misrepresentations of requirements of an FCC-defined costing methodology that this Commission is not required to apply, BellSouth has found another way to inflate the reported costs of providing UNEs.

Q. YOU STATED THAT THE BS-TSLRIC METHODOLOGY OVERSTATES UNE COSTS. ARE BELLSOUTH'S PROPOSED RATES FOR UNES BASED ON THE RESULTS OF BS-TSLRIC STUDIES?

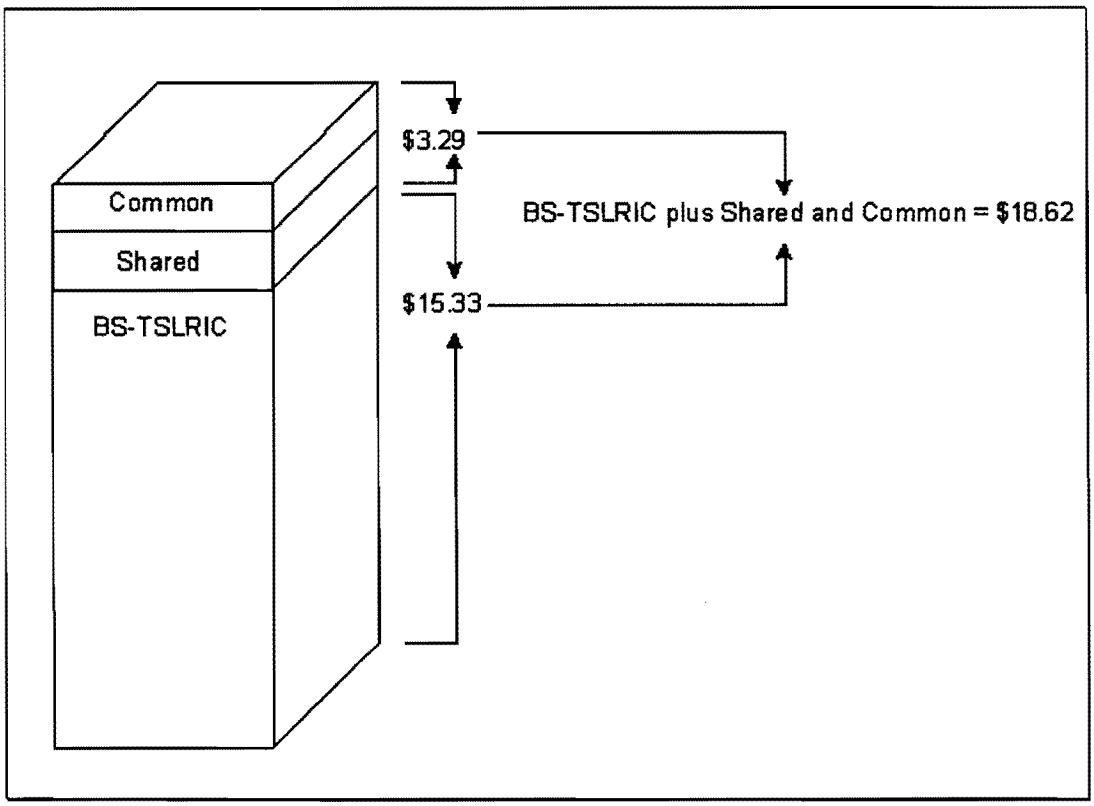
A. No. As described above, Mr. Varner has completely ignored the BS-TSLRIC studies sponsored by Ms. Caldwell when proposing rates for loop and port related

UNEs.

Q. PLEASE DESCRIBE THE CATEGORIES OF COST INCLUDED IN THE BELLSOUTH RATE PROPOSAL.

A. At pages 17-18 of his testimony, Mr. Varner explains that his proposed rates include BellSouth's calculation of the direct cost of providing a UNE (BS-TSLRIC) and a portion of BellSouth's shared and common costs. At workshops held in conjunction with similar cost investigations in other states, BellSouth has provided handouts illustrating the types of cost included in its cost studies and rate proposals. I have populated this diagram with the costs calculated by BellSouth for a 2-wire ADSL loop (based on the data contained in Exhibit AJV-1). This diagram (sometimes referred to as the BellSouth cost column) is reproduced below:

Diagram 1: Categories of BellSouth Costs for 2-Wire ADSL Loop

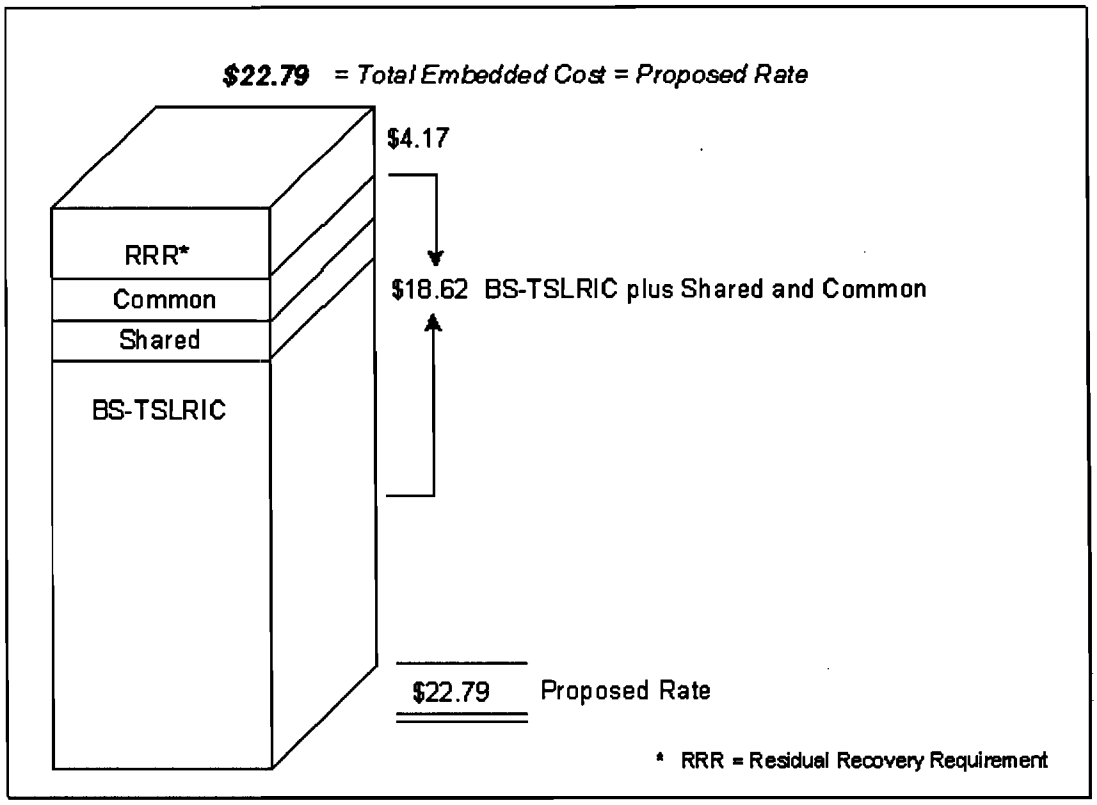


A number of observations must be made regarding this chart. The first block in the column is labelled "TSLRIC." This is clearly *not* the TSLRIC methodology that BellSouth has used to the conduct cost studies previously filed with this Commission that may have been similarly labelled "TSLRIC." This block has been described as representing what are typically referred to as Direct Costs (i.e. costs that are directly caused by the decision or requirement to offer the service or network element being studied). The costs included in this block on the BellSouth chart are not limited to forward-looking direct costs, however: A review of the BellSouth cost studies indicates that the dollar amount associated with this block

on the BellSouth chart also includes costs associated with embedded investments and costs that have been allocated from BellSouth's books of account. Similarly, the blocks labelled as Shared and Common do not include the forward-looking level of these costs for an efficient carrier, but instead contain values based on BellSouth's 1995 books of account. The TSLRIC, shared, and common blocks are added to form what Ms. Caldwell refers to as "economic costs," although economic costing principles were not applied in order to reach this number.

At pages 18 and 19, Mr. Varner introduces BellSouth's purely embedded cost component, the Residual Recovery Requirement ("RRR"). The RRR, according to Mr. Varner, is a cost additive designed for the purpose of recovering "historical costs" in UNE rates. Because the RRR is added to the other categories of cost in order to develop BellSouth's proposed rates, I have revised the previous diagram slightly to better illustrate all of the costs components of BellSouth's pricing proposal:

Diagram 2: BellSouth Cost Column Including the RRR



Q. WHAT DOES THE RESIDUAL RECOVERY REQUIREMENT REPRESENT?

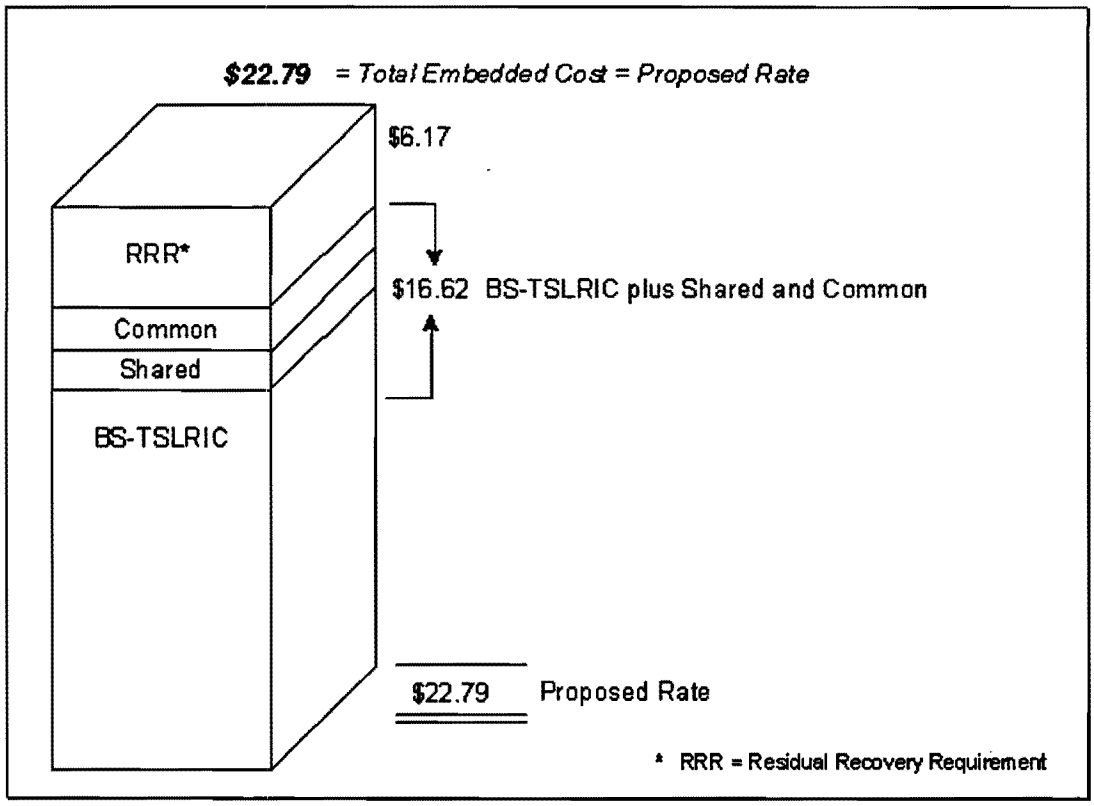
A. The RRR, as used by BellSouth in this proceeding, has either three or four distinct meanings: one conceptual, one practical, and at least one (and possible two) strategic. Conceptually, *if* BellSouth's reported "BS-TSLRIC plus shared and common" figure actually represented forward-looking economic costs, the RRR would quantify the amount by which BellSouth's historic costs (Mr. Varner's "actual" costs) exceed the costs that would be incurred by an efficient carrier serving the same geographic area (Mr. Varner's "theoretical" costs). In other

words, anyone who wished to get an idea of the magnitude of BellSouth's historic level of inefficiency could get a very good idea by looking at the size of the RRR. Unfortunately, the methodology used in the BellSouth cost studies diminishes the usefulness of the RRR for this purpose. Because the costs developed in the BellSouth cost studies that comprise BellSouth's reported "TSLRIC" costs are overstated, the RRR understates the level of BellSouth's inefficiency.

The practical meaning of the RRR is that it is a "plug" figure that a) ensures that all of BellSouth's historic costs are recovered (i.e. ensures that BellSouth is "made whole" from a rate of return perspective, even though it is no longer rate of return regulated), and b) renders all of the loop and switch port cost studies presented by Ms. Caldwell in this proceeding entirely moot. An example will help to illustrate the dominant role of the RRR in the BellSouth pricing proposal and the irrelevance of Ms. Caldwell's loop and switch port cost studies.

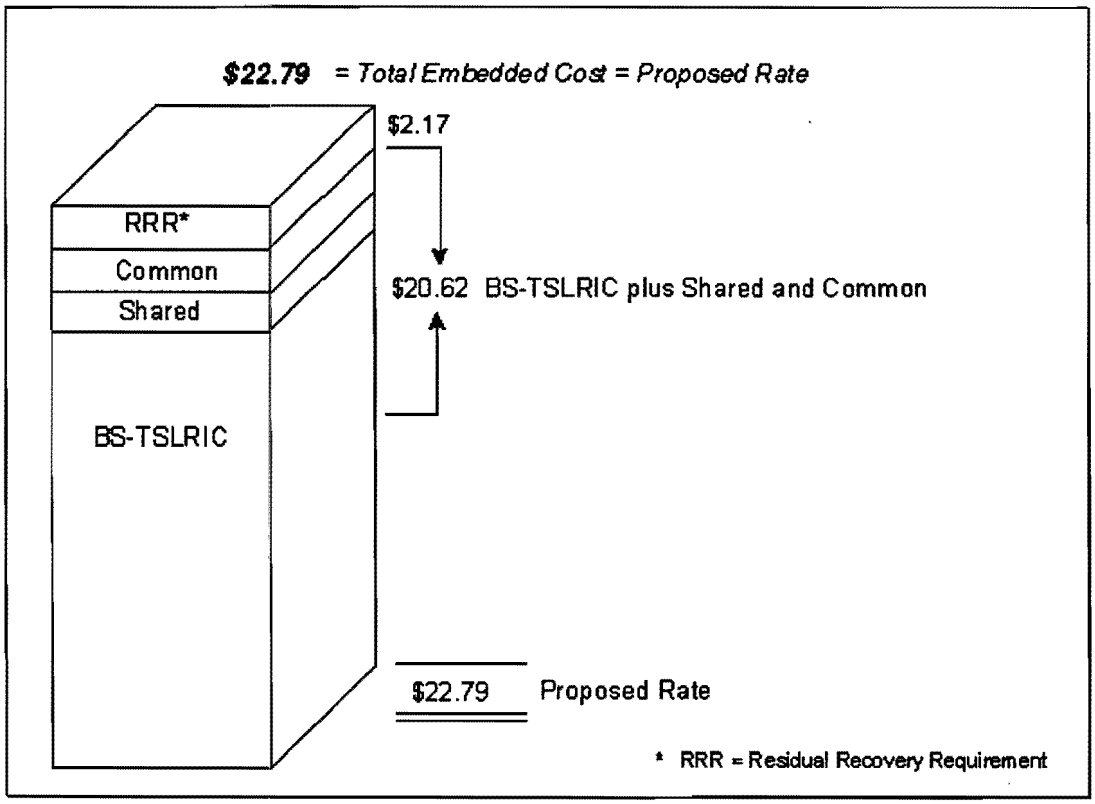
BellSouth is basing its proposed rate for a 2-wire ADSL loop on a total "actual" cost (i.e. calculated cost plus RRR) of $22.79. Suppose that, after reviewing the BellSouth loop cost study, the Staff determines that the reported cost (the BS-TSLRIC plus shared and common value on the BellSouth diagram) is overstated by $2.00. Under such a scenario, the RRR would automatically increase by $2.00 to compensate, and Mr. Varner's proposed 2-wire ADSL loop price would remain $22.79:

Diagram 3: BellSouth Embedded Cost Pricing Proposal with BS-TSLRIC Reduced by $2.00



Similarly, if the BellSouth ADSL loop cost study results are increased by $2.00, the RRR will be reduced by $2.00 to compensate and Mr. Varner will remain steadfast is his proposal of a rate of $22.79:

Diagram 4: BellSouth Embedded Cost Pricing Proposal with BS-TSLRIC Increased by $2.00



This mechanism is apparently maintained even for extreme values: If Ms. Caldwell's BS-TSLRIC cost study generated a loop cost of only a penny per month, Mr. Varner's proposed "cost based" rate would nevertheless remain $22.79 (the Commission should continue to bear in mind that as absurd as this mechanism is, Mr. Varner is asking it to believe that it meets the requirements of section 252 (d) (1) of the federal Act, which requires that UNE rates be based on cost). For a calculated loop cost of any value between $0.00 and $22.79, BellSouth would advocate the same $22.79 as the "cost-based rate" that should be adopted by this

Commission (presumably, if BellSouth were able to show BS-TSLRIC plus shared and common costs of greater than $22.79 it would advocate this higher price. In such a scenario, BellSouth would be arguing that forward-looking incremental costs are higher than embedded costs in a declining cost industry). *In other words, BellSouth's cost studies for the local loop and switch port UNEs at issue in this proceeding play no part in BellSouth's recommendation of the "cost" or rates for these elements and are wholly irrelevant to this proceeding.* Such a conclusion causes the (often exaggerated) claims of BellSouth regarding the "open" nature of its new models to fall flat; even if all of its claims were true, BellSouth is granting the Commissioners, Staff, and intervenors open access to models that produce numbers that are irrelevant to BellSouth's pricing proposal.

Q. YOU STATED THAT THE RESIDUAL RECOVERY REQUIREMENT ALSO HAS AT LEAST ONE AND POSSIBLY TWO APPARENT STRATEGIC PURPOSES. PLEASE EXPLAIN.

A. When considered as one cost component used by BellSouth to develop its proposed rates for a given rate element (such as the 2-wire ADSL loop UNE discussed above), the RRR is merely a vehicle for attempting to justify an inflated rate. When the application of the RRR is viewed across rate elements, it becomes clear that the RRR is also a tool for developing discriminatory rates in direct violation of section 252 (d) (1) of the federal Act. As Mr. Varner states at pages 19-20 of his testimony, BellSouth has selectively applied the RRR to the local loop and switch port UNEs at issue in this proceeding, even though other network elements are also associated with the pool of embedded costs that BellSouth seeks

to recover. In fact, Mr. Varner and Ms. Caldwell readily admit that the loop and switching port elements comprise approximately 70% of the costs used to develop the RRR; the remaining 30% is associated with -- *but not applied to* -- other network elements. The implications of such a discriminatory pricing structure are significant: even if the Commission were to agree with BellSouth that it should be permitted to recover in the rates for UNEs the costs associated with its existing level of inefficiency, the proposed BellSouth pricing mechanism would artificially inflate the price of loop and switching port UNEs relative to the price of other elements in a way that results in discriminatory rates in direct violation of section 252 (d) (1) of the federal Act.

Because these network elements are the ones that competing providers of local exchange service are most likely to need, BellSouth has an additional degree of monopoly power that will allow it to extract -- if not prevented by the Commission -- even higher prices for these UNEs. Under the BellSouth proposal, purchasers of the loop and switching port UNEs will be forced to pay to BellSouth a rate that includes:

1) the forward-looking economic cost that would be incurred by an efficient carrier (including efficient levels of direct, shared, and common costs), *plus*

2) additional costs included in BellSouth's BS-TSLRIC studies associated with its embedded network facilities related to the network element being purchased by the competitor (BellSouth network inefficiencies), *plus*

3) additional shared and common costs associated with BellSouth's historic operational inefficiencies, plus

4) an additional explicit markup to recover the remaining embedded costs related

to the network element being purchased, *plus*

5) an additional explicit markup to recover the remaining embedded costs related to other network elements *not being purchased.*

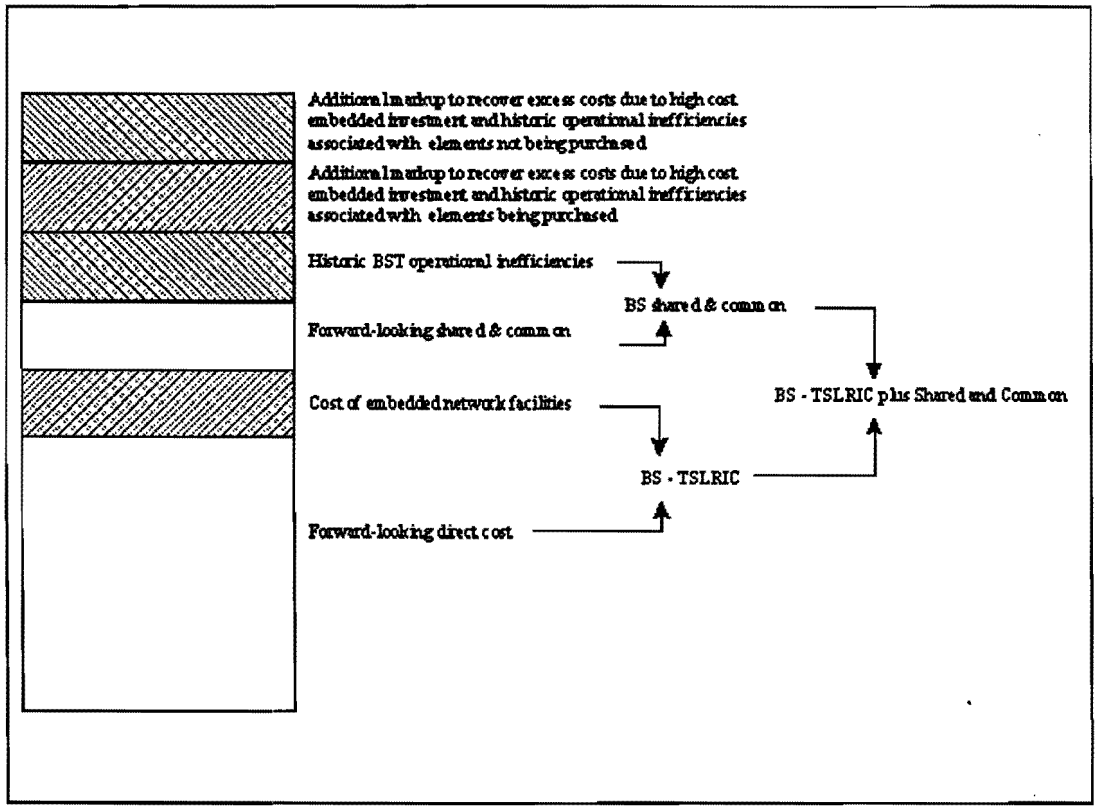
Of these five categories of cost, only the first should be included in the rates for UNEs; the remaining four serve to create a substantial barrier to entry and to artificially inflate the prices that consumers must pay for local exchange services. Adding insult to this substantial injury, purchasers of loop and switching port elements will be paying the 30% of the embedded costs underlying the RRR that is associated with other network elements. Such rates would be discriminatory *per se*, in direct violation of section 252 (d) (1) of the federal Act.

Q. IF THE COMMISSION DETERMINES THAT UNE PRICES SHOULD INCLUDE ONLY FORWARD-LOOKING ECONOMIC COSTS, CAN IT SUBTRACT THE RESIDUAL RECOVERY REQUIREMENT FROM BELLSOUTH'S PROPOSED RATES AND ACCOMPLISH THIS OBJECTIVE?

A. *No.* While the RRR is an explicit add-on for embedded costs, it does not represent the only source of embedded costs within BellSouth's cost proposal. As described later in my testimony (and in more detail in the testimony of other AT&T and MCI witnesses), BellSouth's cost studies include both costs associated with BellSouth's embedded network facilities and shared and common costs associated with BellSouth's historic operations. Removing the embedded component from the BellSouth cost proposal, therefore, would require a top to bottom series of adjustments. Eliminating the RRR is only a first step in a long process that would be necessary.

To illustrate this concept, I have redrawn the BellSouth cost column in a way intended to better reveal its constituent parts:

Diagram 5: BellSouth Cost Column Showing Component Parts



On this diagram, the boxes shown in white are the components of forward-looking economic costs. The shaded boxes represent embedded components of the BellSouth studies and the explicit embedded add-ons. As long as any shaded area remains, UNE prices set at the level of the total BellSouth cost column will be inflated. Clearly, removal of the RRR will eliminate one, but not all, all of the shaded boxes. If the Commission determines that UNE rates should be based on forward-looking economic costs, it must exercise caution to ensure that it has

successfully removed all embedded costs.

Q. YOU HAVE ARGUED THAT BELLSOUTH SHOULD NOT INCLUDE ITS EMBEDDED COSTS IN THE RATES CHARGED FOR UNES BECAUSE THOSE COSTS ARE HIGHER THAN THE COSTS THAT WOULD BE INCURRED BY AN EFFICIENT CARRIER TO PROVIDE THESE NETWORK FUNCTIONS. WHILE BELLSOUTH CURRENTLY OPERATES PURSUANT TO PRICE CAPS REGULATION IN FLORIDA, IT WAS PREVIOUSLY SUBJECT TO RATE OF RETURN REGULATION BY THIS COMMISSION. WHY WOULD ITS EMBEDDED COSTS BE HIGHER THAN THE RELEVANT FORWARD-LOOKING COSTS?

A. Even with close regulatory oversight, rate of return regulation does not duplicate the effects of a competitive market. Over time, the regulated company's costs associated with network investments and company operations can be expected to diverge -- potentially significantly -- from the costs experienced by a company providing the same services in a competitive environment.

Properly administered, rate of return regulation applies certain forces to the regulated firm in a way that influences its behavior. The stated objective, of course, is to duplicate -- to the extent possible -- the forces that would be exerted on the firm by a competitive marketplace. While for many years rate of return regulation has been considered to be the best approximation of competitive market forces available, there is a general understanding that it does not perfectly duplicate these forces. In reality, there is little debate that rate of return regulation creates incentives for the regulated firm not present in competitive markets, and

conversely fails to create some key incentives that competition does create. These differences will, over time, cause the regulated company to operate with a very different base of assets and with a different level of company operations than a similarly positioned competitive company. In short, there are different incentives faced by a firm regulated by rate of return regulation and a firm "regulated" by competitive market forces.

Q. PLEASE DESCRIBE THESE INCENTIVES AND EXPLAIN WHY THEY ARE DIFFERENT.

A. One way of phrasing the question to be answered by the Commission in this proceeding is the following: What are the differences between the network investments and level of company operations embedded in BellSouth today and the network investments and level of company operations that would be present if BellSouth had historically operated in a competitive environment? The difference represents inefficiencies that should not be borne by new entrants or end users. The rates charged by BellSouth for UNEs become part of the costs of doing business for competitors. If these UNE rates are inflated (by including embedded costs, for example), a competitor will be forced to pay for this inefficiency and pass it along to its customers. Under such a scenario, competitive market forces will be unable to protect consumers and an artificially high price floor will be established for local exchange service rates, if competition develops at all.
I would like to focus on the following key differences between rate of return regulation and competitive market forces as "regulators" of a firm's behavior:
There are significant differences in the availability and use of information. During

a general rate case, the regulator and its Staff must rely on information obtained from the regulated company. This information is then used by the regulator in its attempt to duplicate competitive market forces (disallowing certain costs, for example). An important characteristic of this arrangement is that the regulated company has no inherent interest in limiting costs, but does because it is instructed to do so. The regulator must issue those instructions based on the information that it has obtained from the company. In contrast, a company operating in a competitive market faces continuous market pressures for cost reductions, and is highly motivated to reduce costs. Unlike the regulator, which is constrained by the limited information that it has been able to collect, the company and its managers have unlimited access to information regarding the company's operations. As a result, the company will always have a greater *ability* to reduce its costs than a regulator will have. The question of course, is whether it will have the *incentive*. A regulated monopoly will not have such incentives, while a competitive firm will constantly be in a position of acting on such incentives in order to be successful. Over time, even closely regulated companies will have cost structures and levels that are different from those that could be maintained in a competitive environment.

A rate of return regulated company will substitute capital for labor in order to maximize rate base. These incentives for "gold plating" in a rate of return environment are well documented. Even if closely regulated, a regulated firm will, over time, develop a base of investments that is larger than would otherwise exist. In addition, this effect of rate of return regulation creates a disincentive for the regulated company to invest in new, lower cost, technology as it becomes

available.

Rate of return regulation permits full recovery of prudent investments, even if they are technically obsolete and do not represent the lowest cost technology. This characteristic of rate of return regulation may represent a primary source of the difference between BellSouth's embedded costs and the costs that would be incurred by an efficient provider. When operating pursuant to rate of return regulation, a company is permitted to recover a "return on" and "return of" capital for all investments that are considered by the regulator to be prudent when made. In other words, if a regulated company purchases an asset that represents a prudent investment at the time it is made, the company is entitled to the opportunity to recover the cost of the asset over a reasonable depreciation life and to earn a specified return on that investment. This "protection" for the regulated company is obtained as a tradeoff for the limitation applied to the return that it earned on the investment.

Competitive markets are not so generous, however. When a company operating in a competitive environment invests in an asset, it does so at its own risk. There is no guarantee that the company will recover the cost of the asset over the depreciable life that it predicts (a "return of" capital), or that it will have the opportunity to earn a given rate of return (a "return on" capital). This distinction becomes extremely important in an industry, such as telecommunications, in which technological change is occurring rapidly. If a competitive firm invests in an asset today and that asset becomes technically obsolete tomorrow, the competitive firm will not have an opportunity to recover the cost of the asset or to use it to generate a return. Instead, the competitive firm must invest in the new technology in order

to be able to offer service to consumers at the lower price or improved quality made possible by the technical innovation (if it does not invest in the new technology, its competitors will; in doing so they will gain a competitive advantage in terms of price and/or quality). A typical scenario is that the firm will "write down" those assets, thereby removing them from its books of account, before they are fully depreciated. In this scenario, the owners of the firm, not the customers, pay for the obsolete asset.

In contrast, if a company that is rate of return regulated makes a similar investment, it will continue to have the opportunity to recover the cost of the asset -- plus a reasonable return -- from customers. As long as the acquisition of the asset was prudent at the time it was made, the regulated company will be given the opportunity to recover the cost of the asset over its projected depreciable life and will have no incentive to invest in the new technology or to retire the obsolete technology. Over time, the asset base of the regulated company deviates further and further from the asset base of an efficient competitive provider.

Q. THROUGHOUT HIS TESTIMONY MR. VARNER ARGUES THAT BELLSOUTH MUST BE PERMITTED TO RECOVER THESE EMBEDDED COSTS, AND THAT IT IS THEREFORE APPROPRIATE TO INCLUDE THEM IN UNE RATES. DO YOU AGREE?

A. No. This perception by BellSouth employees (Ms. Caldwell makes the same assertion) that a company must recover all of its embedded costs (including the cost of obsolete assets) in order to remain financially viable is apparently the result of having operated for too long in a rate of return environment. While operating

within the protected environment of rate of return regulation, BellSouth was indeed given the opportunity to recover costs associated with obsolete technology (as described above, the opportunity for such recovery is an inherent characteristic of rate of return regulation and is unrelated to the level of oversight exercised by the regulator and its Staff). During this same period of time, companies operating in the competitive world made investments, took their chances, and when necessary invested in new lower cost technologies even when existing assets were not fully depreciated. These obsolete assets were written off the books and in effect paid for by the shareholders, rather than customers, of the company. Those shareholders have often been rewarded with a higher stock price, as wall street analysts have interpreted the acquisition of new technology as a sign that operating costs will decrease and earnings will increase.

Investing in new technologies and writing down obsolete (and undepreciated) assets is a common practice. The pervasiveness of this activity can be readily ascertained by collecting published reports of such asset write-downs and also reviewing the subsequent performance of the company's stock. For example, even a cursory review of the Wall Street Journal on-line service yields the following examples:

Table 1: Survey of Asset "Write-Downs" by Competitive Firms

Year-Quarter	Company	Write-Off Amount (% of Revenue)	Notes
1997-3	Reynolds & Reynolds	$17.1 million (5.1%)	Pretax charges that includes $11 million in in-process research & development and a write-off of some automotive computer assets ($6.1 million)
1997-2	PepsiCo, Inc.	$247 million (2.7%)	Disposal of nonperforming assets in several divisions
1996-4	Motorola, Inc.	$150 million (1.9%)	Write-offs in connection with restructuring efforts
1996-4	National Semiconductor Corp.	$20-26 million	Obsolete equipment write-offs and restructuring
1995-4	Fruit of the Loom	$325 million	Closing plants and writing down of book value of certain brands
1995-4	Polaroid	$195 million	Asset write-off and restructuring
1995-4	Seagram	$290 million	Write-off to re-engineer its beverage unit
1995-4	3M	$600 million	Write-offs related to discontinued operations
1995-4	IBM	$2.64 *billion*	Restructuring
1995-4	Chevron	$800 million (8.7%)	Write-down of obsolete assets and write-down of certain assets as a result of changed accounting rule
1995-3	Best Buy Co.	$15 million (1%)	Write-down of PC equipment and supplies that became obsolete due to new technology arrivals
1995-3	Times Mirror Co.	$500 million (58.2%)	Write-down of assets related to discontinued operations

Year-Quarter	Company	Write-Off Amount (% of Revenue)	Notes
1995-2	Gateway 2000, Inc.	$16.5 million (2.2%)	Write-off of inventory of obsolete computers
1994-4	Sara Lee Corp.	$495 million	Restructuring and closing of obsolete plants
1993	Scott Paper Co.	$395 million (8.3%)	Restructuring charges
1993	General Electric	$1.01 *billion*	Costs of streamlining certain production, service, and administrative functions
1993-4	U. S. Surgical Corp.	$125 million	Restructuring charge
1993-4	Baxter International, Inc.	$700 million	Restructuring charge
1992-4	ICN Biomedicals, Inc.	$73 million (124%)	$35.5 million of write-down related to obsolete and slow moving equipment
1992-3	Seagate Technology, Inc.	$18 million (2.3%)	Pretax charge to write off obsolete disk manufacturing equipment
1992-4	Heritage Media Corp.	$3 million	Cost of closing service center and write-off of delivery equipment
1992-4	Topps Co.	$22 million (49.5%)	Pretax charge for obsolete inventory
1990-4	Mead Corp.	$49 million (1.1%)	Charge to write down value of obsolete color imaging equipment

Clearly, BellSouth's argument that a company's financial viability is threatened if it maintains a base of efficient assets is unsupported by the activity of competitive firms. Because they are operating in an environment in which they are continuously subjected to competitive market pressures, the companies listed in Table 1 above have acted to maintain the ability to act as efficient providers of the service or

product that they offer to customers. Firms operating pursuant to rate of return regulation face no such pressures and therefore do not make these types of adjustments to their base of assets.

Q. SINCE BELLSOUTH HAS OPERATED PURSUANT TO RATE OF RETURN REGULATION, SHOULDN'T IT BE "MADE WHOLE" BY INCLUDING THESE EMBEDDED COSTS IN THE RATES FOR UNES?

A. No. The "picking and choosing" theme of BellSouth's case extends to this issue as well. When operating pursuant to rate of return regulation, BellSouth accepted restrictions on its earnings in exchange for the protection offered by this form of regulation (including the recovery of the costs of all embedded assets). By electing to operate under alternative regulation (and therefore to no longer be subject to rate of return regulation), BellSouth gains freedom from the limitations on its earnings, but also gives up the protection afforded it by rate of return regulation. BellSouth should not be permitted to receive the benefits of alternative regulation and the protection of rate of return regulation.

The Georgia Commission, for example, has already reached this conclusion in its Order in Docket 5825-U (a recent universal service investigation). Specifically, the Georgia Commission noted that significant differences exist between rate base regulation and alternative regulation:

Rate base regulation is the traditional form of regulation for a monopoly telecommunications service. It is characterized by significant regulatory control. Under rate base regulation, rates are set by the Commission. The Commission determines the allowable investment base (i.e. rate base), the allowed return, the

allowed expenses, and the revenue requirement. Finally the Commission sets the rates needed to meet that requirement. The Commission can authorize regulatory assets which are recognized by the accounting profession. See FASB Statement 71. The Commission sets the asset recovery rates, i.e. depreciation. Alternative regulation...eliminates or strictly limits all of the above.

The Georgia Commission specifically noted that by electing alternative regulation, BellSouth gave up the right to recover these so-called "regulatory assets," and should, like a firm operating in a competitive environment, write off these assets:

The accounting profession recognizes regulatory assets for rate base/rate of return regulated firms (FASB Statement 71). Any firm no longer using this type of regulation and which has elected alternative regulation is required to "write off" these regulatory assets. Regulatory assets, including but not limited to "depreciation reserve deficiency" are voluntarily forfeited under alternative regulation...Revenue requirements are an integral feature of rate base/rate of return regulation. All rights to a given revenue level or revenue requirement are also forfeited by the election of alternative regulation.

The Georgia Commission also made it clear that BellSouth's desire to "pick and choose" among the elements of rate of return regulation should not be permitted:

[E]verything associated with rate base or rate of return regulation nor specifically reserved by the statute is gone. This includes items associated with rate base/rate of return regulation which are favorable to the company as well as those unfavorable. The cost of getting the favorable is taking the unfavorable as

well...Companies electing alternative regulation are not permitted to pick and choose the features of rate base/rate of return regulation which they will keep or discard. Unless otherwise provided, the election discards all features of rate base rate of return regulation including, but not limited to, the above examples.

For the above reasons, the Commission finds that BellSouth's application [to recover the costs associated with a regulatory asset] is fatally flawed because it attempts to mix the regulatory freedom of alternative regulation with the safety of rate base/rate of return regulation. BellSouth has chosen alternative regulation and it cannot now go back to pick and choose the features of rate base/rate of return regulation that it would like to keep. There is no merit to the argument that BellSouth is entitled to disbursements for unrecovered depreciation or any other "regulatory asset" because they voluntarily opted for alternative regulation.

BellSouth's pricing proposal for UNEs seeks to accomplish exactly what the Georgia Commission has already determined that it should not be permitted to do; namely, mix the regulatory freedom of alternative regulation with the safety of rate base/rate of return regulation. The objective in this proceeding should not be (if the federal Act is to be successfully implemented, it *cannot* be) to determine the rate for UNEs that will "make BellSouth whole." Instead, the objective should be to determine the rate at which BellSouth will be compensated for the costs that would be incurred by an efficient provider, while making it possible for Florida consumers to receive the benefits of competition for local exchange services.

Q. YOU STATED THAT THE OBJECTIVE OF THE PROCEEDING SHOULD BE TO ENSURE THAT BENEFITS ARE AVAILABLE TO CONSUMERS. HOW CAN THIS BE ACCOMPLISHED?

A. The objective of the federal Act to generate benefits for consumers by introducing competition into the markets for local exchange services can only be met if UNEs are made available to competing carriers at prices that will compensate BellSouth for the costs of an efficient carrier but that are not artificially inflated to include recovery of embedded costs or inefficiencies within BellSouth's operations. At no point does the federal Act contemplate "rewarding" the incumbent LECs for being inefficient, yet that is exactly what BellSouth's pricing proposal for UNEs would do. In addition, BellSouth's proposal threatens the development of competition in two ways. First and foremost, potential competitors who are efficient enough to compete with BellSouth if UNEs are priced appropriately may be unable to compete at all if UNEs are priced at the levels proposed by BellSouth. Inflating the price of UNEs above the level of forward-looking economic cost -- even slightly -- will have an impact on the speed and scope of competitive local entry. Second, even if new entrants can find a way to compete at some level with excessive UNE prices, these inflated "wholesale" rates will inevitably lead to inflated "retail" rates. Short of duplicating BellSouth's ubiquitous local network (the kind of scenario that the federal Act is specifically designed to prevent),

competitors will have no choice but to purchase UNEs, both separately and in combination, in order to offer services to consumers. The price paid to BellSouth for these UNEs is a direct cost to competitors that cannot be avoided and must be included in retail rates. While competitive market forces will exert a continuous downward pressure on rates, no market force can push rates below direct cost. As a result, the price floor for retail local exchange services will be artificially high if UNE rates are set above forward-looking economic cost.

The following diagrams, based on BellSouth's cost column described previously, illustrate this effect. Diagram 6 shows the component parts of both the economic price for a UNE and the inflated price based on the BellSouth pricing proposal:

Diagram 6: Costs Included in the Economic price for a UNE and in the BellSouth Pricing Proposal

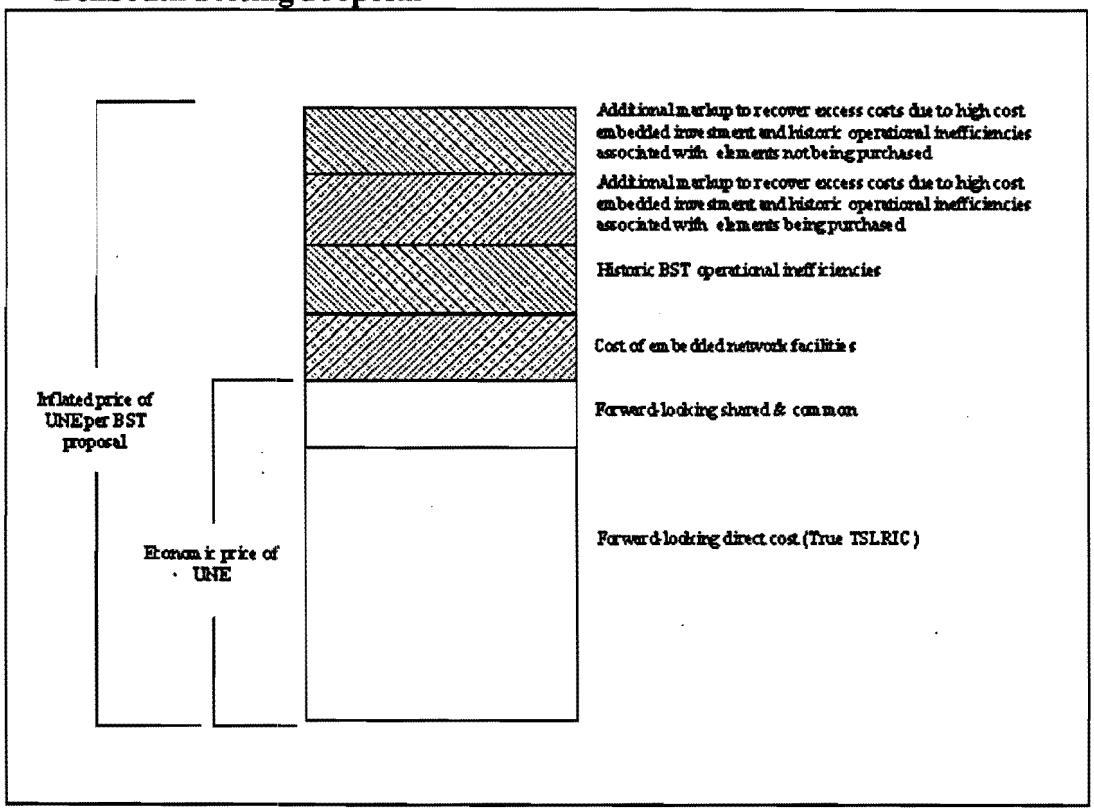
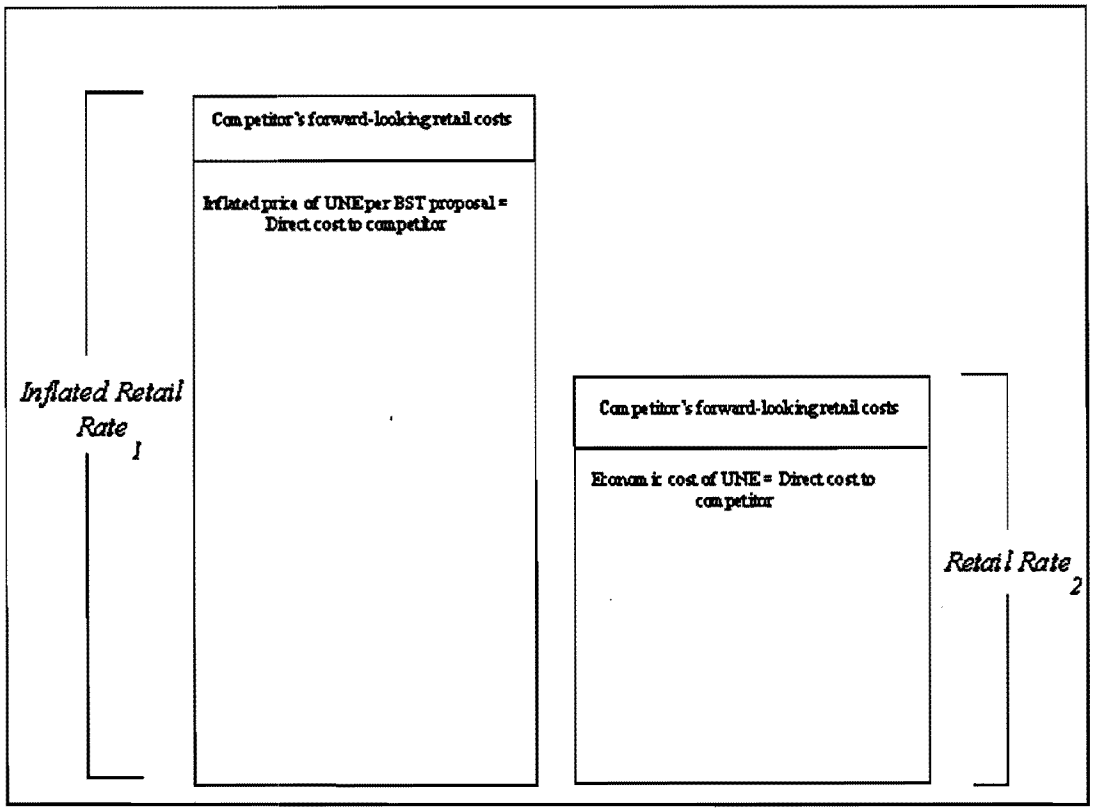


Diagram 7 seven illustrates the impact of UNE prices on the retail rates paid by end users:

Diagram 7: Impact of UNE Prices on Retail Service Rates



In the first scenario, UNE rates are priced at excessive levels pursuant to the BellSouth pricing proposal. These UNE rates, and therefore the resulting retail rates, will include substantial payments to BellSouth -- paid ultimately by end user customers -- to recover embedded costs and operational inefficiencies. In this scenario, the retail prices will remain artificially high until the rates for UNEs are reduced to cost-based levels. BellSouth will be rewarded for its inefficiency, and Florida consumers will provide the funding.

In the second scenario, UNE rates are set at the level of forward-looking economic cost. BellSouth is fairly compensated at the level of the costs of an efficient carrier. It is highly motivated to make the necessary investments and to eliminate excess costs in order to become efficient. Competition is not diminished; competing carriers that are efficient and can offer quality service will succeed, those that are not and do not will not succeed. Most importantly, end user customers will receive the benefits of lower rates and the attention of carriers who want their business and know that these customers can take their business elsewhere. Florida consumers deserve no less.

Q. MR. VARNER ARGUES THAT IF BELLSOUTH IS NOT PERMITTED TO RECOVER ITS EMBEDDED COSTS IN THE RATES FOR UNES, THAT IT WILL -- OF NECESSITY -- RECOVER THESE COSTS FROM END USER CUSTOMERS. DO YOU AGREE WITH MR. VARNER'S ASSESSMENT?

A. Absolutely not. BellSouth's thinly veiled threat to hold Florida end users hostage in order to have UNE rates adopted that will protect it from competition should be seen as exactly what it is and summarily rejected by this Commission. As described above, it is certainly not *necessary* for BellSouth to recover its embedded costs in order to remain financially viable. Successful firms operating in competitive markets often write down obsolete assets. More importantly, however, it is in no way *appropriate* for BellSouth to recover its embedded costs (or any competitive losses that it may experience) from captive end users. Mr. Varner complains in his testimony that because of the terms of its price caps plan, BellSouth is prohibited from raising local exchange rates for a stated period of

time. I find it baffling that Mr. Varner is complaining about this provision, because it was part of the proposal made by BellSouth to this Commission when requesting the freedoms of price cap regulation (to the best of my recollection, Mr. Varner was the BellSouth witness who presented the BellSouth proposal -- including the local rate freeze -- to the Commission). Mr. Varner's threat to extract excessive amounts of money from captive end user customers if it is not permitted to charge excessive rates to competitors for UNEs can only be characterized as a threat to engage in an abuse of monopoly power.

Q. YOU STATED THAT THE BS-TSLRIC STUDIES CONTAIN METHODOLOGICAL FLAWS. WHAT SPECIFIC CRITERIA SHOULD THE COMMISSION APPLY WHEN EVALUATING THE COST STUDIES (AND THE MODELS USED TO PERFORM THOSE STUDIES) PROPOSED BY BELLSOUTH IN THIS PROCEEDING?

A. No cost model -- no matter how sophisticated, detailed, easy to use, or verifiable -- can produce useful results if the underlying methodology is not correct. Specifically, a forward-looking economic cost methodology must be applied, based on the following assumptions:

1) Investments must be forward-looking and based on a long run assumption. For this purpose, long run is defined as being a sufficient period of time such that all costs are considered avoidable or variable. Consistent with this assumption, investment assumptions should be constrained by the geographic and demographic characteristics of the area being studied, but should not be constrained by the characteristics of embedded facilities or equipment.

2) The costs of operating the company (so-called shared and common costs) must likewise be forward-looking and based on a long run assumption. Consistent with this assumption, these costs should be constrained by the tasks that must be performed, but should not be constrained by the historic level of such costs or the methods and practices currently in place.

3) Investment assumptions and demand assumptions must be properly matched. If investment sufficient to serve existing demand is studied, then the current demand should be assumed. If investment sufficient to serve a future level of demand is assumed (i.e. investments are sized for growth), then that future level of demand units must be assumed. This principle has significant implications for the selection of the appropriate "fill factors" to be applied in a cost model. A mis-match of investment sized for growth and a current demand assumption will lead to (potentially significantly) overstated costs.

Q. DO THE BELLSOUTH COST STUDIES SPONSORED BY MS. CALDWELL CORRECTLY APPLY A FORWARD-LOOKING ASSUMPTION TO INVESTMENTS?

A. No. The sponsors of the BellSouth cost studies say the right things, but then do something fundamentally different. For example, BellSouth witness Zarakas states at p. 13 of his testimony that "costs should reflect forward-looking network architecture, engineering, and materials and equipment." BellSouth witness Baeza states more specifically at p. 3 of his testimony that forward-looking costs should be based on the "the incumbent LEC's existing wire center locations and the most efficient technology available."

After articulating the right principles, BellSouth cost analysts have immediately gone on to violate them. The BellSouth loop cost study illustrates the nature of this violation. Instead of following Mr. Baeza's principle of taking the location of existing wire centers as a given and then designing a local network using the most efficient technology available to connect customers to those switches, BellSouth has instead taken a sample of embedded loops. The majority of the characteristics of these loops are then used as constraints in the loop cost study; in other words, the loop cost calculated by BellSouth is constrained by the embedded network. This process is inherently flawed.

Q. BELLSOUTH WITNESSES ARGUE THAT WHILE THEY STARTED WITH A SAMPLE OF EMBEDDED CHARACTERISTICS, THE SAMPLED LOOPS WERE THEN "REDESIGNED" AND THAT AS A RESULT THIS EMBEDDED SAMPLE HAS BEEN SOMEHOW TRANSFORMED INTO A SET OF LOOPS WITH FORWARD-LOOKING CHARACTERISTICS. IS SUCH A TRANSFORMATION POSSIBLE?

A. No. BellSouth's failed attempt at such a transformation indicates that it is certainly a difficult endeavor at best and in fact is likely to prove impossible. Efforts to transform embedded characteristics into forward-looking ones ignore that fact that what BellSouth *has done* historically is simply not very useful as an indicator of what an efficient carrier *should do* going forward. Technology has changed, the relative costs of different assets (some of which can be substituted for one another) have changed, and the regulatory environment faced by BellSouth has changed. In order to calculate forward-looking costs, therefore, it is necessary to use a true

"bottoms up" approach to costing: identify the relevant cost drivers (demographic and geographic characteristics) of the area being studied, and by applying accepted engineering practices design the forward-looking network needed to provide the cost object (UNEs or retail services, for example) being studied. It is extremely difficult (and maybe impossible) to begin this process by studying the embedded network without inappropriately carrying forward embedded characteristics.

BellSouth offers a number of arguments in support of its "begin with embedded" methodology for calculating BS-TSLRIC costs: 1) The embedded facilities have been "redesigned" to reflect forward-looking, most efficient technology, 2) The sample of embedded facilities is only used to determine the locations of customers (and does not otherwise constrain costs), and 3) BellSouth attempted to design its existing network in an efficient manner, so it should be considered efficient going forward. I will briefly respond to each of these arguments below.

In response to the first argument, the "redesign" of embedded plant to have forward-looking characteristics is a continuing theme throughout the testimony and cost study documentation. For its loop cost studies, what BellSouth has specifically done is to change the crossover point for copper feeder vs. fiber feeder with DLC, changed copper distribution cable size from 24 gauge to 26 gauge, eliminated load coils, and limited bridged tap. The relevant question then becomes "Is BellSouth's embedded loop plant, after applying these minor adjustments, equivalent to the loop plant that would be deployed by an efficient provider on a forward-looking basis to serve the area being studied?" The answer is certainly no for at least two reasons. First, BellSouth appears to have made these adjustments by assuming specific forms of technology that are not forward-looking (BellSouth

has deployed a version of Digital Loop Carrier that is not the forward-looking standard, for example). Second, BellSouth has omitted adjustments to other embedded characteristics that would be different in a forward-looking environment. BellSouth has not resized cables to reflect scale economies, for example (one 1800 pair cable is less costly than three 600 pair cables) or done a study to determine if its existing routing is the most efficient way to serve an area. In short, even if this transformation of embedded investments could be made, BellSouth has not made it correctly or completely.

In response to the second argument, BellSouth witness Daonne Caldwell has stated in her testimony and in workshops held in other states that BellSouth has constructed its cost studies by "starting from the ground up" to design its forward-looking network, and has used the sample of embedded loops only to "find out where customers are today." While I agree with Ms. Caldwell that it is essential to "start from the ground up" and that the location of customers is a relevant cost driver, I strenuously disagree that this is the only way that BellSouth has used this embedded information in its study. In fact, Ms. Caldwell has made it very clear that, subject only to the minor adjustments described above, the embedded characteristics of BellSouth's loops form the foundation of the BellSouth loop study. In addition, BellSouth's loop sample would not be useful at all in determining customer locations: only a small sample of residence and business loops were used (leaving the remaining loops in the state -- and the location of the customers served by those loops -- unstudied), and the engineering diagrams used to study the loops indicate existing routing, *not* the location of customers in relation to the serving central office. The cost study documentation clearly

indicates that BellSouth has used its sample of embedded loops to determine investment characteristics, not the location of customers. In fact, BellSouth's embedded loop sample provides no useful information regarding customer locations.

Regarding the third argument, Mr. Baeza argues in his testimony that, over time, BellSouth has attempted to engineer its existing network in an efficient manner. If Mr. Baeza is suggesting that a series of historic decisions that were efficient when made will yield a network equivalent to the network that would be deployed by an efficient carrier on a forward-looking basis, then I disagree with his assertion. As an engineer, Mr. Baeza is certainly aware of the changes in available technologies, and changes in the absolute and relative cost of those technologies, that would impact engineering decisions. As a result, what BellSouth "has done," however well intentioned, provides no indication of what it either "should have done" or "should do" on a going forward basis. Again, forward-looking costs simply cannot have a backward-looking foundation.

Q. THE SECOND METHODOLOGICAL PRINCIPLE YOU DESCRIBED IS THE REQUIREMENT THAT ALL SHARED AND COMMON COSTS LIKEWISE BE FORWARD-LOOKING. WHY IS THIS IMPORTANT?

A. When calculating the costs of an efficient carrier, it is essential to consider all three categories of cost: direct, shared, and common. The investments discussed previously relate primarily to direct costs, although some of these investments may be properly characterized as shared. Many shared and most common costs, however, relate more generally to the costs of running the various functions of the

company. Clearly, an efficient provider must utilize efficient investments, but it must also operate as an efficient company. Inefficiencies in the historic methods of operation utilized by BellSouth, if they are included in the rates for UNEs, will have the same effect as the inclusion of embedded investments: a significant barrier to entry will be erected, and even if competitive entry does occur, an artificially high price floor for local exchange services will have been created.

Q. DO THE BELLSOUTH COST MODELS CORRECTLY APPLY A FORWARD-LOOKING ASSUMPTION TO SHARED AND COMMON COSTS?

A. No. In direct contrast to the "bottoms up" process that should be followed to determine the shared and common costs of an efficient carrier, BellSouth has utilized a pure "tops down" process of cost allocation in its studies. Rather than undertake an effort to determine what an efficient level of shared and common costs *should* be, BellSouth has taken its total accounting costs (subject to minor adjustments) as they *are* (or were, as of the date used in the study) and has implicitly assumed -- without justification of any kind -- that its historic levels of these costs are equal to the costs that would be incurred by an efficient carrier on a forward-looking basis.

The objective of any cost allocation process (including the one used by BellSouth and described in the testimony of BellSouth witness Reid) is to distribute the historic level of costs among cost objects (UNEs or services) in order to ensure their recovery; in other words, cost allocation is a process used to ensure that BellSouth is "made whole," not a process that should be (or can be) used to determine forward-looking costs. BellSouth's methodology is flawed for

at least four reasons:

First, the process itself is inherently top down instead of bottom up; it takes a backward-looking view and projects it into the future. As Mr. Reid describes in his testimony, the BellSouth methodology is based on an *allocation* of costs, not a *determination* of costs. Even if performed flawlessly, BellSouth's methodology cannot be used to provide useful information to the Commission in its effort to make such a cost determination as is required by section 252 (d) (1) of the federal Act.

Second, BellSouth is basing its study on the cost information in its books of account. While there are reasons to believe that BellSouth's historic level of costs incurred to "operate the company" are higher than the corresponding costs that would be incurred by an efficient carrier, the Commission has never had the opportunity to review this information or make a determination as to whether these costs are excessive. Even if a tops down process could be used to develop costs in this proceeding, there are three fundamental steps to a cost allocation process: 1) the costs to be allocated must be reviewed and determined to be of the correct magnitude, 2) the costs to be allocated must be reviewed to ensure that they have been categorized correctly, and 3) the costs must be allocated according to a meaningful mechanism (if such a mechanism is determined to exist). BellSouth has omitted the first two steps entirely, and is asking the Commission to nevertheless make a determination regarding the results of step three. In effect, BellSouth is asking the Commission to render a "rate case" decision without holding a rate case. Such an approach violates the requirements of section 252 (d) (1) of the federal Act for two reasons: it does not provide the Commission with the

information necessary to make a determination of what cost-based rates for UNEs should be, and it asks the Commission to determine UNEs rates by referring to a process that only exists within a "rate-of-return or rate-based proceeding." As the Commissioners are aware, Section 252 (d) (1) requires a determination by this Commission of the just and reasonable rates for UNEs, and requires those rates to be based on cost determined without reference to a rate of return or rate based proceeding.

The third and fourth flaws in the BellSouth methodology relate to the method by which it has engaged in this improper tops down allocation of historic costs: BellSouth attempts to make a meaningful allocation of costs to UNEs using a set of allocation rules developed for a wholly different purpose, and commits a number of errors in the process. As Mr. Reid describes in his testimony, BellSouth has utilized the provisions of its Cost Allocation Manual, or CAM, along with the underlying cost pools and sub-pools, to allocate costs among wholesale and retail categories and to ultimately develop shared and common cost factors to be applied to UNEs. As Mr. Reid readily admits, however, the BellSouth CAM was not developed for this purpose, but instead was developed in order to separate costs between regulated and non-regulated activities. While Mr. Reid states that he feels that the CAM can be used to allocate costs on a "cost causative" basis between regulated and non-regulated activities of BellSouth, the ability of the BellSouth CAM, its underlying cost pools, or its rules of allocation to meaningfully divide costs in the way proposed by BellSouth in this proceeding has not been tested. The cost attribution rules underlying CAM methods were not developed for use in determining the most cost-causative way for assigning forward-looking costs to

unbundled elements.

In addition, reviews of this process in related proceedings in others states indicates that a number of errors were committed by BellSouth related to the use of certain data, the application of CAM principles, and applicability of the calculations to the use to which the results have been put.

In summary, the Commission should reject BellSouth's proposed shared and common cost methodology as the fundamentally wrong approach, based on untested historical data, utilizing an allocation scheme developed for another purpose, conducted incorrectly.

Q. THE THIRD METHODOLOGICAL PRINCIPLE YOU DESCRIBE IS THE REQUIREMENT THAT INVESTMENTS BE SIZED CONSISTENTLY WITH THE LEVEL OF DEMAND ASSUMED IN THE STUDY. HOW IS THIS ACCOMPLISHED IN A COST STUDY?

A. The most important mechanism for matching investment and demand assumptions is the correct application of "fill factors," based on assumed fill rates for specific investments. Improperly applied fill factors can cause an otherwise properly conducted cost study to generate results that significantly overstate the cost of the UNE or service being studied.

Q. WHY ARE FILL FACTOR ASSUMPTIONS SO IMPORTANT?

A. All studies of the costs of either individual components of the telecommunications network or services which comprise combinations of those elements must apply the correct assumptions regarding the treatment of spare capacity placed for future

growth. This assumption is most often applied as a fill factor representing the portion of the transmission facility (such as a cable in the distribution portion of the local loop, or fiber in an interoffice facility) or equipment (the remote terminal for a digital loop carrier system or the processor for a local switch, for example) that is expected to be in use.

An important principle that must be applied in all studies, including all studies of economic costs, is the principle of cost causation: specifically, the study should include all costs, but only those costs, that are *caused* by the decision or requirement to offer the UNE or service being studied (BellSouth apparently endorses, but then does not apply, this principle of cost causation). A forward-looking economic cost study, therefore, will include the costs that would be caused by an efficient provider to offer the UNE or service. Since spare capacity in a facility or piece of equipment is a potentially significant cost to be addressed, it is important that this type of cost be treated in accordance with the principle of cost causation and other economic costing principles.

Q. WHAT ARE THE SOURCES OF SPARE CAPACITY?

A. Spare capacity has several different sources. Each of these types of spare should be treated appropriately in a cost study. First, some need for spare capacity arises from the need to perform administrative functions (this administrative need includes the need for extra capacity for maintenance and to account for defective facilities (bad pairs in a copper cable, for example). For this reason, the engineer's "target fill" or "fill at relief" -- the fill rate at which new capacity will be installed -- is almost always less than 100%. This form of spare capacity is directly caused by

the UNE or service being studied and is properly included in a forward-looking economic cost study (this form of spare capacity is included in correctly performed TSLRIC studies through the use of objective fill factors that are less than 100%). Second, some spare capacity is created by the fact that investments are lumpy; in other words, it may not be possible to purchase a facility that is exactly sized for the existing need. A need for 550 copper pairs may have to be met with a 600 pair cable, for example. This type of spare is also appropriately included in a forward-looking cost study. Third, spare capacity may be placed to serve future growth in the network. For example, BellSouth may decide to place sufficient capacity to serve not only all current customers but also all expected future customers in a given geographic area over some planning period. For the reasons outlined below, this type of spare capacity is not properly included in a forward-looking economic cost study. Fourth, there is spare capacity that may exist because of an incumbent carrier's incentives to overinvest when subject to rate of return regulation. This type of spare should never be included in any cost study.

Of the four sources of spare capacity, it is the treatment of spare placed for future growth that has proven to be primarily at issue. BellSouth has included the first three types of spare in its cost studies filed in this proceeding (administrative, lumpy investment, and future growth) and may have included some portion of the fourth. In contrast, a correctly performed TSLRIC study includes only the first two types (administrative and lumpy investment). This difference in the treatment of spare capacity placed for future growth represents a significant portion of the difference in cost results reported in the BellSouth studies and the results of a comparable TSLRIC study. By applying the fill factors that it has used in its

studies, BellSouth is in effect requiring new entrants to pay for BellSouth's investment needed to serve both current and future customers. The practical effects of this approach have serious implications: BellSouth's costs to serve customers in the future will be paid for by its current competitors, BellSouth will be able to double recover its costs, and a significant barrier to entry will be created.

Q. PLEASE EXPLAIN HOW BELLSOUTH'S USE OF THE WRONG FILL FACTORS WILL HAVE THESE FAR REACHING EFFECTS.

A. The cost causation principle referred to above is a requirement for efficiency: the costs attributed to any given customer should be no higher than that customer actually causes. While BellSouth or any other carrier may elect to place facilities or equipment today in order to accommodate growth that may occur in the future, today's customers should not have to pay for costs that are *caused* by tomorrow's customers. UNE rates set at the level of the results of the BS-TSLRIC studies would have exactly this consequence.

This specific case of shifting costs from one set of customers to another (from future customers to current customers) is conceptually no different than any other improper shifting of costs between customers. For example, if BellSouth wants to offer broadband services, it may invest in the facilities to do so. The costs of these broadband facilities, of course, are *caused* by the customers of broadband services and should be recovered in the rates charged to them. It would clearly be inappropriate to shift those costs to other customers (purchasers of narrowband Plain Old Telephone Service, for example). It is likewise inappropriate to shift costs *caused* by future customers to current customers; future customers, like

broadband customers, should pay for the costs that they cause.

In order to avoid this shifting of costs, it is important that spare capacity placed for future growth be treated correctly. It is *not* appropriate (and in fact is conceptually meaningless) to look at the total size of plant in place today (including capacity to serve both existing and future customers) and only the current level of demand in order to calculate the level of "fill" to be used in a cost study, yet this "apples to oranges" calculation is exactly what BellSouth has used in its cost studies. In order to perform this calculation on an "apples to apples" basis, it is necessary to calculate the level of fill by matching the size of the facility placed to serve current demand with current demand, or the size of the facility placed to serve both current and future demand with the expected level of future demand.

Stated mathematically, the two options for correctly calculating fill are as follows (for illustrative purposes, these formulas are stated in terms of lines -- as they would be used when calculating the fill factor for a cable used in the loop or interoffice network. Other units, such as the units of processor capacity of a switch, would be used where appropriate):

1) Fill Rate = Current Working Lines / Total Lines Placed to Serve Current Demand, *or*

2) Fill Rate = Projection of Future Working Lines / Total Lines Placed to Serve Current and Future Demand

This second alternative is consistent with the requirement set forth by the FCC in the paragraph often cited by BellSouth witnesses. Specifically, paragraph 682 of the FCC Order requires fill to be based on a "*reasonable projection* of actual fill."

When applying its flawed methodology, BellSouth conveniently forgets that the phrase "reasonable projection" was included in the FCC language for a good reason. As a result, BellSouth calculates fill according to the following flawed formula:

Fill Rate (BST) = Current Working Lines / Total Lines Placed to Serve Current and Future Demand

This is not a trivial oversight. By mixing and matching elements of two mutually exclusive options, BellSouth has reduced (often significantly) the level of the calculated fill. Even small changes in the fill factor applied can have a significant impact on the cost calculated, however. For example, consider a facility costing $1000 to acquire and place ($1000 EF&I investment) having 100 units of capacity. With a fill rate of 85%, the calculated investment per unit for the facility will be $11.76. If the fill factor is lowered to 70%, the investment per unit increases to $14.28. As a result of using this flawed approach, BellSouth has significantly overstated the cost of providing UNEs.

Rates based on the results of the BS-TSLRIC studies would also be discriminatory and therefore in direct violation of section 252 (d) (1) of the federal Act. In effect, BellSouth would be offering itself terms that are more favorable than those offered to its competitors. Under BellSouth's proposal, new entrants would pay for the spare capacity to serve future customers, but never get to use this capacity that they have paid for. In contrast, BellSouth would have access to this spare capacity for future use, even though it had been paid for by its competitors. An example makes this problem clear: Assume that a competitor pays $20 per month to BellSouth for an unbundled loop, based on a BS-TSLRIC study that used a fill

factor based on the flawed formula described above. If BellSouth is using a fill factor that includes spare for future use, the competitor is paying for the line being used and all or part of an additional line (if BellSouth is using a distribution fill factor that is significantly less than 50%, it is very possible that the rate paid by the competitor is recovering the cost of two full lines). Now assume that the end user customer wishes to purchase an additional line from BellSouth's competitor. The competitor would have to pay BellSouth an additional $20 to do so (thereby potentially paying for the cost of four lines); no correction would be made for the fact that the competitor is now using some of the previously spare facilities *for which it has already paid.* In contrast, BellSouth could offer the second line for a very low price, because the competitor will have paid for the second line in the rate it paid for the first. Such an arrangement is discriminatory (BellSouth receives the second line at a cost that is much lower than the cost to an entrant) and creates the opportunity for a price squeeze.

In addition to gaining the ability to charge excessive and discriminatory rates, the error made by BellSouth when calculating fill factors also will permit it to recover its costs multiple times. If the spare capacity for growth and current demand are both used when calculating the fill factor to be used in the cost study (BellSouth's "apples and oranges" methodology), the costs of this spare capacity will be recovered in the rates charged to current customers (including both competitors and end users). When new customers enter the area and the expected demand growth takes place, BellSouth will use the previously spare capacity in order to serve those customers (that is why it was originally placed, after all). These future customers (or a BellSouth competitor serving these new customers) will be paying

BellSouth full rates for facilities for which BellSouth has already been fully compensated by current customers -- a classic case of double recovery.

In order to avoid this problem, the Commission must reject the flawed costing methodology that causes it: BellSouth's incorrect calculation of fill rates (and subsequent application of these flawed fill factors in its cost studies). The Commission should ensure that any costs that it uses to establish rates for UNEs (or for any other purpose) be determined by cost studies that properly mix investment and demand assumptions. In order to accomplish this, fill rates must be calculated using one of the two acceptable formulas described above and not with the BellSouth formula that attempts to force together two mutually exclusive assumptions.

Q. HOW HAVE YOU DETERMINED THAT THE BELLSOUTH COST MODELS HAVE INCORRECTLY MATCHED INVESTMENTS AND DEMAND?

A. While this can be ascertained from the cost study documentation, that research is not necessary. Surprisingly, BellSouth is quite up front about the calculation error that it has made. BellSouth witness Baeza makes it clear, for example, that BellSouth has calculated fill as described above: by considering capacity placed to serve both present and future customers juxtaposed with the demand of only current customers. Mr. Baeza explains at p. 7 of his Direct Testimony that BellSouth places facilities with spare for *future* growth, yet calculates the fill factors used in its cost studies by simply dividing total capacity by *existing* demand. Ms. Caldwell states in her testimony that BellSouth uses this type of fill factors in the studies she sponsors (but offers no explanation why BellSouth has

changed this important assumption in its TSLRIC methodology).

The contradictions in Mr. Baeza's testimony reflect the contradictions inherent in BellSouth's fill factor calculation. For example, Mr. Baeza correctly points out at page 8 that all telecommunications plant should be placed "in a manner which minimizes the cost of doing so, whether you are talking about the actual cost of placing the plant, or the cost of carrying the spare capacity." There is certainly no disagreement on this point; the capacity that should be installed is a function of both placement costs and the costs of carrying additional capacity. All firms that must make significant capital investments face the same dilemma and must make the same calculation: there are costs associated with coming back and installing additional plant (Mr. Baeza uses the example of digging up Flagler Street in Miami), but there are also capital costs associated with carrying extra capacity as an asset that does not currently produce revenue. The calculation to determine the efficient level of spare capacity to be placed compares the present value of the cost per unit over the life of the asset with the level of spare capacity in place and the cost of placing the plant to serve today's capacity without regard to growth and reinforcing that plant at exhaust (i.e. when the objective fill level, or fill at relief, has been reached).

After correctly identifying the tradeoff of costs associated with each scenario and the need for BellSouth to choose the approach with the lowest total cost (that is, the scenario with the lowest total of the stream of costs to be incurred over the life of the asset discounted back to the present; in other words, the scenario with the lowest cost expressed on a present value basis), Mr. Baeza goes on to recommend that cost studies be performed with BellSouth's measure of what he calls "actual"

fill: the mismatch of investment to meet current and future demand with current demand units. *The effect of the BellSouth calculation is to shift 100% of the carrying costs associated with spare capacity to its end user customers and competitors.* The tradeoff described so well by Mr. Baeza at page 8 of his Direct Testimony *will not exist* if the fill factors he recommends are used: it is impossible for BellSouth to compare the cost of two scenarios if the costs of one of the scenarios has been transferred to its customers and competitors. As a result -- if Mr. Baeza's proposed fill factors are used in cost studies, and Ms. Caldwell states that they are -- BellSouth can minimize cost over time (the objective stated by Mr. Baeza) by placing excess capacity and having others pay for it.

In fact, BellSouth would gain two distinct benefits under its proposal. First, as described above, BellSouth would gain the capacity necessary to serve future customers while having it paid for by its competitors (through UNE rates) and end user customers (through retail service rates). Second, BellSouth could place more capacity now than it projects to be needed to accommodate growth, and it could do so risk free. While companies operating in competitive markets must consider the risk that it will overdeploy capacity and ultimately pay carrying costs on capacity that never produces revenue, BellSouth would face no such risk. It could deploy capacity equal to twice, or ten times, or one hundred times its projected need, and the effect would be that its (inappropriately calculated) fill factors would fall, the per unit costs calculated by its cost studies would increase by a corresponding amount, and rates for UNEs and retail services would likewise increase. *BellSouth will be in a position to bet its competitors' and customers' money that a given level of capacity will be used in the future, while never putting*

a penny of its own at risk. In summary, both the testimony of Mr. Baeza and the BellSouth position regarding the calculation of appropriate fill factors contain an inherent contradiction that will result in significant benefits to BellSouth but significant peril for its competitors and other customers.

Specific instances of the application of inappropriate fill factors are described in the Rebuttal Testimony of AT&T witnesses Wayne Ellison and James Wells.

Section 2: The Development of Rates for Loop-Related UNEs that Reflect Geographic Differences in Cost

Q. WHY IS IT NECESSARY FOR THE RATES ASSOCIATED WITH LOOP-RELATED UNES TO BE GEOGRAPHICALLY DEAVERAGED IN ORDER TO BE COST BASED?

A. There is little dispute among the parties that the cost of providing certain unbundled network elements varies, potentially significantly, based on the geographic area being studied. The cost of loop facilities, for example, has been shown to be geographically sensitive because the primary drivers of the cost of these facilities -- loop length and line density -- vary depending on the area being studied.

In order for the rates for unbundled network elements to be cost-based, it is necessary for those rates to reflect any significant geographic cost differences that may exist. BellSouth has often attempted to confuse this issue by suggesting that it is the deaveraging of retail rates -- rather than the wholesale rates for unbundled network elements -- that is at issue; of course, it is both possible and appropriate

for the rates for unbundled network elements to be geographically deaveraged while maintaining statewide average retail rates for end users. The results of the Hatfield Model presented by AT&T and MCI in the arbitration proceedings illustrate the geographic cost differences for a 2-wire local loop. While the Commission chose not to rely on the results of this model when establishing rate levels, it can and should rely on the results of the model as a clear demonstration of the significant variations in the cost of providing a local loop in different geographic areas. BellSouth apparently agrees: in the cost proceeding established by the Georgia Commission to determine the cost of network elements and in several Universal service investigations in other states, BellSouth has presented the results of the Benchmark Cost Proxy Model ("BCPM"). BellSouth has used BCPM results to illustrate the cost differences associated with providing local loops in different geographic areas, and has used the results of the model to support its geographically deaveraged pricing proposal for local loops in Georgia. In summary, cost information which is apparently not in dispute indicates that the cost of providing some unbundled network elements, specifically local loops, varies significantly across different geographic areas. Cost-based rates, established pursuant to section 252 (d) (1), can and must reflect this demonstrated cost variability.

Q. WHAT COST INFORMATION HAVE YOU DEVELOPED TO PROVIDE A BASIS FOR THE GEOGRAPHICALLY DEAVERAGED RATE PROPOSALS SUPPORTED BY AT&T AND MCI?

A. Both the Hatfield Model and the BCPM have been proffered as a means of

determining how the cost of a local loop varies in different geographic areas. For purposes of this proceeding, I ran the Hatfield Model utilizing the option to produce costs at the wire center (end office) level and using inputs specific to BellSouth's territory in Florida. These results are attached as Exhibit DJW-2. I also attempted to perform the same analysis using the latest version of the BCPM (provided by BellSouth in the Kentucky Universal Service proceeding), but bugs in the model software prevented it from executing properly.

I then compared the loop cost results specific to each wire center with the statewide average, and used these values to develop a factor that, when applied to a statewide average loop cost, produces a measure of the cost that is unique to each wire center. These factors were then applied to the loop costs developed by AT&T witness Ellison based on his analysis and corrections to the BellSouth loop cost studies. The resulting geographically deaveraged rates are presented in the testimony of Mr. Ellison.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing was furnished to the following parties by U.S. Mail or hand delivery(**) this 9th day of December, 1997.

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