

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Investigation into  
pricing of unbundled network  
elements. (BellSouth Track)

DOCKET NO. 990649A-TP  
ORDER NO. PSC-02-1311-FOF-TP  
ISSUED: September 27, 2002

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**FINAL ORDER ON RATES FOR UNBUNDLED NETWORK ELEMENTS  
PROVIDED BY BELL SOUTH TELECOMMUNICATIONS, INC. (120-DAY FILING)**

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ACRONYMS

LIST OF ACRONYMS AND ABBREVIATIONS USED IN THE ORDER

AA	Allocation Area
ACC	Account
ADSL	Asymmetrical Digital Subscriber Line
ADUF	Access Daily Usage File
ALEC	Alternative Local Exchange Company
ARMIS	Automated Reporting and Management Information System
AT&T	AT&T Communications of the Southern States
ATM	Asynchronous Transfer Mode
BCC	BellSouth Cost Calculator
BCPM	Benchmark Cost Proxy Model
BR	Brief
BRI	Basic Rate Interface (i.e., Integrated Services Digital Network - ISDN-BRI)
BSCC	BellSouth Cost Calculator
BST or BellSouth	BellSouth Telecommunications, Inc.
BSTLM	BellSouth Telecommunications Loop Model
BT	Building Terminal
CATV	Cable Television

CC	Common Carrier
CFR	Code of Federal Regulations
CLEC	Competitive Local Exchange Company
CO	Central Office
CRIS	Customer Records Information System
CSA	Carrier Serving Area
DA	Distribution Area
d/b/a	Doing business as
DLC	Digital Loop Concentrator, or Digital Loop Carrier
DLR	Design Layout Record
DN	Docket Number
DS1	Digital Signal-Level 1
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
DT	Distribution Terminal
DUF	Daily Usage File
EF&I	Engineered, Furnished, and Installed
Eighth Circuit	U.S. Court of Appeals for the Eighth Circuit
EODUF	Enhanced Optional Daily Usage File
EXH	Exhibit
F.S.	Florida Statutes
FASB	Financial Accounting Standards Board
FCC	Federal Communications Commission
FCTA	Florida Cable Telecommunications Association, Inc.
FDI	Feeder/Distribution Interface



FDN	Florida Digital Network, Inc.
FPSC	Florida Public Service Commission
Ft.	Feet
GTEFL	GTE Florida Incorporated
HAI	Hatfield Model
HCPM	Hybrid Cost Proxy Model
ILEC	Incumbent Local Exchange Company
ISDN	Integrated Services Digital Network
ISP	Internet Service Provider
ITC	Independent Telephone Company
IXC	Interexchange carrier
kft	Kilofeet (Also Kft. and kf)
LEC	Local Exchange Company
JCTN	Junction Point
MCI	MCI WorldCom, Inc.
MNHL	Manhole
MOU	Minutes of Use
MPB	Meet-Point Billing
NGDLC	Next Generation Digital Loop Carrier
NID	Network Interface Device
No.	Number
NRC	Non-Recurring Charge
OC3	Optical Carrier-Level 3
ODUF	Optional Daily Usage File
OSPCM	Outside Plant Construction Management System
OSP	Outside plant

OSS	Operations Support Systems
POD	Production of Documents
PSC	Public Service Commission
RT	Remote Terminal
RTAP	Resource Tracking Analysis and Planning
RTU	Right-To-Use
SAI	Serving Area Interface
SC	Structure Cost
SCIS/IN	Switching Cost Information System/Intelligent Network
SCIS/MO	Switching Cost Information System/Model Office
SCP	Service Control Point
SCR	Selective Carrier Routing
SDSL	Symmetric Digital Subscriber Line
SME	Subject Matter Expert
SOP	Statement of Position
Sprint	Sprint-Florida, Incorporated
TELRIC	Total Element Long Run Incremental Cost
TPI	Telephone Plant Index
TR	Transcript
UCL	Unbundled Copper Loop
UCL-L	Unbundled Copper Loop-Long
UCL-ND	Unbundled Copper Loop-Nondesignated
UCL-Short	Unbundled Copper Loop-Short
UNE	Unbundled Network Element
UNE-P	UNE-platform

USF	Universal Service Fund
Verizon	Formerly GTE Florida Incorporated
xDSL	"x" distinguishes various types of DSL
Z-Tel	Z-Tel Communications, Inc.

BY THE COMMISSION:

**CASE BACKGROUND**

The Federal Telecommunications Act of 1996 (Act) made sweeping changes to the regulation of telecommunications common carriers in this country. The Act envisioned that firms would use one of three entry strategies to enter the local exchange services market: (1) resale of the incumbent's services; (2) pure facilities-based offerings, thus only requiring a competitor to interconnect with the incumbent's network; and (3) a hybrid involving the leasing of unbundled network elements (UNEs) of the incumbent's network facilities, typically in conjunction with network facilities owned by the entrant.

The Act required that the FCC promulgate rules to implement the resale, interconnection, and UNE requirements within six months after passage of the Act. Therefore, the FCC's Local Competition Order, FCC Order 96-325, released August 8, 1996, included in its pricing rules Rule 51.507(f), which requires each state commission to establish rate zones for UNEs, the deaveraging rule. That rule states:

State commissions shall establish different rates for elements in at least three defined geographic areas within the state to reflect geographic cost differences.

Since the establishment of the pricing rules, these rules have been the subject of a number of court decisions and FCC actions, which have directly impacted this issue and its resolution.

Our proceeding was initiated on December 10, 1998, when a group of carriers, collectively called the Competitive Carriers,

filed their Petition of Competitive Carriers for Commission Action to Support Local Competition in BellSouth's Service Territory. Among other matters, the Competitive Carriers' Petition asked that we set deaveraged unbundled network element (UNE) rates.

On May 26, 1999, we issued Order No. PSC-99-1078-PCO-TP, granting in part and denying in part the Competitive Carriers' petition. Specifically, we granted the request to open a generic UNE pricing docket for the three major incumbent local exchange providers, BellSouth Telecommunications, Inc. (BellSouth), Sprint-Florida, Incorporated (Sprint), and GTE Florida Incorporated (GTEFL, now Verizon). Accordingly, Docket No. 990649-TP was opened to address the deaveraged pricing of UNEs, as well as the pricing of UNE combinations and nonrecurring charges.

On May 25, 2001, we issued our Final Order on Rates for Unbundled Network Elements Provided by BellSouth (Phases I and II), Order No. PSC-01-1181-FOF-TP. Within the Order, we addressed the appropriate methodology, assumptions, and inputs for establishing rates for unbundled network elements for BellSouth. We ordered that the identified elements and subloop elements be unbundled for the purpose of setting prices, and that access to those subloop elements shall be provided. We also determined that the inclusion of non-recurring costs in recurring rates should be considered where the resulting level of non-recurring charges would constitute a barrier to entry. In addition, we defined xDSL-capable loops, and found that a cost study addressing such loops may make distinctions based upon loop length. We then set forth the UNE rates, and held that they shall become effective when existing interconnection agreements are amended to incorporate the approved rates, and those agreements become effective.

Furthermore, we ordered BellSouth to refile, within 120 days of the issuance of the Order, revisions to its cost study addressing hybrid copper/fiber xDSL-capable loops, network interface devices (NIDs), and cable engineering and installation. The parties to the proceeding were also ordered to refile within 120 days of the issuance of the Order, proposals addressing network reliability and security concerns as they pertain to access to subloop elements. Later, BellSouth determined, through proceedings in other states, that changes were needed to the inputs for Daily Usage Files (DUF) rates. As a result, that issue has been

incorporated into this proceeding as well. This proceeding has come to be referred to as "BellSouth's 120-day filing."

By Order No. PSC-01-2132-PCO-TP, this docket was divided into sub-dockets in an effort to alleviate confusion between the BellSouth track, Docket No. 990649A-TP, and the Sprint/Verizon track, Docket No. 990649B-TP.

On March 11 and 12, 2002, we conducted an administrative hearing to receive evidence regarding the issues addressed as part of BellSouth's 120-day filing. This Order addresses the resolution of those issues.

I. LOOP COST STUDIES AND MODIFICATIONS

First, we have been asked to address whether or not BellSouth's 120-day filing comports with our directives as set forth in Order No. PSC-01-1181-FOF-TP. The relevant language in that decision which is germane to our consideration here is:

. . . BellSouth shall be required to refile the BellSouth Telecommunications Loop Model (BSTLM) within 120 days of the issuance of this Order. As previously explained, the revised model shall explicitly model all cable engineering and installation placements and associated structures. Thereafter, we shall consider whether it is necessary to revisit and revise, on a prospective basis, the loop rates we set in this proceeding. The refiling shall include all BellSouth assumptions used in developing the cable placements, the basis and source data for the revised input values, and a clear identification and listing of all input values.

Order No. PSC-01-1181-FOF-TP at pages 306-307. We directed BellSouth not only to provide specific data and the assumptions that underlie the data, but to clearly identify its input values for the purposes of this proceeding.

A. COMPLIANCE WITH ORDER NO. PSC-01-1181-FOF-TP

AT&T/MCI witness Pitkin submitted in excess of 300 proposed alternate input values for the BSTLM and identified the source for these inputs as AT&T/MCI witness Donovan. Witness Donovan

testified, however, that he did not address each input. Instead, he offered work papers and documentation in support of 22 of these inputs. Herein, we have considered the inputs proffered by AT&T as they relate to the direction we specifically gave to BellSouth by Order No. PSC-01-1181-FOF-TP.

#### 1. ENGINEERING FACTOR

In its previous filings in this docket in August 2000, the BellSouth Cost Calculator's internal logic calculated engineering as a loading on material. For its 120-day filing, BellSouth modified the logic of the BSTLM to calculate engineering costs by applying factors to the total non-engineering investment, according to BellSouth witness Caldwell. To make its calculations for the "bottoms-up" 120-day filing, witness Caldwell contends that BellSouth relied on two sources for inputs: 1) outside plant contractor costs; and 2) BellSouth's outside plant construction management system (OSPCM). Witness Caldwell explains that outside plant contracts for each Florida district were reviewed for specific work activities. BellSouth's actual usage from its contracts during 2000 became the basis for each activity in the 120-day filing. The OSPCM, which is used internally by BellSouth to estimate job costs, provided source code data and assumptions for splicing and placing time inputs, according to witness Caldwell. The inputs used by BellSouth in its original 120-day filing yielded two engineering factors, 27 percent for copper cable accounts, and 35.7 percent for fiber accounts, according to witness Caldwell.

The record reflects that at her deposition prior to hearing, witness Caldwell was asked to produce the inputs from the OSPCM that were used to arrive at the engineering factors in the 120-day filing as a late-filed deposition exhibit. This request precipitated a revision by BellSouth to its 120-day filing. This revision included changes to BellSouth's engineering factors, as well the following explanation of why the factors changed:

The engineering factors in the OSPCM were applied to Telco labor plus contractor costs. The BSTLM, however, was programmed to apply the factors to Telco labor, contractor costs, and material costs. Thus, the application of factors from BellSouth's OSPCM resulted in

an overstatement of the engineering costs for copper and fiber cable accounts. In order to address this problem, BellSouth has developed engineering factors based on relationships between engineering costs and the total non-engineering investments for each plant account.

BellSouth also acknowledged in response to discovery requests that no documentation existed to substantiate the engineering factors in the OSPCM that had formed the basis for BellSouth's original engineering factors.

Witness Caldwell has, however, provided the following explanation of how BellSouth arrived at its final revisions to the engineering factors after discarding its initial approach using the OSPCM inputs, "Basically, we used 1998 RTAP data in which we looked at each one of the individual accounts and looked at the engineering dollars associated with that account." The witness further explains that BellSouth then took the RTAP data, which comes from BellSouth's Resource Tracking Analysis and Planning database, and created a spreadsheet that calculated BellSouth's final engineering factors. The final revised engineering factors range from 8.8 percent to 52.7 percent for copper cable accounts, and from 7.9 percent to 25.1 percent for fiber cable accounts.

AT&T/MCI witness Donovan believes that in spite of BellSouth's changes to its calculation methods, the engineering factors fail to accurately reflect forward-looking costs. He explains that:

BellSouth should have created an engineering cost that correlates with technician labor. BellSouth has muddied the waters by creating a factor that treats engineering cost to be proportional to labor costs plus material costs. This inappropriately includes the cost of materials in the allocation of engineering costs. Engineers create Engineering Work Orders to instruct technicians what to do. They do not create Engineering Work Orders to instruct materials.

The remedy, witness Donovan maintains, is for BellSouth to further modify the logic of the BSTLM to yield engineering costs that reflect a direct correlation to internal direct labor and contract direct labor, but eliminate material costs as a driver of engineering allocations.

The witness further contends that, ideally, engineering costs should be broken down into three components: 1) one based on sheath feet of cable or structure engineered, calculated on a "per feet per day engineered" cost; 2) one for cable splicing on a "minutes of engineering time per splice" basis; and 3) a third for groups of copper or fiber pairs spliced on a "minutes of engineering per 300 pairs spliced" or "minutes of engineering time per 12 fibers spliced."

Witness Donovan also advocates establishing a ratio of engineering to technician labor, which he refers to as a "span of control." Witness Donovan explains that he analyzed BellSouth's embedded data for the years 1997 through 2000 and found the ratio of engineers to technicians varied depending on accounts. The ratio was as low as one engineer to one technician in some accounts, and as high as one engineer to roughly five technicians in some accounts. According to witness Donovan, "The ratio of 1.1[sic] engineers per technician is absurd because such a ratio would indicate that as much time was spent on the engineering and paperwork as was spent on building a piece of outside plant."

Witness Donovan thus contends that we should direct BellSouth to modify the BSTLM to reflect a 16.7 percent engineering to labor ratio, which is the equivalent of having a "span of control" of one engineer to six technicians. This "span of control" ratio advocated by witness Donovan translates to an engineering to labor percentage of 16.7 percent. If the 16.7 percent ratio of engineering to labor were used in the BSTLM, according to witness Donovan, BellSouth's engineering factor input would range between seven and 11 percent -- averaging 9.4 percent -- depending on the account. Witness Donovan notes that his proposal is consistent with the FCC's finding in its Universal Service Final Inputs Order FCC Order No. 99-304, CC Docket No. 96-45, which set the engineering factor at 10 percent.

In response, BellSouth witness Caldwell argues that witness Donovan's proposal to mandate an engineering-to-technician ratio of 1:6, "dismisses the actual data" and replaces the data with, "his own personal judgment."

Acknowledging witness Caldwell's argument, AT&T/MCI witness Donovan agrees that he has used his own personal experience as a



partial basis for his "span of control" argument. However, he maintains that:

. . . I know enough about how costs are accumulated having done those studies on a corporate staff, albeit with a different regional telephone company, to know that there are miscellaneous costs frequently included in the alleged cost data. I have looked at those numbers, they seem unreasonable, and it is not outside my experience to have investigated those in other companies only to find out that the data is - may not be as granular as it could be in looking at span of control.

In other words, isolating exactly engineers' labor costs alone and exactly the technicians' labor cost alone is not always as clean as that when data is collected at the macro level that this data was collected in.

BellSouth's decision to use data from a single year for the purpose of establishing engineering rates was incorrect, according to witness Donovan. "Work must be planned by engineers, funding must be secured, and detailed engineering must be completed even before technicians begin work," witness Donovan contends. "Therefore it is unrealistic to assume that one year should be selected to determine an appropriate ratio." Instead, witness Donovan proposes using data from 1997 through 2000 to establish an average that would, "levelize those obvious year-to-year timing differences."

#### DECISION

We begin by noting that BellSouth's witness Caldwell initially recommended engineering factors drawn from a single year's contractor data and inputs from the OSPCM. The OSPCM inputs were not included as part of the initial filing with us. When witness Caldwell was asked in deposition to provide the inputs, BellSouth changed its calculation method to include RTAP data and admitted that no documentation existed to substantiate the OSPCM inputs. This gives us some concern as to the stability of BellSouth's underlying analysis. An unstable premise may lead to an unstable conclusion.

Furthermore, we share witness Donovan's concern that reliance on a single year's data could potentially skew results. We also

have difficulty reconciling witness Caldwell's admission that BellSouth's engineering factors are linear loadings since we specifically determined in Order No. PSC-01-1181-FOF-TP that such factors generate questionable results when deaveraged rates are the intended outcome because they preclude economies of scale. See Order at p. 282.

However, AT&T/MCI witness Donovan's "span of control" ratio of one engineer for six technicians, regardless of the type of work performed, appears to rest entirely on the witnesses's own experience. Furthermore, witness Donovan's proposal also appears somewhat flawed. By calculating labor dollars in relationship to engineering dollars without accounting for labor rates, witness Donovan's calculations could yield inaccurate engineer-to-technician ratios.

Based on the evidence presented, we have considered the following options. The first option would be to accept BellSouth's engineering factors from its third revision to its 120-day filing. Another option would be to accept the percentages proposed by witness Donovan, and adjust these figures appropriately for inflation. A third option would be to accept BellSouth witness Caldwell's and AT&T/MCI witness Donovan's respective methodologies and split the difference between their values for each account. A final option would be to order BellSouth to modify the logic of the BSTLM to have engineering costs reflect a correlation to internal direct labor and contract direct labor but exclude material costs.

The delays necessarily associated with the final option render it unacceptable. As for the first three options, while each has its own benefits, we find that the second option has the most merit. BellSouth's admission that its engineering factors are linear loadings renders their use inconsistent with our directive in Order No. PSC-01-1181-FOF-TP. Further, BellSouth's decision to change its methodology for arriving at its engineering factors midway through this phase of the proceeding creates an aura of uncertainty about its premise and correspondingly, its conclusion. Using the AT&T factors, adjusted for inflation, yields the following engineering factors for fiber and cable accounts:

Poles	9.61%
Underground Metallic	7.51%
Aerial Cable Metallic-Bldg. Entrance Cable	8.61%

Aerial Cable Metallic	7.37%
Buried Metallic Cable	10.46%
Intrabuilding Network Cable Metallic	7.94%
Underground Non-Metallic Cable	5.11%
Aerial Cable Fiber-Bldg Entrance Cable	9.30%
Aerial Non-Metallic Cable	7.24%
Buried Non-Metallic Cable	11.88%
Intrabuilding Network Cable Fiber	9.80%

Therefore, upon consideration, we hereby approve the engineering factors identified above.

## 2. STRUCTURE COSTS

### a. Miscellaneous Contractor Charge

The parties dispute the validity of applying a Miscellaneous Contractor Charge, or closing factor, of 25.43 percent to each function performed under the category of outside plant structure costs. These functions include placement and restoration operations necessitated by the placement of telecommunications cable.

AT&T/MCI witness Donovan contends BellSouth's application of the 25.43 percent Miscellaneous Contractor Charge is a "potpourri of charges" for which BellSouth could find no other place in the BSTLM-SC. As such, he contends that they should be excluded from every cable placement category. BellSouth witness Milner counters that the miscellaneous category includes legitimate costs that are appropriate in a cost study designed to reflect the forward-looking costs associated with placing cable.

BellSouth witness Milner does acknowledge that some of the costs included in the miscellaneous category - use of a bulldozer when plowing cable, as one example - would occur infrequently. He explains:

If you need, if you need a police officer because you're working in the middle of a street to direct traffic, if the situation is that you've got to rent equipment like chainsaws to remove brush or trees from the property before you can begin the work. So it's all sort of incidental. The question becomes to what degree of

granularity do you want to start accounting these things such that you make sure they're absolutely, absolutely in the right bucket, if the net result is that the average cost per foot reflects these costs anyway?

In that context, maintains witness Milner, BellSouth has elected to spread the cost of all miscellaneous items evenly across all cable placement categories. Witness Milner asserts that a possible alternative would be for BellSouth to determine which of the miscellaneous costs apply to each individual cable placement category, and derive specific charges. Witness Milner believes that if miscellaneous charges are specifically applied by placement category, the result will be "individual placement types that are more expensive because you took all of those costs and applied them solely to that type of placement. But at the gross level the math, you know, works out the same."

AT&T/MCI witness Donovan did not address witness Milner's suggestion that the miscellaneous costs could be reallocated to specific cable placement operations instead of being treated as a percentage factor applied across all categories.

#### DECISION

We begin by assessing the following options: 1) acceptance of BellSouth's method of distributing and recovering miscellaneous costs equally over all structure activities as proposed; 2) acceptance of AT&T/MCI witness Donovan's suggestion to disallow all miscellaneous contractor charges; 3) requiring BellSouth to segregate miscellaneous contractor costs and apportion the costs on an activity-specific basis; 4) directing BellSouth to refile this aspect of its cost study, making provisions to allow ALECs to book contractors to perform certain functions and include all costs that may arise from coordination activities; or 5) adopting a miscellaneous contractor charge separate from that recommended by BellSouth.

The first option is problematic because it appears to contradict the purpose of this 120-day filing. As previously noted, we sought in this phase of the proceeding to arrive at costs that did not include linear loadings. While not precisely a linear loading, the miscellaneous contractor charge applies a percentage of costs to all structure activities, regardless of whether the

activity generates the cost. By blurring the distinction between cost causation and cost allocation, the practical effect of applying a miscellaneous contractor charge in this manner appears to be at least reminiscent of the application of a linear loading.

As for witness Donovan's suggestion that we disallow all miscellaneous contractor charges, we are concerned that this would result in non-recovery of legitimately incurred costs. Aside from AT&T/MCI witness Donovan's overarching assertion that these miscellaneous contractor charges do not meet TELRIC, BellSouth's claim that the costs are legitimate is uncontested by evidence or testimony of any ALEC witness. While BellSouth witness Milner did concede that some costs booked to the miscellaneous contractor charge category may be incurred infrequently, no ALEC witness demonstrated these costs are not incurred.

The third option, which would group costs by type of placement, provides an opportunity to more accurately determine what costs should be associated with structure related activities than is currently possible using BellSouth's 120-day filing. Unfortunately, however, the necessary level of detail to perform such an analysis is not available in this record. Furthermore, BellSouth witness Milner asserts that adopting this approach will increase per-foot costs within some structure categories, and decrease costs within others. Thus, the lack of record support and the lack of clarity as to the impact preclude this option.

If we were to accept the fourth option, which is to allow ALECs to contract independently for some of the services BellSouth performs, we recognize that this would likely result in delay because, as noted by BellSouth witness Milner, we would have to conduct further proceedings to develop the costs of coordinating activities between BellSouth and ALEC in order to meet the TELRIC standard. We find this potential delay unacceptable.

The last option would involve the introduction of new cost model inputs into the record. We are concerned this option would also create unacceptable delay by necessitating further proceedings.

We find it appropriate to delete the miscellaneous contractor charge. While the costs for which BellSouth seeks recovery through the charge appear legitimate in some instances, it is BellSouth's

treatment of these costs that we believe is contrary to our clear directive that the 120-day filing should be devoid of linear loadings. The testimony of BellSouth witness Milner supports an assumption that acceptance of BellSouth's methodology is an inherent acceptance of a linear loading factor. While it is theoretically possible to separate contractor charges into specific activity accounts, the record does not support such an analysis. The potential for non-recovery of some costs is subordinate to our instruction that distortions caused by the application of linear loadings be avoided wherever possible.

We note that with the deletion of the 25.43 percent miscellaneous contractor charge, input values to the model will be reduced in a number of categories, including aerial pole material, pole labor costs, buried excavation contract labor, and underground excavation contract labor.

#### b. Aerial Structure

AT&T/MCI witness Donovan alleges that BellSouth's use of an average of 120 feet between poles in urban, suburban and rural density zones does not pass what he describes as "the red-face test." In his deposition, witness Donovan described the "red-face test" accordingly:

What I mean by the red-face test is that it doesn't pass the common layman's real-life observations about a particular topic. It just doesn't make sense, and probably when presented with real evidence, real live evidence in person before your own eyes, the author may end up with a red face.

Witness Donovan further contends that a simple observation can be performed by driving along a stretch of road where telecommunication cable is attached to poles. Witness Donovan explains that the observer should begin by setting the automobile odometer at zero, and then should drive for one mile, counting the number of poles. At the end of one mile, the number of linear feet in one mile is divided by the number of poles counted to yield an average distance.

Witness Donovan supplements his recommended observational method by citing the FCC's Final Inputs Order, which he asserts

used the BellSouth Cost Proxy Model (BCPM), the Hatfield Model (HAI), and the FCC's own calculations to arrive at proposals in §214 that distances between poles range from 150 feet to 250 feet. Witness Donovan takes the distances cited by the FCC in each of nine density zones, divides the aggregate number by nine, and arrives at a figure of 184 feet between poles, which he advocates that we use.

BellSouth witness Caldwell responds that witness Donovan's method of computing average distances between poles is not better than making calculations utilizing actual data and should not be accepted. Witness Caldwell acknowledges some spans vary, but BellSouth's 120-foot increment should be accepted:

Clearly, some span lengths may be 150, 200 or 250 feet depending on the size cables carried on the span and a host of other factors. However, there are also those areas of the network - for example, a road intersection with multiple cable routes intersecting - where there are several poles at various corners of the intersection all in close proximity to one another. While BellSouth agrees it is a simple task to ride in one's car for a mile and count poles per mile, as Mr. Donovan suggests, this is in no way superior to basing cost study inputs on real data.

Regarding the FCC's Final Inputs Order, witness Caldwell maintains, "the facts clearly reveal that those other model default values are understated."

However, witness Donovan is also critical of BellSouth's proposed linear-foot intervals for downguys and anchors, which are used to stabilize pole lines. Witness Donovan maintains that, "In my experience, downguys and anchors should be expected to occur every 1,000 to 1,200 feet. In fact, developers of BellSouth's BSTLM agree with that, and included a default of 1,200-foot spans." Witness Donovan references page 72 of the BSTLM Methodology Manual in support of his contention, which reads, in part:

The Investment Process calculates anchors, guys, and poles on a per foot basis. Per foot development assumes an average span of 1200 feet to determine the number of anchors and guys needed.

Witness Donovan further asserts that BellSouth's proposal to place anchors and downguys every 500 feet is contrary to "common industry knowledge."

BellSouth witness Caldwell nevertheless counters that witness Donovan's claim of a 1,200-foot default in the BSTLM is a misperception. She explains:

BellSouth does not maintain records of the number of anchors and guys used, so an approach to determine average spacing similar to that taken for poles was not possible. Furthermore, the 1,200 foot anchor and guy spacing included as a filler in the BSTLM was never modified or evaluated since BellSouth had no intention of using that variable prior to our order for a bottoms-up study.

BellSouth witness Stegeman elaborates on the use of the 1,200-foot figure in the BSTLM cost methodology manual:

This distance has nothing to do with guy and anchor spacing. Rather, the 1200-foot value is used to account for the number of poles, including the end pole, on a typical aerial span length; that is, if you have a 1200-foot span with 150-foot spacing between poles, you need 9 poles, not 8, if you simply divide 1200 by 150.

#### DECISION

Upon consideration of the foregoing, we hereby adopt a distance of 150 feet between poles in all density zones. BellSouth's proposed 120-foot distance is less than the shortest distance of 150-foot used by the FCC in any of its nine density zones for Universal Service assumptions, rendering BellSouth's proposal unacceptable. Witness Caldwell's dismissal of the value of all other cost models without supporting evidence or testimony is difficult to validate. Of similar concern to us is the fact that witness Donovan's observation method for pole placement appears to be subject to probable inconsistencies. Furthermore, we do not believe that it is compatible with any definition of TELRIC compliance. However, witness Donovan's use of substantive data previously relied on by the FCC to establish pole placement



distances for Universal Service purposes lends credibility to his proposal.

Conversely, witness Donovan's proposal that we adopt 1,200 feet as a distance between downguys and anchors appears to be based on a misunderstanding of material taken from the BSTLM cost methodology manual. BellSouth witnesses Caldwell and Stegeman argue the 1,200-foot value alluded to by witness Donovan is not a default for anchor and downguy spacing but a hypothetical figure in an example to calculate the number of poles in a span. Witness Donovan offers nothing to dispute this assertion. Therefore, we hereby adopt BellSouth's 500-foot value for downguys and anchors.

We also find it appropriate to require a reduction in the cost of poles from BellSouth's \$300.16 to \$239.31 based on our decision to eliminate BellSouth's miscellaneous contractor charge of 25.43 percent.

#### c. Aerial Structure Contract Labor

AT&T/MCI witness Donovan contends BellSouth's calculations for aerial structure contract labor are flawed for two reasons. First, witness Donovan alleges, BellSouth includes the cost of placing power company poles without taking credit for the number of poles placed. "Because the objective is to determine the installed cost per pole, it is inaccurate to divide the costs of installing two poles (one telco pole + one power pole) by only a single (telco) pole." Second, witness Donovan alleges BellSouth includes costs for placing "Carry-In" poles without taking credit for the number of poles placed. These pole placements, witness Donovan believes, "must be excluded to balance the numerator and the denominator." Witness Donovan's proposed resolution is to exclude from the BSTLM calculations contractor line items that have pole placement costs but no matching quantities of poles, which would result in a reduction of \$38.23 in labor costs for each pole placed.

BellSouth witness Kephart, whose testimony was adopted by BellSouth witness Milner, argues that witness Donovan misinterprets the contract data associated with pole placements. Witness Milner maintains that the cost categories referenced by witness Donovan are additional contract labor costs over and above standard pole-placing costs. For example, the witness explains that the additional costs to carry a pole into a location at the back of a

property line prior to the actual placement of the pole is accounted for as the "Carry-In" line item referred to by witness Donovan. Witness Milner concludes, "These are additional costs that are experienced in the real world, and will be experienced in a forward-looking environment, and are correctly included as part of the average cost of placing poles."

AT&T/MCI witness Pitkin has provided an exhibit illustrating a proposed reduction in the price for aerial poles from \$300.16 to \$239.31. Witness Pitkin has not, however, provided any testimony in support of his proposed reduction. Furthermore, AT&T/MCI witness Donovan, upon whose analysis witness Pitkin has relied, presents proffered no testimony or exhibits supporting witness Pitkin's proposed reduction.

#### DECISION

Given the absence of any evidence to the contrary, we find that labor costs shall be included for the aerial structure categories in dispute. BellSouth's value, however, includes the previously referenced 25.43 percent miscellaneous contractor charge. This loading shall be deleted, and both aerial pole and pole labor input values shall be appropriately reduced.

#### d. Buried Excavation Contract Labor

BellSouth witness Caldwell asserts that while the BSTLM input tables were modified to permit the prices charged by contractors for buried excavation to vary depending on the type of terrain, the agreements between BellSouth and its outside contractors do not differentiate prices by terrain type. "Therefore," witness Caldwell explains, "all excavation cost values are the same regardless of terrain type." The witness continues:

Excavation costs were determined in the same manner as the aerial structure contract labor costs. Contract labor costs for buried excavation activities were obtained from actual outside contractor contracts in each district in Florida. Each district contractor's price was weighted by the amount of usage in the district in 2000 to arrive at a weighted average price per foot for buried excavation in the state.

AT&T/MCI witness Donovan, however, contests BellSouth witness Caldwell's assertion that buried excavation contract labor costs do not vary in seven of the nine types of excavation BellSouth lists in the BSTLM. According to witness Donovan, the BSTLM fails to delineate costs for the following types of excavation: Trench & Backfill, Backhoe Trench, Hand Dig Trench, Cut & Restore Asphalt, Cut & Restore Concrete, Cut & Restore Sod, and Plow Cable. Witness Donovan explains, "BellSouth's witness Caldwell claims that buried excavation contract labor costs do not vary by type of excavation because BellSouth's agreements with its contractors do not vary with terrain type. I believe this to be a misleading statement." Witness Donovan asserts that BellSouth purportedly allows contractors to determine which of the seven types of excavation will be used without direction from BellSouth engineers. He explains:

During my career, in every instance of which I am aware, a contractor hired to install cable was specifically directed to install that cable in a particular manner, as directed by the engineer. This allows the engineer to specify the exact type of construction, and allows economical use of much less expensive plowing where appropriate.

In response, BellSouth witness Milner explains that within the seven categories challenged by witness Donovan, BellSouth negotiates a single price:

The rate per foot is negotiated between BellSouth and, and contractors. We describe the work that we want done, we put a bid sheet out. Various contractors come back and give us their prices for what they would do that unit of work for. We agree to a contract, sign it. And then when we have work, we place the work with those contractors and the prices are those found in the contract.

To this, witness Donovan counters that he does not argue that BellSouth witness Caldwell's statements are "misleading," but rather,

My testimony says that I think that that is an unreasonable or - I don't think it's the most cost-

effective way to do the procurement function, having done the procurement function myself, to mix a very low cost with a much higher cost excavation method and not take advantage of the extremely low cost of plowing cable.

Witness Donovan does not contest BellSouth's assertion that plowing cable is the predominant form of excavation used in rural areas of Florida; in fact, witness Donovan describes BellSouth's stated ratio of 78 percent for plowing cable in rural zones "reasonable." What is unreasonable, according to the witness, is the combining for cost purposes of relatively low cost cable placement methods, such as plowing cable, with a more expensive type of placement, such as backhoe trenching. Witness Donovan proposes a cable plowing input of \$0.80 per foot, while BellSouth proposes a proprietary per-foot input that is several times greater than witness Donovan's proposal. Witness Donovan bases his input value of \$0.80 per foot on industry experience and the FCC's Synthesis Model, which he contends generated a \$0.77 per-foot cost in rural density zones.

#### DECISION

Based on the evidence and testimony presented, we have considered the following options. First, we can accept BellSouth's proprietary single per-foot cost for all types of buried excavation contract labor. Another option is to accept the discrete values recommended by AT&T/MCI witness Pitkin in Exhibit 59. A third option would be to adopt the BellSouth values with the exception of plowing cable, for which witness Donovan offers supporting documentation.

While we believe that BellSouth's practice of merging high-cost and low-cost forms of excavation for the purpose of procuring contracts to perform buried excavation activities may not yield the preferred level of detail desired in a cost study, there is no evidence in the record to dispute that this is BellSouth's business practice. Witness Donovan appears incredulous that each discrete buried excavation activity contracted for by BellSouth does not have a separate per-foot negotiated price; however, he offers nothing factual to usurp the existence of a "one-price-fits-all" approach.

AT&T/MCI witness Pitkin initially offered separate inputs for each buried excavation activity which were subsequently modified, but supplied no documentation to support his exhibits. Asked for the source for the inputs, witness Pitkin cited AT&T/MCI witness Donovan. AT&T/MCI witness Donovan was asked if his testimony supported each input value in the exhibits submitted by witness Pitkin, to which he responded, "I don't discuss all the inputs in my testimony, only some of them."

Given the interval between the depositions on January 18, 2002, and the hearing in this phase of the proceeding on March 11, 2002, coupled with our clear indication of interest in the source of inputs contrary to those proposed by BellSouth, we believe witnesses Donovan and Pitkin had sufficient time to marshal documentation in support of their input values. The witnesses' failure to corroborate their position leaves us little choice but to give greater credence to BellSouth's inputs and adopt them with the exception of the \$0.80 per-foot cost for plowing cable. In theory, the per-foot cost for other forms of buried excavation should be adjusted upward from BellSouth's contract value; however, we find there is no record evidence to calculate such an adjustment.

Here again we note that the deletion of the miscellaneous contractor charge of 25.43 percent will result in decreased input values for a number of activities in this category.

#### e. Buried Splice Pits

On this point, AT&T/MCI witness Donovan asserts that BellSouth spreads its contractor costs for buried splice pits across bore buried cable and buried cable operations, which increases BellSouth's costs. Witness Donovan believes this method of accounting for buried splice pits results in inequities for competitors because, "Splice pits are not needed for normal buried splicing operations because such splices are routinely placed in above ground pedestal enclosures." Witness Donovan contends that since the costs of enclosures are included in BellSouth's Exempt Material Loading Factor, the buried splice pit contractor costs should be excluded from the model.

BellSouth witness Caldwell rejects witness Donovan's premise that the cost of buried splice pits should not be included. The witness contends that:

First, the actual data, i.e., the 2000 contractor activity in Florida, clearly shows that costs associated with buried splice pits, including digging, shoring and costs, do occur. Furthermore, if we were to accept Mr. Donovan's proposal that all buried splices should occur above ground in pedestals, he has not accounted for all of the costs in his proposed inputs.

Costs associated with pedestals would include labor associated with the placing of the pedestals, according to witness Caldwell.

#### DECISION

Witness Donovan's contention that buried splice pit structures are accounted for in the exempt material loading factor appears to misinterpret BellSouth's filing. The costs to which witness Donovan refers in his testimony appear to be labor costs, not material costs. As such, we believe AT&T/MCI witness Donovan's testimony on this issue cannot sustain the conclusion he advocates. Thus, there shall be no adjustment to BellSouth's costs in this category.

#### f. Bore Buried Cable and Push Pipe/Pull Cable

The BSTLM identifies two methods of excavation as unique cost items, Bore Buried Cable and Push Pipe/Pull Cable. The record reflects that boring necessary to bury cable involves use of a drilling device to create subsurface channels through which cable can be run in order to avoid disturbing surface structures, such as roads. The latter cost category refers to the practice of pushing a length of pipe between two points and pulling a telecommunication cable through the pipe.

AT&T/MCI witness Donovan assails BellSouth's per-foot cost for Bore Buried Cable excavation, alleging BellSouth has included in its calculations the price of steel, polyvinylchloride (PVC), non-specific conduit and flexible pipe. Witness Donovan believes that, "Costs for pipe should be excluded, because Boring Buried Cable

does not normally use pipe." The cost of any pipe should be accounted for in the Push Pipe/Pull Cable category, according to witness Donovan.

BellSouth witness Caldwell disagrees with witness Donovan's assessment of the Bore Buried Cable category, contending BellSouth's approach is based on actual contracts listing steel pipe, PVC and flexible pipe as added costs in bidding agreements. Because these pipe costs are actually incurred, witness Caldwell asserts, they are loaded into the BSTLM. Witness Caldwell explains:

This resulted in every foot of boring assuming a fraction of pipe costs (less than 25%). This is a reasonable and factually based approach for identifying pipe costs. It does not imply that every foot of boring requires pipe of some sort.

Witness Caldwell also disagrees with witness Donovan's proposal that all pipe investment be included in the Push Pipe/Pull Cable category. In response, she contends that:

Mr. Donovan prefers to identify the cost of the pipe in the push pipe pull cable category, in reality ignoring the contractual facts. In effect, Mr. Donovan's approach is not based on fact and will result in inaccuracies.

#### DECISION

The record offers clear alternatives on this issue. BellSouth's option is to assess costs for materials across both categories, resulting in a lower per-foot cost for push pipe/pull cable activities while raising the cost for bore buried cable activities. AT&T/MCI witness Donovan believes the conduit investment should be excluded from the bore buried cable category because conduit is not used for bore buried cable activities. Witness Donovan notes his proposal will more than quadruple the per-foot cost for push pipe/pull cable activity.

Witness Donovan's point is well taken. While BellSouth may structure its contracts to include conduit investment for both activities, this practice appears to obscure the relationship between cost causation and cost recovery. Nothing in the record

contradicts witness Donovan's assertion that conduit is not normally used for bore buried cable and BellSouth's procurement practices notwithstanding, competitive interests are not served by attributing costs to activities where costs are not warranted. Therefore, we find that conduit costs from the bore buried cable category shall be excluded, and instead they shall be included in the push-pipe/pull-cable category.

g. Buried Cable

Witness Donovan further believes the BSTLM improperly adds investment to the buried cable category, which results in a higher per-foot cost than is justifiable, based on his experience. In confidential Hearing Exhibit 66, witness Donovan arrives at a per foot cost that is \$0.71 below that advocated by BellSouth. Witness Donovan proposes the per-foot reduction by eliminating the inclusion of conduit, concrete handholds and "other inappropriate costs." Witness Donovan contends the only appropriate costs in this category should be those necessary to place the cable, which forms the basis of his calculations.

BellSouth witness Milner responds, "The costs he (Witness Donovan) refers to are legitimate costs associated with burying cable, thus are correctly included in BellSouth's study. Those real costs of burying cable include such things as disposal costs of trench aggregate, placing additional cables in the same trench, etc."

DECISION

We found testimony on this issue to be limited, and BellSouth witness Milner does not provide a detailed response to witness Donovan's specific proposals as to which investments should be excluded for the buried cable placement category. Witness Donovan is persuasive in his argument that the appropriate method of arriving at a per-foot cost for placing buried cable is to include only those costs that can be specifically identified with the activity, and divide the costs by the number of linear feet of cable placed. In the absence of detailed rebuttal from BellSouth witnesses, we adopt witness Donovan's proposal and reduce the per-foot rate of placing buried cable by \$0.71.



h. Underground Excavation Contract Labor

According to BellSouth witness Caldwell, the BSTLM input tables were modified to allow contractor underground excavation prices to vary contingent on terrain type. The witness notes, however, that contracts between BellSouth and its outside contractors do not differentiate by terrain type, similar to buried excavation contract labor.

To derive the figures in the BSTLM, witness Caldwell explains that:

Contractor labor costs for underground excavation activities were obtained from actual outside contractor contracts in each district in Florida. Each district contractor's price was weighted by the amount of usage in the district in 2000 to calculate a weighted average price per foot for underground excavation in the state.

Witness Donovan emphasizes, however, that BellSouth assumes eight types of underground excavation labor: 1) Rocky Trench; 2) Trench and Backfill; 3) Backhoe Trench; 4) Hand Dig Trench; 5) Cut & Restore Asphalt; 6) Cut & Restore Concrete; 7) Cut & Restore Sod; and 8) Bore Underground Cable. For Florida, the BSTLM assumes zero percentage occurrence for rocky trench excavation. Witness Donovan is nevertheless critical of BellSouth's methodology in arriving at a per-foot cost for the remaining seven categories of underground excavation, because BellSouth includes the cost to bore underground cable, which he alleges is a rarely used, high-cost activity. Witness Donovan contends:

BellSouth's overall combined weighted input costs for underground conduit placing per foot vary significantly between Rural, Suburban, and Urban density zones. One might ask, if excavation costs are the same regardless of the excavation method, then why are the costs by density zone not the same? The answer is simple. BellSouth inappropriately used an extremely high Bore Underground Cable Cost, and then applied varying percentages of use by density zone as a "fudge-factor" to make the cost per density zone vary.

Using BellSouth proprietary data, witness Donovan contends the frequency of use of Bore Underground Cable by BellSouth is less than one half of one percent (0.47%) on a linear foot basis. Witness Donovan alleges, however, that BellSouth allocates this "rare, and extremely high cost type of construction" as 2.67 percent in rural zones, 5.75 percent in suburban zones, and 12.5 percent in urban zones. Witness Donovan concludes, "I recommend adjusting these BSTLM input percentages, based on underground route feet produced by [the] BSTLM, to result in an overall average of 0.47%, but varying density zone based on sheath feet differences." It is noteworthy that neither BellSouth witness Caldwell nor witness Milner directly address AT&T/MCI witness Donovan's criticisms of the allocation of Bore Underground Cable percentages.

Witness Donovan also advocates reallocating restoration costs for asphalt, concrete and sod to the appropriate underground excavation categories instead of spreading the cost of all three across all categories of excavation. To this, BellSouth witness Caldwell responds, "Rather than argue about subject matter expert based estimates in the BSTLM of how often these restoration costs actually occur, BellSouth chose to spread these costs out over buried cable placements, underground placements, buried boring and underground boring to develop the average placement costs based upon what actually occurred in Florida."

#### DECISION

Work papers submitted by BellSouth in this proceeding support witness Donovan's conclusion that the occurrence of the activity labeled Bore Underground Cable is negligible in Florida. Conversely, BellSouth's tables show the percentage of activity attributed to Bore Underground Cable as indicated by witness Donovan for rural, suburban and urban density zones. No BellSouth witness addresses this apparent incongruity and the matter is not addressed in BellSouth's brief. By omission, whether intentional or inadvertent, the available evidence favors witness Donovan's position. We find it appropriate to adopt witness Donovan's proposal on this point, and the appropriate inputs for Bore Cable.

Conversely, we decline to adopt witness Donovan's proposal to reapportion restoration costs in the model. While there may be merit in witness Donovan's proposal, outstanding questions regarding implementation give us pause. Witness Donovan purports

to demonstrate how he achieves per-foot reductions in the removal and restoration of concrete, asphalt and sod, but does not offer an explanation of his methodology. Witness Donovan also fails to address the frequency with which he believes these activities may occur, leaving us in a position of accepting BellSouth's inputs or AT&T/MCI witness Donovan's incomplete analysis. Upon consideration, we adopt BellSouth's inputs for all other categories. However, here again we note that the elimination of BellSouth's 25.43 percent miscellaneous contractor charge, reduces input values in this category. In addition, a reduction in the loading for conduit material, as explained in detail in the ensuing decision is appropriate, based on the reduction in engineering factors. The reduction in the loading for conduit material will further decrease the input values in this category.

i. Conduit Material

AT&T/MCI witness Donovan alleges BellSouth's methodology for arriving at a per-foot cost for conduit material is flawed by the application of a 40 percent loading factor, which he argues artificially inflates BellSouth's price. BellSouth witness Caldwell counters that the 40 percent loading factor is actually a conservative estimate of BellSouth's costs which, if averaged over a three-year period from 1998 to 2000, would result in a loading factor of 49 percent.

Witness Caldwell believes the loading on conduit material is appropriate, because it properly captures miscellaneous material costs incurred for the material. These costs, according to witness Caldwell, include engineering (28 percent of the 40 percent loading factor), exempt material (eight percent of the 40 percent loading factor), and other costs, including plant labor, supply expense, contract labor, right of way and interest during construction (four percent of the 40 percent loading factor). Witness Caldwell explains:

The costs identified here are not included in the bill from the contractor. Specifically, this factor excludes exempt material, supply expense, engineering and other miscellaneous costs that are considered in the conduit account. Mr. Donovan says exempt material should be excluded from the account: however, he is incorrect. Documents we filed associated with the cost study clearly

indicate the exempt material dollars are charged against the conduit account and in fact make up 8 percent of the 1998 factor. Again, these are real dollars incurred by BellSouth that BellSouth should be allowed to recover.

Witness Donovan, however, disputes the validity of the 40 percent loading factor, and instead advocates a reduction of BellSouth's engineering factor, as well as the elimination of the exempt material input. Witness Donovan believes that based on industry experience, the appropriate engineering factor for conduit material should be 12 percent, not BellSouth's proposed 28 percent. As far as exempt material, witness Donovan explains, "There are no exempt materials that are added to plain white pipe. A pipe is a pipe, and such things as nuts and bolts do not apply." Witness Donovan does not advocate changing the four per cent input for other materials. Reducing BellSouth's loading factor from 40 percent to 16 percent would result in a reduction of BellSouth's proprietary per-foot cost by \$1.11, according to AT&T/MCI witness Donovan.

#### DECISION

Based upon the evidence and testimony presented, we have considered the following options regarding the appropriate loading for conduit. BellSouth witness Caldwell proposes a 40 percent loading, while witness Donovan proposes 16 percent. Another alternative is to adopt engineering factor of 6.313 percent, which is an average of our proposed engineering factors for underground copper cable and fiber discussed previously in this Order. We find an average of the two to be appropriate because the available data do not support a distribution of conduit between copper and fiber cable on this issue. There is no dispute between the witnesses on the viability of four percent loading for other costs, and we therefore retain this figure, bringing the alternative loading up to 10.313 percent. This leaves the extent to which exempt material should be included, if at all, in this loading. The testimony on the appropriateness of including exempt material in this loading leaves us disinclined to exclude recovery completely. However, BellSouth has done little to inspire confidence that the 11 percent historical figure or eight percent figure proposed for exempt material in this loading relates directly to conduit. Given the ambivalence surrounding the inclusion of an exempt material factor in this loading, a compromise is appropriate. Therefore, BellSouth

shall be allowed to include a 5.5 percent exempt material factor in its conduit loading, which is half of the four-year historical average of 11 percent. The 5.5 percent, added to the existing 10.313 percent results in a loading of 15.813 percent, which we find appropriate and hereby adopt.

j. Buried Restoration

BellSouth labels the activities necessary to restore the ground surface in the wake of underground cable placement, "Buried Restoration." BellSouth provided exhibits that demonstrate these activities may include the replacement of asphalt, concrete, gravel or dirt, reseeding or other necessary restoration operations.

Rejecting the notion that these activities are, in fact, properly addressed in the BSTLM, AT&T/MCI witness Donovan first contends that BellSouth has erred in its application of buried restoration activities by aggregating the costs of the activities and spreading them over all structure accounts related to buried cable placement. Witness Donovan finds this approach problematic because, he maintains, ". . . performing Boring Cable operations is done to avoid the need to cut and restore the ground surface; therefore, surface restoration costs are inappropriate for Boring Cable. Plowing Cable also requires no surface restoration activities."

Second, witness Donovan contends, BellSouth distributes the cost of splice pits over bore cable and buried cable placement accounts. This is inappropriate, according to the witness, because splices for buried cable are normally contained in above ground pedestal enclosures, and the material costs for these enclosures are included in the Exempt Material Loading Factor. He further contends that the labor is already included in the category of splicing labor.

Finally, witness Donovan contends that BellSouth assesses the cost of furnishing and placing various diameter corrugated pipe on all placement accounts, which he believes is inappropriate because, "By definition, buried cable involves cable in contact with dirt, not pipe."

BellSouth witness Caldwell counters by noting that:

While Mr. Donovan seems to agree these restoration costs are appropriate costs to include in the bottoms-up study, he appears to disagree with the manner in which BellSouth has spread those costs over buried cable placement and boring costs.

Witness Caldwell then explains that BellSouth chose to spread the buried restoration costs over all accounts to derive the most accurate per foot cost for restoration on a Florida-specific basis. Witness Caldwell further cautions that if witness Donovan's approach is approved by us and restoration costs are allocated directly to specific operations, a reduction in per-foot costs will result in some operations, while an increase in costs will occur in others.

Witness Donovan does, however, recognize that his proposal may result in increased costs in certain categories. Nevertheless, he notes, "But I believe this is the more appropriate way of allocating costs into the correct categories. I just think it's the right thing to do."

#### DECISION

As noted in our decision on the issue of underground excavation contract labor, the concept advocated by witness Donovan has validity, but his analysis does not achieve a level of completeness that allows a thorough evaluation of his conclusions and proposed implementation. While BellSouth's method of distributing restoration costs across all buried cable and bore cable activities may admittedly create some blurring of distinctions between cost causation and cost recovery, we believe the parties have provided limited opportunities for resolution on this issue. Thus, no changes shall be made on this issue.

#### k. Manholes

BellSouth witness Caldwell asserts that costs for manholes/underground structures, in which telecommunications cables may be spliced and transmission equipment located, are based on

actual outside contractor contract costs.<sup>1</sup> Witness Caldwell explains that each district contractor's price was weighted by the amount of usage in the respective district in 2000 to arrive at a weighted average price for furnishing and installing conduit in manholes in Florida. Because contractors charge BellSouth for placing manholes on a per cubic foot basis, the BSTLM inputs for manholes were based on the total cubic feet of the different sizes.

We note that in BellSouth's revised 120-day filing, revisions were made that affected the development of manhole costs. In a letter accompanying its third revision of the 120-day filing, counsel for BellSouth explained that BellSouth had neglected to apply certain loadings to Type 1 (less than 351 cubic feet) and Type 2 (greater than 351 cubic feet) manholes. The application of the miscellaneous loading (25.43 percent) and material loading (40 percent) factors increased the per-cubic-foot cost of a Type 1 manhole from BellSouth's contracted cost of \$48.06 to \$84.39 and increased the per-cubic-foot cost of a Type 2 manhole from \$16.90 to \$29.68.

In response, AT&T/MCI witness Donovan calls into question BellSouth's methods of arriving at a per-cubic-foot cost for manholes. First, witness Donovan contends that BellSouth's sample size consists of seven manholes, one of which is an "exceptionally high-cost Type-A manhole that is almost 3 times the cost of the other 6 manholes in the sample." Witness Donovan advocates the exclusion of the Type-A manhole for calculating the cubic-foot cost.

Second, witness Donovan contends that BellSouth attempts to inflate the cost of manhole covers and collars by distributing the costs of 207 manholes and collars over the seven manholes in its sample. This mismatch between numerator and denominator results in the allocation of 30 manhole covers for each manhole in the sample, according to witness Donovan. The witness maintains that BellSouth's methodology of calculating manhole cover and collar costs is flawed, because covers and collars do not change in size in relationship to the size of the manhole, retaining the same 30-inch diameter regardless of the size of the manhole beneath.

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<sup>1</sup>Also referred to by witnesses as "vaults."

In addition, witness Donovan argues that BellSouth underestimates the capacity of manholes to handle conduit, leading BellSouth to gravitate unnecessarily to larger structures, which, when costs are calculated on the basis of cubic footage, results in inflated prices to ALECs. The witness asserts that, "BellSouth claims that its smallest manhole is 4 feet wide by 3 feet deep by 6 feet long (72 cubic-feet)." Referring to Hearing Exhibit 68, witness Donovan contends that a 72 cubic-foot manhole can support four cables and retain space for additional cables, and that even smaller vaults (52.5 cubic feet) can accommodate four cables. Witness Donovan attached drawings from two vendors purporting to demonstrate that underground vaults of less than 100 cubic feet are capable of accommodating up to 12 cables, compared with the BSTLM's use of a 504-cubic-foot manhole to accommodate 12 cables.

Furthermore, witness Donovan argues that BellSouth's final cubic foot costs are unsupported by cost data. He believes that BellSouth also "fails the test of logic" in proposing that the installed price of a 224 cubic-foot manhole is \$19,337.15, even though the installed price of a 503 cubic-foot manhole is \$15,330.54. Witness Donovan also dismisses BellSouth's addition of its 25.43 percent miscellaneous factor and its addition of a 40 percent material loading as a "grab-bag of alleged contractor items that have nothing to do with manholes, and certainly nothing to do with manhole covers."

Finally, witness Donovan alleges that BellSouth's 40 percent loading factor includes exempt material costs that include manhole covers and collars. What this means, according to witness Donovan, is that:

BellSouth should not be allowed to recover the costs of manholes covers and collars through its exempt material loading factors and also include the cost of that material directly in its computation of total manhole costs.

Witness Donovan proposes recalculating the costs of manholes, collars, and covers as follows:

- (1) retain the BSTLM's use of 72-cubic-foot manholes with 4-cable capacity for all existing applications in the model involving the use of four cables;



(2) replace all 224-cubic-foot manholes housing four cables with 72-cubic-foot manholes with 4-cable capacity;

(3) replace all 703-cubic-foot manholes housing five cables with 5-cable capacity 224-cubic-foot manholes;

(4) compute the cost of one manhole cover and collar for each manhole based on contractor data; and

(5) eliminate manhole cover and collar costs that are based on the cubic footage of the manhole.

Witness Donovan's proposals produce a per-cubic-foot cost of \$16.90, regardless of size, and a flat rate of \$246.48 for manhole covers.

At hearing, BellSouth witness Caldwell appeared to confirm witness Donovan's observation that the size of manhole covers does not change based on the size of the subsurface vault. Responding to a question as to whether the size of a manhole collar and the manhole cover depend upon the size of the manhole itself, the witness acknowledged that

I don't believe the actual cover does. You can have different heights of collars. But the way the input that we input into the model we just used the one collar cost that is associated here.

Likewise, witness Caldwell appears to acknowledge flaws in the cost development methodology for manholes and manhole cover costs. In responding to witness Donovan's statement that BellSouth distributed the costs of 207 manhole covers and collars over 7 installed manholes, witness Caldwell concedes that witness Donovan is "mathematically correct," but further contends that:

. . . one must consider that it was BellSouth's aim in the input development to create simple, understandable, and supportable inputs. In regard to Manhole costs, BellSouth originally chose to use cubic feet as the approach to develop costs. Thus, all incurred manhole costs were divided by the installed cubic feet. In most areas and circumstances this simple method is appropriate.

Thus, while acknowledging doubts about the efficacy of BellSouth's approach, witness Caldwell rejects witness Donovan's proposals, as follows:

In fact, Mr. Donovan failed to recognize that BellSouth's simplified inputs also resulted in 'distortion' of the costs for large manholes (Size 5) and the smaller manholes (Sizes 1, 2 and 3). According to the contract, BellSouth incurs a much lower per cubic foot cost for the larger manholes (above 351 cubic feet) than for smaller manholes (under 351 cubic feet). Thus, if we attempt to override BellSouth's simplified inputs on the manhole covers, it must also take the step of applying the appropriate contractor costs for the size of the manhole.

Witness Caldwell therefore concludes that we should approve per cubic-foot rates of \$84.39 for 72-cubic-foot manholes and 224-cubic-foot manholes, a rate of \$29.68 per cubic foot for 502-cubic-foot manholes and a flat rate of \$432.82 for manhole covers regardless of size. These rates, according to the witness, include the application of the loadings filed in the third revision of BellSouth's 120-day filing.

#### DECISION

Upon consideration, we adopt witness Donovan's proposal on manhole sizes and manhole collars and covers accordingly:

1. We shall use 72-cubic-foot manholes with 4-cable capacity for all existing applications in the model involving the use of four cables.
2. We shall replace all 224-cubic-foot manholes housing four cables with 72-cubic-foot manholes with 4-cable capacity.
3. We shall replace all 703-cubic-foot manholes housing five cables with 5-cable capacity 224-cubic-foot manholes.
4. We shall compute the cost of one manhole cover and collar for each manhole based on contractor data.
5. We shall eliminate manhole cover and collar costs that are based on the cubic footage of the manhole.
6. We shall eliminate the application of the 25.43 percent miscellaneous contractor charge.

Further, we adopt BellSouth's per-cubic-foot manhole contract unit costs, before any loadings, of \$48.06 for Type 1 (less than 351 cubic feet) and \$16.90 for Type 2 (greater than 351 cubic feet), and \$246.48 for manhole covers.

As noted in the decision on the conduit material issue, a number of options present themselves to us to resolve the dispute over the appropriate loading for manholes. BellSouth witness Caldwell proposes a 40 percent loading, while AT&T/MCI witness Donovan proposes elimination or, failing that, 16 percent. Another option is to adopt the engineering factor of 6.313 percent. This represents the average of 7.51 percent for copper and 5.11 percent for fiber, as previously discussed in this Order, retain the four percent loading for other materials that is not in dispute, and allow a 5.5 percent loading for exempt material to arrive at a loading of 15.813. We find this last option appropriate, and adopt it as such.

#### 1. Structure Sharing

AT&T/MCI witness Donovan is also critical of BellSouth's proposed input of 0.07 percent for structure sharing -- the percentage of BellSouth's conduit leased by other parties -- contending the figure is "highly suspect." Witness Donovan contends:

Whereas Verizon claims that more than 30 different companies occupy its conduits in Manhattan, it appears that BellSouth is either monopolizing access to its own ducts and creating severe barriers to entry, or is mistaken in its forward looking structure sharing projections.

To resolve this, witness Donovan proposes that we change the input for structure sharing to 50 percent in rural density zones and to 33 percent in suburban and urban density zones.

In response, BellSouth witness Milner observes that witness Donovan's recommended inputs are, "not realistic" and should not be adopted. Witness Milner contends that witness Donovan's proposal has no basis in the record other than witness Donovan's own personal experience outside the state of Florida.

Witness Milner further explains:

First, due to work coordination, safety and available space considerations, significant sharing of underground construction costs is very unlikely and thus BellSouth seldom, if ever, shares in underground excavation. Underground structure sharing would occur only when BellSouth is excavating for underground conduit and other parties are willing to share that excavation and conduit cost with BellSouth. However, BellSouth rarely, if ever, jointly places conduit with another party.

Witness Donovan is, however, also critical of BellSouth's inputs regarding buried structures:

BellSouth has assumed that it never encounters cases where housing development contractors provide free trenches for BellSouth. In addition, BellSouth claims that joint buried trenching only occurs 6% of the time. Based on my experience, this is an extremely low number.

Witness Donovan proposes the same inputs be applied to buried structure accounts as those he proposes for sharing conduit: 50 percent in rural zones and 33 percent in urban and suburban zones.

At hearing, witness Donovan did acknowledge that his recommended inputs are not based on any documentation in the record and offers nothing to refute the inputs recommended by BellSouth. When asked if the imposition of strict sharing inputs would mean BellSouth would under-recover its costs if it cannot locate other parties to share buried structure placement expenses, witness Donovan explained:

Once again, I'm not a cost recovery person, but if I have got to answer as an engineer, to me it means that extra effort needs to take place to coordinate the activities of the telephone company, the power company, the cable TV companies, municipal traffic lights, cabling companies and a number of others so that the streets are not dug up every year or every nine months in your cities."

Witness Milner argues that sharing the costs of buried structures is rare because of timing problems and because CATV and

power lines are already in place. Witness Milner also emphasizes that in Order No. PSC-99-0068-FOF-TP, in Docket No. 980696-TP, we found, "Accordingly, we hereby adopt each LEC's proposed sharing percentages because they are a reasonable surrogate for sharing percentages likely to be achieved by an efficient provider of basic service."

#### DECISION

We have addressed this issue in proceedings dating back to 1996, including Docket Nos. 960757-TP, 960833-TP, 960846-TP and 980696-TP. In these dockets, we declined to adopt the position advocated by AT&T and MCI that in a forward-looking, competitive environment there will be significantly "greater opportunities and incentive for telecommunications companies to share pole lines, trenches, and conduit runs." See Order No. PSC-98-0604-FOF-TP, p.77 In this order, which was issued to resolve arbitration issues between BellSouth and AT&T, WorldCom, and Metropolitan Fiber Systems of Florida, Inc., we provided a comprehensive treatment of the structure sharing issue. Significantly, we found that the "cost causer" was responsible for any rearrangement occasioned by structure sharing. In addition, we found that placement of telecommunications lines in proximity to high voltage lines could cause interference and that insistence on joint trenching could prompt poor economic decisions. Accordingly, we concluded:

We are not persuaded by AT&T/MCI's argument that a competitive environment will encourage more structure sharing, at least in the foreseeable future. Therefore, we find it appropriate to accept BellSouth's structure sharing assumptions.

Id., p.78

Subsequently, in Order No. PSC-99-0068-FOF-TP, we found, "While this proceeding is to determine the cost of a forward-looking scorched node network, there needs to remain a basis in reality if the costs developed for the networks are to have any relevance to the cost of basic local telephone service. We believe that assuming sharing percentages which require, for example, power and cable TV companies to rebuild their networks so that more of the cost of a telephone network can be shifted to other industries,

means a network severed from reality." Again, we rejected the AT&T/MCI recommended structure sharing inputs.

Nothing in the record of this proceeding overcomes our aforementioned conclusions that although structure sharing percentages should reflect forward-looking values, they must be tempered by reality. Therefore, we decline to adopt changes to BellSouth's inputs.

m. Feeder/Distribution Facility Sharing

AT&T/MCI witness Donovan believes the BSTLM does not assume a forward-looking perspective for feeder and distribution cable structure sharing, which refers to those occasions when the feeder and distribution cable share the same geographic route and can share space on or within a facility. Witness Donovan explains that structures are "a high cost limited resource," and that the investment should not only be shared with other service providers, but used as a resource for both feeder and distribution cables.

In its model, witness Donovan asserts, BellSouth assumes feeder and distribution cable laid along the same route share the distribution cable structure 25 percent of the time. Witness Donovan believes that in a TELRIC environment, facilities would frequently be shared; thus, he proposes modifying the input "to reflect the fact that feeder facilities ride on or in structures already built by distribution plant 75% of the time." Witness Donovan further explains the meaning of this percentage, stating:

It's not that 75 percent of the distribution cable shares the structure, it's that 75 percent of the feeder -- first of all, there are many more sheath feed [sic] distribution. It's like the veins versus the capillaries. So there is a lot of small distribution cable. So much so that there is plenty of structure around and when an engineer designs a feeder route, the engineer will look for structure that is already there to support the distribution.

Witness Donovan also relies on an order by the State Corporation Commission of Kansas (Docket No. 99-GIMT-326-GIT) determining Kansas-specific inputs to the FCC's cost proxy model to establish a cost-based universal service fund for that state. At

pages 27-28 of the Order, the Kansas Commission found that in an evaluation of 14 selected wire centers, "In every case, at least 40 percent of the feeder routes also included distribution cable. In some wire centers, the percentage was much higher."

BellSouth witness Milner concedes that data does not exist pertaining to this percentage, but contends that, "[T]here are many reasons that sharing of structures between feeder and distribution do not happen that frequently, including timing of placements, need for more frequent access to distribution cables than to feeder cables, etc." Though lacking data upon which to base a percentage, witness Milner argues, "BellSouth's estimate is based on BellSouth Network's experience and forward looking projections regarding the infrequency of such occurrences."

### DECISION

We have a number of options before us to establish the value for this input. We can accept either BellSouth's 25 percent, witness Donovan's 75 percent, the Kansas Commission's finding of 40 percent, or some other number.

Given the lack of supporting documentation, any of the figures recommended by the witnesses may be as valid as any other. We found witness Donovan's arguments that the value should be set at 75 percent most persuasive in view of apparent support for his rationale by the Kansas Commission. As such we adopt this figure for this input.

### 3. CABLE PLACEMENT COSTS

#### a. Copper Cable Placement Costs

AT&T/MCI witness Donovan offers four specific criticisms of BellSouth's copper cable placement costs. Witness Donovan criticizes: 1) BellSouth's failure to correctly populate the BSTLM with travel and set-up times that would lead to reasonable productivity; 2) its assumption of low cable splicing rates; 3) its inclusion of copper cable stubs in underground construction; and 4) its use of a material loading factor, plant labor, and interest during construction.

i. Travel and Set-up Times

Witness Donovan argues that a reasonable amount of time for a crew to travel to a work site is 15 minutes, and that two hours is a reasonable time for a crew to set up a cable placing operation. Witness Donovan argues that it is not possible to determine what inputs BellSouth uses for travel and set-up times because BellSouth folds travel and set-up times into a single proprietary figure that yields a chronological increment for each 100 feet of cable placed. In effect, witness Donovan contends, BellSouth's decision to use a per-100-foot input value for cable placement creates a linear loading for copper cable placement, which he believes violates our the direction in Order No. PSC-01-2051-FOF-TP.

Witness Donovan summarizes his disagreement with BellSouth's results accordingly:

The reason why the BellSouth method fails is simple. The result of BellSouth combining setup costs into a Cable Feet Placed per Day productivity figure is equivalent to BellSouth assuming that its technicians will travel to the work site, place 100 feet of cable, and stop work. The work crew would then travel to another work site, place 100 feet of cable, and stop work. It would then travel to a third work site, place 100 feet of cable, and return to the garage.

Witness Donovan, therefore, recommends that we order BellSouth to file bottoms-up cable placement inputs "with reasonable productivity numbers." Based on his experiences, witness Donovan expects an underground placing crew to place 3,000 feet of cable a day, a buried cable crew to place 8,000 feet of cable daily, and an aerial crew to place 5,000 feet per day.

At his deposition, BellSouth witness Kephart responded,

Mr. Donovan has his own set of theories, but we use the same information that we use to manage our own business in the construction. That's what we are using as input into developing these cost models. So we are dealing with actuals, and I'm not sure where his information is coming from. But we are dealing with actuals. And let me further state we are dealing with actuals in the State



of Florida, and he is talking from his experience, which, I think is outside the State of Florida.

We note that the time allocated for travel and set up for slicing cable pairs in the BSTLM, while proprietary, is more than double the time increment proposed by AT&T/MCI witness Donovan.

ii. Copper Cable Splicing Costs

Generally, witness Donovan raises the same criticism of BellSouth's proposed splicing rates for copper cable that he raised in the context of BellSouth's copper cable placing costs -- that BellSouth fails to account specifically for travel and set-up times, providing only a proprietary figure for cable pairs spliced per hour, which is equivalent to a linear loading factor. Specifically, witness Donovan contends:

In the case of any copper cable larger than 100 pairs, such as splicing a 200-pair cable, BellSouth's model creates costs equivalent to traveling to the job location, preparing the splice, splicing 100 pairs, closing up the splice case, driving around the block, opening up the same splice case, splicing 100 more pairs, closing up the splice case, and then going home for the day. In the case of a 4200-pair copper cable, the example is simply 42 iterations of the 100-pair splice operation.

Witness Donovan advocates discarding BellSouth's approach, and implementing, instead, a "conservative" splicing rate of 300 pairs per hour, which we note is more than three times the per-hour proprietary rate proposed by BellSouth.

Witness Donovan relies on two sources for corroboration of his proposed 300-pair per hour rate. The first is a letter from AMP Incorporated, a manufacturer of wire connectors, which states that an "average" technician can splice 300 cable pair per hour and a skilled technician should be able to splice 500 pairs per hour. Witness Donovan also references the FCC's Universal Service Fund Final Inputs Order at §218, which found that a splicing rate of 250 pairs per hour, presuming average conditions, was an appropriate assumption for Universal Service modeling.

At hearing, BellSouth witness Caldwell suggested that this debate is of little consequence, since BellSouth rarely experiences large-scale splicing operations. The witness maintains:

One of the things, though, that I pointed out in Phase 1 of the cost docket is that predominantly in the BSTLM the cable placements are approximately, close to 50 percent 25-pair. You have very little over 100. There was an exhibit to my testimony. So predominantly, the numbers in the first two columns [referencing Hearing Exhibit 43], 25 and 100, come into play in the modeling.

### iii. Copper Cable Stub Investment

Here, AT&T/MCI witness Donovan contends BellSouth doubles the cost of copper cable splicing at each splice point to account for copper stub cables. The stub cable is a cable that brings the splice point up to the surface so that maintenance can be done on the surface, rather than in a subsurface structure.

Witness Donovan contends that a copper stub cable is required only in a situation where a copper splice case, which is normally limited to four cable entry/exit holes, requires five or more cable entry/exit points. Witness Donovan describes circumstances that would require the use of a stub cable as, "very unusual." The witness explains:

If the splice point is a branch point, then one cable enters the splice case from the central office, one cable exits the splice case to serve a side-leg branch off the main cable path, and one cable exits the splice case to continue on down the main cable path, which requires the use of three holes.

Quoting from the BSTLM Methodologies Manual, witness Donovan, however, contends that BellSouth's own protocols eschew the use of more than three cables at a splice point:

The model will place a splice point at which the cable changes size. Splicing can occur at any plant locations (DTBT, FDI [feeder/distribution interface], and DLC [digital loop carrier]). In addition to these plant locations, the model will place a splice at each junction

point of the network. A junction point typically represents a road intersection where the cable splits into two directions. This would occur where a road segment intersects a perpendicular road segment forming a "T." Junction points are noted in the data as JCTN.

Based on this excerpt, witness Donovan concludes that copper stub cables are unnecessary, and as such, we should order BellSouth to remove any stub cable costs.

BellSouth witness Stegeman responds that the inclusion of stub cable investment in the BSTLM at each splice point is not an error. He contends:

Rather, it is a difference of opinion as to whether a stub cable is required for underground placement. As I understand the modular splicing rules and as the BSTLM is subsequently coded, a stub and an additional splice are required to facilitate CSA [carrier serving area], DA [distribution area], and AA [allocation area] administration.

#### iv. Miscellaneous Material Loading Factor

As emphasized in their post-hearing briefs, the parties disagree over the appropriate method of applying the miscellaneous material loading factor in the BSTLM and whether double counting has occurred in BellSouth's exempt material accounts, which are the basis of the material loading factor. The parties do, however, apparently agree that exempt materials are "nuts and bolts" items that are exempt from "cradle to grave" tracking under the FCC's System of Accounts for telecommunications companies. We note that a 71-page list of items comprising exempt materials was submitted as Hearing Exhibit 7, Item No. 5. Witness Caldwell explains that the list of materials contained in Exhibit 7 is not used in the BSTLM, which instead uses an overall exempt material dollar figure.

Specifically, the parties dispute the appropriate method of applying the miscellaneous material rate. AT&T/MCI witness Donovan argues that exempt materials are normally computed as a portion of a technician's fully loaded labor rate, based on actual material usage audits. He maintains that the labor component usually ranges from \$6 to \$10 per hour for cable splicing technicians and cable

placing technicians. Witness Donovan concedes he did not perform an analysis of the exempt material loading, but notes, "I believe that Exempt Material is already included in the fully loaded labor rate proposed by BellSouth, and that the Miscellaneous Material Rate proposed by BellSouth should be disallowed as double counting." Witness Donovan suggests that if BellSouth can prove exempt material has been excluded from the fully loaded labor rate, we should limit the exempt material loading rate on labor to 20 percent.

BellSouth witness Caldwell responds that the miscellaneous material loading factor develops a relationship between exempt and non-exempt materials, which is subsequently applied as a percentage to forward-looking material prices. BellSouth witness Caldwell rejects witness Donovan's advocacy of the inclusion of exempt material costs in labor rates. In addition, maintains witness Caldwell, the recommended 20 percent cap on the exempt material, "Besides being arbitrary, Mr. Donovan's method is inappropriate." Witness Caldwell explains:

Exempt material varies by field reporting code; the amount of exempt material associated with aerial placements is not the same as buried or underground placements. Furthermore, the amount of exempt material associated with cable provisioning varies vastly between copper and fiber placements. On the other hand, labor rates do not vary. A splicer is paid the same per hour whether he is splicing aerial, buried, or underground cable.

At hearing, witness Caldwell referenced Hearing Exhibits 49 and 50 with regard to the concern of double counting of network interface devices (NIDs) and cable drop investments, concluding that not only could she not confirm what the potential overstatement for NIDs and drops is, but she could not identify the understatement for aerial terminals, which she contends get excluded because they are assigned to Accounts 248 and 548.

As further support for AT&T/MCI's contentions, AT&T/MCI witness Pitkin relies upon a quote from a Reply Affidavit filed by witness Caldwell in a 271 proceeding in the state of Georgia. The portion of the affidavit quoted by witness Pitkin reads as follows:

The material costs of the service drop wires and associated NID units are classified to exempt material. The cost of exempt material, however, is distributed as part of the monthly allocations process to the various ACCs (including ACC 248 and ACC 548) based on the direct labor dollars associated with each ACC.

Reply Affidavit of D. Daonne Caldwell, CC Docket No. 01-277, paragraph 37. From this language, witness Pitkin concludes:

Because the BSTLM explicitly models the costs of NIDs and drops, the exempt material loading factor should exclude these items. BellSouth did not remove any of the exempt materials associated with NIDs or drop wires in its calculation of the exempt material loading factor and thus double-counts these investments.

BellSouth witness Caldwell contends that witness Pitkin quotes selectively from her Reply Affidavit and that a complete reading neutralizes witness Pitkin's assertion. According to witness Caldwell, we must consider the full text, which reads:

The labor-related costs of placing service drop wires and the associated NIDs are assigned to Asset Category Code ("ACC") 248 (Aerial cable - Metallic Drop). The material costs of the service drop wires and associated NID units are classified to exempt material. The cost of exempt material, however, is distributed as part of the monthly allocations process to the various ACCs (including ACC 248 and ACC 548) based on the direct labor dollars associated with each ACC. In the development of in-plant factors for ACC 022 (Aerial Cable -Metallic) and ACC 045 (Buried Cable - Metallic), BellSouth does not include any of the assignments to ACC 248 or ACC 548. Therefore, the costs of placing service drops and NIDs are not reflected in the in-plant factors.

Caldwell Reply Affidavit, CC Docket 01-277, ¶37, emphasis added. Witness Caldwell concludes, "Again, BellSouth excluded ACCs 248 or 548, the asset accounts containing NID/drop costs, in the development of the material loading factors. Thus, Mr. Pitkin's claim is without merit."

In its brief, AT&T/MCI specifically cite five items or categories of items that they believe should be excluded from the list of exempt materials identified in Hearing Exhibit 7: 1) bracket tap video; 2) card 56 Kbps CO SM8806-1318-1 through CARD T1 CO EXT. 8806-1325-1; 3) CASE COIL 1 MOD 1PR through CASE MODULAR 6SGL COILS, COIL LOAD LID TP 880040-1; 4) DROP COMP 2FB2TWP 37581590-250 through 37581590-750; and 5) FRAME&COVER MNHL B30 through SH30.

AT&T/MCI witness Donovan also takes issue with two other inputs that are included in BellSouth's Material Loading Factor, the Other-Plant Labor-Indirect Salaries, Benefits, and Other category; and Other-Interest During Construction Items. Witness Donovan assails BellSouth's inclusion of plant labor, indirect salaries, benefits, and other expenses as a loading on non-exempt material. He maintains that direct supervision costs are already components of the fully loaded labor rate, which would mean BellSouth would over recover its expenses. Witness Donovan proposes excluding the category Other-Plant Labor-Indirect Salaries, Benefits, and Other from the Material Loading Factor.

Finally, AT&T/MCI witness Donovan contends BellSouth has improperly used the Interest During Construction input, but offers no evidence to buttress his argument.

BellSouth witness Caldwell contests witness Donovan's assertion that direct supervision and other indirect expenses are already components of the fully loaded labor rate in the BSTLM, arguing instead that, "While it is true that direct supervision is included in the labor rates, it is not included in the Other-Indirect factor created for this filing." She continues, "The salaries, benefits, and other direct costs are for 'supervision and support **above the first level** (emphasis by the witness) of work reporting plant employees.' These costs are not direct supervision costs, as Mr. Donovan claims." She also disputes witness Donovan's assertions regarding the Interest During Construction input and maintains that BellSouth adheres to the rules promulgated by the FCC for outlining costs and refers specifically to 32 C.F.R. 32.200(c)(2)(x) as the basis for BellSouth's inclusion of interest during construction. BellSouth witness Caldwell also notes that Hearing Exhibit 48 (DDC-5, 120 day, p.1) shows interest during construction constitutes "a small fraction [1.2 percent] of the sum of the Other loading factor."

DECISION

Witness Donovan raises valid concerns regarding BellSouth's treatment of travel and set-up times in the BSTLM for cable placement and cable splicing. Assuming the intention of BellSouth's filing was to provide a level of granularity sufficient to clearly delineate between a tops-down and a bottoms-up approach to cost determination, we believe that ambition has been thwarted in this instance. BellSouth's failure to populate the BSTLM with discrete travel and set-up times for placement and splicing activities and to instead calculate times based on 100 feet of cable placed or 100 pairs spliced creates distortions in cost relationships and leads to productivity levels that are not realistic.

For example, using BellSouth's distance of 120 feet between poles and BellSouth's travel and set-up times based on 100 feet of cable placed, the BSTLM assumes a crew would be required to incur travel and set-up time equal to two separate operations simply to place cable between two poles 120 feet apart.

Witness Donovan proposes specific travel and set-up and closure times based on his industry experience in addition to recommendations on crew sizes and the sheath feet of cable that should be placed each day.

Witness Donovan proposes 15 minutes of travel time and two hours of set-up time for cable placement and splicing operations. In a previous order in this proceeding, we established travel times of 20 minutes. (Order No. PSC-01-1181-FOF-TP, p.358) We find nothing in the record of this proceeding that would prompt us to reconsider this interval. Therefore we adopt travel time of 20 minutes. Witness Donovan also proposes a set-up and closure time of two hours, which is unchallenged by BellSouth. Therefore, we adopt the two-hour set-up and closure time proposed by witness Donovan.

The same issues that affect cable placement affect cable splicing. Here, witness Donovan has provided sufficient corroborative evidence to support a copper cable splicing rate of 300 pairs per hour, and a fiber splicing rate of one pair every six minutes. BellSouth witness Caldwell does not dispute this

productivity. Thus, we adopt a splicing rate of 300 pairs per hour. The parties appear to agree that a splicing rate of one fiber strand every six minutes is appropriate, and we adopt this value.

We also find it appropriate to adopt AT&T/MCI witness Donovan's inputs for daily placements of aerial cable of 5,000 feet, underground cable of 3,000 feet, and buried cable of 8,000 feet. However, we believe that witness Donovan's position on the number of technicians needed to place aerial cable is flawed. He contradicts himself on this issue, on one hand recommending a crew size of one for the placing of aerial cable, but acknowledging that "Typically, in a [sic] RBOC, two technicians place aerial cable." We find it appropriate to adopt an assumption of two technicians for placing aerial cable.

We do find some merit to witness Donovan's argument to eliminate copper cable stub investment. BellSouth witness Stegeman offers little justification for including this investment in every splice case in the model. However, witness Donovan does not identify a specific, quantifiable, investment input in the model that can be amended to accomplish his proposal. As such, we decline to adopt changes to the copper cable stub investment.

Regarding the Miscellaneous Material Loading Factor, we believe witness Donovan's testimony on this issue to be speculative and unsubstantiated. As such, we adopt BellSouth's application of a miscellaneous material factor as a loading on material.

#### 4. FIBER CABLE INPUTS

AT&T/MCI witness Donovan grafts a number of his criticisms applied to copper cable placing costs on to BellSouth's fiber cable inputs. Specifically, he contends that: 1) BellSouth does not have appropriate cable placing set-up and cable placing productivity parameters; 2) there are not separate splicing set-up and fiber splicing productivity parameters; 3) that the Miscellaneous Material loading on Non-Exempt Material is inappropriate; 4) Other-Plant Labor-Indirect Salary, Benefits and Other Loading on Non-Exempt Material is inappropriate; 5) Interest During Construction is inappropriate; and 6) BellSouth's engineering loading factor of 35.72 percent is too high.



Witness Donovan proposes: 1) reducing the engineering factor to 10 percent; 2) slashing the Miscellaneous Material loading on Non-Exempt Material to no more than 20 percent on labor costs; 3) disallowing costs listed under Other-Plant Labor-Indirect Salary, Benefits, and Other; 4) using inputs of 45 minutes for travel and set-up for fiber cable placement; 5) a fiber placing rate of 3,000 feet-per-day for underground placement, 8,000 feet-per-day for buried placement, and 5,000 feet-per-day for aerial placement; 6) a travel and set-up input of two hours for fiber cable splicing; and 7) a productivity rate of five minutes per fiber strand spliced.

BellSouth witness Caldwell's are those previously set forth with regard to copper cable.

In summary, we are persuaded that while the methods used by the parties to arrive at certain input values for the cost model have their respective flaws, overall these flaws can be minimized. Therefore, on balance, we find that with the adjustments to the methods used and input values as outlined above, the loop cost study submitted in BellSouth's 120-day filing complies with Order No. 01-1181-FOF-TP.

#### B. MODIFICATIONS TO LOOP RATES OR RATE STRUCTURE

Here we consider whether BellSouth's loop rates or rate structure previously approved in Order No. PSC-01-2051-FOF-TP should be modified, and if so, to what extent. Z-Tel witness Ford, AT&T/MCI witness Darnell and AT&T/MCI witness Gillan apply separate methods to assert that the UNE rates we set in two previous orders, Order No. PSC-01-1181-FOF-TP and Order No. PSC-01-2051-FOF-TP, are not TELRIC-compliant for a number of reasons.

Witness Ford advocates the use of a "sanity" test, based on a benchmark methodology used by the FCC in evaluating UNE rates for regional Bell Operating Companies seeking authority to originate interLATA traffic under Section 271 of the Telecommunications Act. The test employed by witness Ford is rooted in the FCC's Hybrid Cost Proxy Model (HCPM) and uses the relative costs of loops across the states in which an ILEC is the dominant local exchange carrier.

In the absence of a state that has had its UNE rates confirmed by the FCC in the Section 271 evaluation, witness Ford maintains

his sanity test is useful in attempting to determine if Florida UNE rates are comparable to those of Georgia and Louisiana. Witness Ford concludes that UNE rates in Florida are 23 percent too high, thus failing his sanity test.

Witness Ford was unable to cite an instance in which the FCC rejected a UNE rate using its HCPM benchmark test when comparing rates between states. He acknowledged that the FCC has indicated that a rate could fail the benchmark test and remain TELRIC-compliant.

In its brief, BellSouth argues that witness Ford's sanity test is applicable only if a state commission improperly applies the TELRIC methodology and if the FCC concludes that the rates in the comparison state are reasonable. BellSouth maintains that neither condition exists here.

AT&T/MCI witness Darnell criticizes the Florida UNE rates approved in previous orders in this proceeding, using BellSouth's embedded cost data contained in the FCC's Automated Reporting and Management Information System (ARMIS). The ARMIS data indicate Florida, "has been BellSouth's lowest cost state for every year for the past five years."

Despite Florida's lower costs, contends witness Darnell, both Georgia and Tennessee have lower UNE-platform (UNE-P) rates than Florida. Witness Darnell notes that higher population densities in Florida than in surrounding states should also work to drive down UNE-P rates because, he explains, "Population density is the primary driver of loop cost."

Witness Darnell also argues that BellSouth should be compelled to refile its loop cost study using a single network design scenario, as opposed to the three-scenario approach. Witness Darnell contends FCC Rule 51.505(b) requires the use of a single, unified network design in order to reflect economies of scale and scope, giving ALECs a "realistic opportunity to compete."

Witness Darnell acknowledges having raised the multiple-scenario argument in the two previous phases of this proceeding and that on both occasions we did not accept his argument. Witness Darnell also acknowledges that because a state has the lowest embedded costs does not necessarily mean that state will have the

lowest UNE rates. Finally, witness Darnell admits no regulatory body uses embedded costs as a basis for setting or lowering rates.

AT&T/MCI witness Gillan argues that he conducted two analyses to demonstrate that BellSouth's proposed UNE rates are not TELRIC compliant. In the first analysis, explains witness Gillan, he applied BellSouth's TELRIC costs for switched lines and compared those costs to BellSouth's embedded expenses. Witness Gillan contends his analysis shows that BellSouth would only be able to provide service to two-thirds of its existing lines under his scenario. The witness concludes, "if their forward-looking costs are so above their accounting costs, their actual incurred expenses, then they would have a financial catastrophe on the horizon." This indicates the costs submitted in this proceeding are unreliable, according to witness Gillan.

In his second analysis, witness Gillan contends that he took all revenues BellSouth accumulated from switched services and calculated how much BellSouth would pay to lease its network from itself to provide POTS service. In this analysis, witness Gillan concludes, BellSouth's profitability would be about 14 percent, compared with actual earnings of 44 percent in 2000, according to the witness.

Witness Gillan concludes, "the UNE rates that BellSouth has proposed at this high end of the range are simply not plausible."

In its brief, BellSouth counters, "BellSouth never proposed that the Commission adopt the higher costs calculated using the bottoms-up study as new UNE rates," which renders witness Gillan's analyses "irrelevant in any case."

#### DECISION

The ALEC witnesses addressing this issue offer little substantive testimony regarding specific rates or inputs used in the BSTLM, which they entrust to AT&T/MCI witnesses Pitkin and Donovan. Witnesses Ford, Darnell and Gillan argue for the application of their own devices to evaluate the rates in this phase of the proceeding.

Some of the arguments raised in the context of this issue have been presented by the witnesses in earlier phases of this

proceeding or in other dockets. We addressed witness Darnell's advocacy of a single network design in previous orders in this docket, Order No. PSC-01-1181-FOF-TP, p.154 and Order No. PSC-01-2051-FOF-TP, pp.19-24, and witness Darnell acknowledges filing substantially the same rebuttal testimony in this proceeding as he filed in Docket No. 960786-TP. In addition, witness Darnell acknowledges TELRIC-based costs differ substantially from the ARMIS data.

Witness Ford's proposal that we use a sanity test, derived from the FCC's benchmark test for UNE rates in section 271 proceedings, appears self-immolating to some extent. In its most recent 271 order, FCC Order 02-147, Joint Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc. for Provision of In-Region, interLATA Services in Georgia and Louisiana, the FCC cautions:

Although some benchmarking is advocated by some commenters, our analysis is complete if it reveals that there are no basic TELRIC violations or clear errors on substantial factual matters, and we do not proceed to determine TELRIC compliance on the basis of comparisons with other states, including those that have section 271 approval. To do otherwise would put the Commission in the position of establishing benchmark rates for the nation on the basis of a few states where the Commission, thus far, has found state commissions to apply TELRIC correctly. We see no reason to do this as it undermines the importance of state-specific, independent analysis of rates for UNES.

FCC Order 02-147, ¶24. The FCC acknowledges that reasonable applications of TELRIC principles can produce a range of rates and concludes, "We do not, however, regard failure to meet a benchmark, by itself, as evidence that a state commission failed to reasonably apply TELRIC in setting UNE rates." FCC 02-147, ¶25

Witness Gillan attempts to demonstrate BellSouth itself could not profit from the rates that emerged from the bottoms-up study if it were required to purchase UNES as are other ALECs, and that BellSouth's UNE costs would allow the company to support only two-thirds of its existing network. None of the arguments, however,

truly address BellSouth's TELRIC costs, which are the subject of this proceeding.

Witness Ford's proposed use of a benchmark test spawned by the FCC appears to be in direct conflict with the manner in which the FCC itself applies the test. The so-called "sanity test" requires a finding that TELRIC principles were misapplied. Witness Ford fails to identify any errors in our application of the TELRIC methodology: therefore, we believe proceeding further with his analysis is a moot exercise.

Witnesses Darnell and Gillan essentially argue that the rates that resulted from a bottoms-up analysis would not allow ALECs to sustain profitability, and reiterate arguments we have previously ruled upon.

In its brief, BellSouth points out that the witnesses do not address cost issues, but focus instead on their ability to profit from the rates that emerged from this phase of the proceeding.

We find merit in the arguments BellSouth raises in its brief and find nothing in the testimony of witnesses Ford, Darnell and Gillan to support changes in rates not previously addressed in Issue 1(a) of this proceeding.

Additionally, as noted in Issue 1(a), adopting a number of the recommended inputs proposed by AT&T/MCI witnesses Donovan and Pitkin does not bring the loop rate structure into conformance with criteria established by us for this proceeding. We determined in Order No. PSC-01-1181-FOF-TP, p.284, that BellSouth's 120-day filling should dispense with linear in-plant factors and adopt a "bottoms-up" approach to determine the "magnitude of discrepancies" between linear loadings and a bottoms-up approach.

On the issue of engineering factors, for example, BellSouth filed account-specific factors based on one methodology, while AT&T/MCI witness Donovan recommended account-specific factors based on a separate methodology. While account-specific engineering factors bring us closer to the goal of a bottoms-up analysis, neither party differentiated engineering factors by density zones. We are concerned that the account-specific engineering factors still retain sufficient linear qualities to distort costs between rural and urban areas. We are similarly concerned with the parties'

treatment of BellSouth's proposed 25.43 percent miscellaneous contractor charge, and BellSouth's proposed 40 percent loading on conduit and manholes.

We have reservations concerning the "bottoms-up" inputs provided by the parties in this proceeding, specifically BellSouth's use of linear loadings, which is directly contrary to Order No. 01-1181-FOF-TP, we believe changes to selected inputs reflected in Issue 1(a), bring the 120-day filing more into compliance with our directives in this matter. Therefore, we adopt the rates contained in Appendix A, which reflect modifications to the 120-day filing outlined in Issue 1(a).

**II. ADUF, ODUF, AND EODUF COST STUDIES AND MODIFICATIONS**

Next, we address whether whether the ADUF, ODUF, and EODUF cost studies submitted in BellSouth's 120-day compliance filing are appropriate. We also consider whether the ADUF, ODUF, and EODUF rates or rate structure previously approved in Order No. PSC-01-2051-FOF-TP should be modified, and if so, to what extent.

BellSouth offers three different daily usage services: Access Daily Usage Files (ADUF); Optional Daily Usage files (ODUF); and Enhanced Optional Daily Usage Files (EODUF). These services provide electronic billing data to the ALECs. An explanation of each service is provided in Table 2-1.

**Table 2-1**  
**DUF Services**

ELEMENT	SERVICE PROVIDED
ADUF	Information of end user's daily originating and terminating access carrier messages. BellSouth extracts and distributes call detail on these access messages.

ODUF	Call detail information for billable messages transported through BellSouth's network and processed in BellSouth's CRIS (Customer Records Information System) billing system. BellSouth extracts and distributes call detail on messages such as: Measured Local, IntraLATA Toll, and operator-handled calls if the ALEC purchases Operator Services form BellSouth. This element is applicable to both UNEs and resale.
EODUF	Usage data for local calls that originate from resold, flat-rated business and residential lines. BellSouth extracts and distributes call detail on these messages.

As noted in the Case Background, this issue did not arise from our Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, that required certain items in BellSouth's cost study to be revisited. BellSouth witness Caldwell explains that

Even though the Commission's Order did not specifically include these elements in the 120-day requirement, substantial changes to the study inputs necessitated that BellSouth advise the Commission.

Witness Caldwell continues that BellSouth has experienced a dramatic increase in the number of message records since it developed its previous cost study inputs in August 2000. Since the cost of DUF is based largely on demand for the services, the result of the increase is to reduce cost on a per-message basis, and thus decrease the rate. Only EODUF demand decreased.

Witness Caldwell states that "BellSouth has developed unique programs at the ALECs' request in order to extract the billing data they requested, in a format such that they can bill their end-users. The costs associated with this on-going process and the computer resources required to implement and support the programs are reflected in BellSouth's cost study. These costs are incremental to BellSouth's normal billing process."

While the parties agree that the services should be provided, there was not a consensus as to what the rates should be. Three specific points arose during the course of this proceeding. At issue is whether certain DUF services should have a zero rate; whether certain costs have been double counted in both the DUF study and the common costs; and whether projected demand adequately reflects ALEC market penetration. We address each in turn.

#### A. ZERO RATE

AT&T/MCI witness Darnell asserts that BellSouth should not have a separate charge for DUF information. His reasons are twofold. First, he contends that "BellSouth is adequately compensated for its cost to maintain daily usage file systems by the common cost factor." Second, he claims that BellSouth does not always charge independent telephone companies (ITCs) for DUF information, but enters into bill and keep arrangements with some ITCs. The common cost factor will be discussed below under double counting.

AT&T/MCI witness Darnell argues that "[a]ccording to BellSouth data request responses received in other proceedings it has bill and keep arrangements with some ITCs."

AT&T/MCI provided a copy of one interrogatory response from a Kentucky proceeding in which BellSouth stated that it does exchange access records with independent carriers for meet-point billing access, at no charge.

BellSouth responds that it does not have bill and keep arrangements with any carriers for DUF services. Further, BellSouth states that it does not provide DUF services to ITCs.

Witness Ruscilli contends that BellSouth provides usage records for Meet-Point Billing (MPB) to carriers that have their own switch for the provision of intercarrier billing. He explains that in some cases

BellSouth will jointly provide a telecommunications service to an Interexchange Carrier ('IXC') or to an ALEC with another carrier. For example, suppose an IXC and an [ITC] are both interconnected with BellSouth at BellSouth's access tandem in Jacksonville. If the



[ITC's] end user places a call that transits BellSouth's access tandem and is to be billed by the IXC, then BellSouth and the ITC have jointly provided originating access to the IXC. In this example, BellSouth is providing the tandem and perhaps some portion of interoffice transport, and the ITC is providing the end office switching and perhaps some portion of the transport. BellSouth, as the tandem provider, will make the recording for the call and send the [ITC] a usage record. The ITC will take all of these usage records for a given period of time, summarize them, bill the IXC for its portion of the traffic, and then send to BellSouth summary usage records for BellSouth to bill its portion of the originating access to the IXC. This process ensures that both the [ITC] and BellSouth bill the IXC for exactly the same amount of traffic. Because both the [ITC] and BellSouth are providing each other with usage records, the exchange is done at no charge to either party. The scenario [witness Ruscilli has] just described could also occur between BellSouth and an ALEC that has its own switch. In that case, BellSouth and the ALEC would also exchange these usage records at no charge to either party.

Witness Ruscilli continues that BellSouth provides DUF information to ALECs that do not have their own switches. He explains that "in the case of an ALEC using BellSouth's local switching UNE, all of the usage records are provided in one direction." He points out that ALECs have no information that BellSouth needs.

#### DECISION

There is no record support for AT&T/MCI's position that BellSouth provides DUF services at no charge to ITCs. Even the information AT&T/MCI provided from the Kentucky proceeding supports BellSouth's explanation that BellSouth only provides information at no charge in certain meet-point billing situations. Although the information provided to the carriers may be similar, it appears that the distinction is that meet-point billing requires an exchange of information between carriers, while the DUF services sought by the ALECs require BellSouth to provide a service for which there is no reciprocity.

We believe that the provision of DUF services benefits ALECs by providing them with billing information that they need in the course of business. BellSouth's contention that there is no exchange of information involved with DUF is un rebutted in the record. Thus, we find that it is reasonable for BellSouth to maintain a separate charge for provision of DUF services.

#### B. DOUBLE-COUNTING

AT&T/MCI witness Darnell argues that "[t]he cost used by BellSouth in the development of its DUF charges are the same costs that BellSouth used in its development of the common cost factor." Witness Darnell explains that:

. . . the foundation of the common cost factor is the relationship of its adjusted historical common costs to BellSouth's embedded total cost. . . . The amount of common cost that is included in UNE rates is dependent upon how much direct and shared costs are produced by the costing methodology. This is because common cost is a percentage added on to all costs at the end of the process.

Witness Darnell continues that:

Included in the development of the common cost factor are costs associated with the systems used to produce daily usage information. . . . Therefore, if the Commission permits BellSouth to charge ALECs separate charges for daily usage information, the Commission should lower the common cost factor to account for the system cost being directly assigned to specific rate elements.

He further claims that:

By proposing an additional rate element for DUF, BellSouth is making the argument that the historical cost used to develop the common cost factor is not enough to cover its forward looking cost of information systems used to provide daily usage information. There is no reason to have additional rate elements for DUF information.

Witness Darnell concludes that "[i]f the amount of cost directly assigned to DUF charges is so insignificant that it does not effect the common cost percentage when this cost is removed from that percentage, we should reject DUF charges because [of] the potential for costing mischief that they create."

BellSouth witness Caldwell counters that the DUF charges in the cost study are not the same as those used in the development of the common cost factor. She contends that the computer resources, programming effort and support labor reflected in BellSouth's DUF costs are directly attributable to the DUF services. She explains that BellSouth developed unique programs to provide the ALECs with billing data in a format that meets the ALECs' needs. Witness Caldwell further contends that BellSouth removed costs that are directly assigned to various services from the costs used to develop shared and common cost factors. She explains that file EXPPRJ00.XLS outlines those adjustments.

She also addresses witness Darnell's statement that if the cost directly assigned to the DUF is so insignificant that it does not impact the common cost percentage, DUF charges should be removed. She argues that this is a self-serving pronouncement and a faulty conclusion. She states that his suggestion of costing mischief on the part of BellSouth is "wholly unfounded."

#### DECISION

Witness Darnell explained that he "identified the investment amounts that are being directly assigned to [DUF] rate elements." He then subtracted those amounts from the general purpose computers account. However, upon further questioning, witness Darnell was unable to support his contention that BellSouth had double-counted costs associated with the provision of DUF services in the common costs.

It is difficult to discern what is germane to the issue in the cost study materials provided by AT&T/MCI. When questioned on the amounts witness Darnell had marked in responses detailing his procedures, it became apparent that much of it was irrelevant. For example, when asked why he had circled account 2211, analog electronic switching, he responds that "[t]here is no real significance between how much average investment analog switching should have as compared to DUF." His response was similar for

Account 2220, operator systems and a number of other accounts. When the discussion arrived at account 2232, analog circuit equipment, he explains, "It's circled because my long-standing thought process being that a forward-looking TELRIC cost model shouldn't have any analog circuit equipment in it, and I saw that, and it threw up a red flag to me." Again, this has nothing to do with the issue of double-counting. Regarding account 2124, General Purpose Computers, which we believe to be specific to the DUF costs in question, witness Darnell states that the numbers he had marked in red "don't really tie into my discovery response." In the end, witness Darnell was unable to proffer any response that showed the double-counting of costs.

BellSouth provides much more credible evidence that it has removed charges associated with the provision of DUF services from the common cost factors. BellSouth explains that the adjustment is not made directly in the shared and common cost calculations; rather, it is made in the "'Normalizing Issues' section of the expense development workbook labeled 'EXPPRJ00.xls'." According to BellSouth, the amounts are included in the column for Operational Support System Upgrades, which contains costs associated with Electronic Interface, Daily Usage File, and Number Portability related costs. We verified that the amount in the stated column exceeds by a substantial sum the amount that witness Darnell claims to be double-counted. Accordingly, we find that no such double-counting exists.

The mere potential for mischief, as alleged by witness Darnell, is not sufficient reason to eliminate a valid cost from a cost study. Nevertheless, there may be other reasons to eliminate certain costs from BellSouth's cost study. While those costs do not appear to be double-counted, the same numbers noted by witness Darnell exhibit other discrepancies.

We found a dramatic increase in Contractor Software Development Cost in the cost study from the September 2001 filing to the November 2001 filing. When asked why the cost increased, BellSouth explains that the cost had initially been booked in 1998 as RTU Software development expense. The 1999 Financial Accounting Standards Board (FASB) Statement of Position (SOP) 98-1 requires that such software development costs be capitalized. Additionally, BellSouth claims that the contractor labor rate reflects the 2002-2004 period, in which the labor rate is higher than that previously

used. We interpret this to mean that the changes in accounting period and methods resulted in higher costs in the model.

We also observe that the amounts for software development charges increased dramatically from the September to the November filing. For example, BellSouth witness Caldwell agrees that the number of hours for EODUF IT Non-recurring Developmental Labor Hours Contractor increased by more than seven times between the two versions of the study. She explains that "as we've learned more about it and worked more with it going forward, we felt it would take more time." She also agreed that the contractor hourly labor rate increased by approximately 50 percent. BellSouth never mentioned these increases when it filed its DUF model revisions in November 2001, citing only increases in usage, which reduce rates.

Not only do we have concerns about the large increases in costs in the model values that took place in the November 2001 model revision, but we wonder why such amounts are included in the model at all. The costs identified are clearly labeled as "software development." Witness Caldwell states that the costs are part of scorched node provisioning.

It's not necessarily that we're going to be changing or adding stuff. I mean, we're not looking at just the cost associated with maintaining. This would be from a TELRIC perspective if we had to go in and develop the system going forward.

BellSouth's cost study documentation shows that software development capitalized costs which were associated with the adoption of SOP 98-1, as discussed above, have now largely been amortized. Further, the rate comparison in table 2-4 at the end of this section shows that BellSouth has been over-recovering its DUF costs. Any modest amounts which are not fully amortized on BellSouth's books have been adequately compensated by BellSouth's over-recovery through its DUF rates. Additionally, as discussed above, the record shows that BellSouth is not developing any new services associated with DUF services. We do not believe BellSouth has justified the inclusion of software development costs in its model for DUF services. Accordingly, we find that the model shall be adjusted to remove this portion of the costs. While the amount is confidential, its impact is reflected in the rate comparison.

C. PROJECTED DEMAND

Z-Tel raised an issue in its brief regarding the DUF usage projections BellSouth used to calculate the DUF rates. Z-Tel cited certain points it elicited through cross-examination and discovery that it believes support the contention that "BellSouth has overstated the [DUF] rate by understating the projection of ALEC messages."

Z-Tel's arguments are twofold. First, Z-Tel contends that witness Caldwell "acknowledged that a projection that understates ALEC demand could have the 'self-fulfilling' effect of overstating the DUF rate and, to the extent that the DUF rate affects the ALECs' costs, decreasing demand.

Second, Z-Tel asserts that "[witness] Caldwell agreed with the concept that the relationship of the projected ALEC demand (expressed in terms of the total ALEC messages) to the overall number of messages handled by BellSouth would in effect be a quantification of the degree of ALECs' market penetration" Z-Tel complains that it asked for a late-filed exhibit containing the assumed ALEC market penetration associated with projected demand, but that BellSouth did not provide the information Z-Tel was seeking in late-filed exhibit 52. Lacking such evidence, Z-Tel asks us to take notice of ARMIS data that is not in the record. Z-Tel argues that the data would show that BellSouth has seriously understated its projected DUF usage.

Upon cross-examination, BellSouth witness Caldwell agreed that it "could be possible" that the projection of a low level of activity could become a self-fulfilling prophesy by reducing demand through a higher DUF rate. However, she states that she disagrees with Z-Tel that a high DUF rate would make the overall demand for DUF decline. She argues that the numbers in question are very small, and are part of an overall offering. Witness Caldwell opines that the overall offering is the driver, not the DUF rate alone.

In discussing ALEC penetration rates with Z-Tel's attorney, witness Caldwell was asked:

Well, it appears to me that for purposes of developing this DUF rate you made some projections and assumptions

that, in essence, predict the degree of market penetration by the ALECs because you project the total activity of ALECs within the universe of total activity period, and wouldn't that be an indication of your prediction of the extent of penetration of ALECs?

In response, the witness stated:

I follow your analysis, your explanation. What I cannot comment on is exactly how the billing department developed this number, but I follow what you have said in terms of that. There was a projection made. Maybe if I can say that and clarify that. There was a projection into the future years of the number of messages the ALECs would use.

BellSouth did not address this portion of the issue in its brief.

#### DECISION

One of the bases for Z-Tel's arguments is the supposed admission by witness Caldwell that low projected DUF usage would become a self-fulfilling prophesy. Our reading of the referenced passage reveals that, contrary to Z-Tel's allegations in its brief, witness Caldwell only agreed that it "could be possible" that the projection of a low level of activity could become a self-fulfilling prophesy by reducing demand through a higher DUF rate. She emphatically states that she disagrees with Z-Tel that a high DUF rate would necessarily make the overall demand go down. She argues that the numbers in question are very small, and are part of an overall offering. Witness Caldwell opines that the overall offering is the driver, not the DUF rate alone. We are not cognizant of any evidence to the contrary in the record.

Z-Tel's emphasis on high DUF rates as a self-fulfilling prophesy is misplaced. The important issue is whether the rates are based on appropriate inputs. Toward that end, Z-Tel made an effort at hearing to obtain information that would show projected DUF usage in the model did not reflect ALEC market penetration. The apparent goal was to show that the DUF messages used by BellSouth in its projections compared to the total universe of telephone messages would give an indication of market penetration.

Z-Tel was unsuccessful in obtaining such information in the record. We agree with Z-Tel that the information BellSouth provided in Late-filed Exhibit 52 does not contain the data that was requested. However, BellSouth only agreed to provide it if it was available. Witness Caldwell did not agree that she had knowledge of such information.

While Z-Tel argues that BellSouth's ARMIS report contains message data that Z-Tel finds useful, we note that Z-Tel questioned BellSouth witness Caldwell about the ARMIS report, but did not present it or ask for it to be provided as an exhibit. Beyond a few pages of cross-examination, we are unaware of any testimony on the projected volume of DUF messages. There is also no evidence in the record as to what the relationship may be between market penetration by the ALECs and BellSouth total messages, other than the exchange noted above, and a few similar paragraphs in the transcript.

Even if such information were made available, we question what Z-Tel would gain. In our view, the fatal flaw in Z-Tel's arguments is Z-Tel's implicit assumption that all ALECs use DUF services to obtain billing data for every message they process. Unless one knows the percentage of ALEC messages for which DUF services are obtained, one cannot use DUF as a measure of market penetration. Similarly, levels of market penetration, absent other information, do not indicate levels of DUF usage.

It appears from the record that the purchase of DUF services is optional. For example, BellSouth states "ALECs who receive ODUF do not need to wait on receipt of their bill from BellSouth to invoice their end user customers. ODUF saves time and improves cash flow for the ALEC." There is no record evidence as to how many ALECs choose to avail themselves of this service.

Nevertheless, we note unexplained discrepancies in BellSouth's cost study. It appears that DUF usage may be under-projected, as explained below.

BellSouth's model shows the projected monthly growth in DUF messages in a number of places in the model. For example, projected growth in ODUF messages is shown in ODUF.XLS, WP1, lines 25 through 38. The figures for January through April 2001, appear to be based on actual data, according to BellSouth's explanation that "[a]ctual



monthly messages were used as a base to calculate forward looking demand by applying an estimated incremental growth in the number of monthly message [sic] for the years 2002-2004." The average monthly increase in usage is approximately 4 million. For the remainder of 2001, messages were increased by 4 million. However, for 2002 through 2004, messages were increased by only 1 million per month. There is no explanation for this difference. We see no reason why the monthly increase in usage should drop to one-fourth of that experienced for January through April 2001. Accordingly, we find it appropriate to adjust the figures through 2004 to reflect a monthly increase in ODUF usage of 4 million messages.

Table 2-2

ODUF Usage Projections

Month/2001	Usage	Increase
January	83,890,659	N/A
February	83,661,035	(299,624)
March	94,829,567	11,168,532
April	95,934,904	1,105,337
May	99,934,904	4,000,000
June	103,934,904	4,000,000
July	107,934,904	4,000,000
August	111,934,904	4,000,000
September	115,934,904	4,000,000
October	119,934,904	4,000,000
November	123,934,904	4,000,000
December	124,934,901	4,000,000

A similar situation occurs in the ADUF usage data. BellSouth projected growth in ADUF messages through December 2011 in the file ADUF.XLS, WP1, lines 24 through 37. These numbers are not indicated to be confidential. In year one, during the first 5 months of 2001, the figures appear to be actual, as previously discussed. Table 2-3 below includes an excerpt from the model showing ADUF usage, as well as the increase in projected usage calculated from the data.

Table 2-3

ADUF Usage Projections

Month/2001	Usage	Increase
January	50,184,495	N/A
February	53,916,801	3,732,306
March	72,222,597	18,305,796
April	76,058,866	3,836,269
May	81,792,649	5,733,783
June	85,592,649	3,800,000
July	89,392,649	3,800,000
August	93,192,649	3,800,000
September	96,992,649	3,800,000
October	100,792,649	3,800,000
November	104,592,649	3,800,000
December	108,392,649	3,800,000

Source: EXH 24, ADUF.XLS, WP1, lines 24 through 37

Beginning in January 2002, each month's messages are increased by 1 million per month, rather than the 3.8 million used for 2001. There is no explanation in the record as to why the projected growth in messages was decreased to only about one-fourth of BellSouth's actual 2001 experience.

If the 3.8 million increase per month were used, an additional 336 million messages would be used in the calculation. The average increase over the 5-month period is 7,902,039 messages per month. Accordingly, it appears that 3.8 million messages per month is moderate, and 1 million messages per month is not supportable based on BellSouth's actual experience as shown in the model. The use of a higher average figure of nearly 8 million messages increase per month would be based largely on what appears to be one outlier month (February to March). Therefore, we are concerned that use of the higher figure could over-project the usage. Accordingly, we believe that 3.8 million messages per month, which is half the average monthly increase shown in early 2001, is a reasonable figure to used in calculating the projected ADUF usage. We also note that the use of a dollar amount produces a declining percentage in the increase in projected usage. We find this to be a reasonable approach. There is no evidence to the contrary.

A review of the EODUF files shows that an increase in messages of 500 per month is used throughout the projection. These figures are appropriate.

As discussed in the preceding sections, BellSouth should be allowed to recover the cost of providing DUF services through specified rates. Accordingly, it was appropriate for BellSouth to file a cost study in support of those rates. We find that the DUF cost studies submitted in BellSouth's 120-day compliance filing are appropriate with certain adjustments. First, the cost study should be adjusted to remove costs for software development which have already been amortized. Second, the cost study should be adjusted to reflect BellSouth's actual growth experience in DUF messages. We find that the existing DUF rates should be modified to reflect these adjustments. The resulting rates are shown in Table 2-4 below.

**Table 2-4**  
**Rate Comparison**

		Previous BellSouth Approved Rates	BST DDC-3 01/28/02	BFP-19 2/11/02	Commission Approved
<b>L.0</b>	<b>ADUF</b>				
L.1.1	ADUF Message processing, per message	\$0.014391	\$0.001858	\$0.00	\$0.001656
L.1.3	ADUF, Data Transmission, per message	\$0.0001297	\$0.0001245	\$0.00	\$0.0001245
<b>M.1</b>	<b>Enhanced Optional Daily Usage File</b>				
M.1.1	EODUF message processing - per message	\$0.229109	\$0.235115	\$0.235150	\$0.080698
<b>M.2</b>	<b>Optional Daily Usage File</b>				
M.2.1	ODUF recording, per message	\$0.0000071	\$0.0000071	\$0.00	\$0.0000071
M.2.2	ODUF message processing, per message	\$0.006835	\$0.002505	\$0.00	\$0.002146

M.2.3	ODUF, message processing, per magnetic tape provisioned	\$48.96	\$35.91	\$35.91	\$35.91
M.2.4	ODUF Data Transmission, per message	\$0.00010811	\$0.000103750	\$0.00	\$0.00010375

**III. UNBUNDLED COPPER LOOP - NONDESIGNED (UCL-ND) LOOP COST STUDY AND MODIFICATIONS**

We now examine the UCL-ND loop cost study as submitted by BellSouth in its 120 day filing for compliance with Order No. PSC-01-1181-FOF-TP. We then address what modifications, if any, are appropriate and what should the rates be.

One of the requirements of our Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, is that BellSouth determine xDSL loop nonrecurring costs that exclude the design layout record (DLR), test point, and order coordination. Specifically, our order stated:

. . . we shall require BellSouth to file modified versions of its xDSL nonrecurring cost studies, which exclude the following: 1) the DLR, 2) a test point, and 3) order coordination. The purpose of these modified cost studies is to provide us with sufficient information to set rates for a menu of separate provisioning options.

. . .

Furthermore, as noted above, although the Data ALECs want a nondesigned xDSL-capable loop, they also want a guarantee that the loop will not be rolled to another facility. We find this to be a reasonable request; therefore, based on [sic] record, we find it appropriate to require BellSouth to provision an SL-1 loop and guarantee not to roll it to another facility, or in other words, guarantee not to convert it to an alternative technology.

A. COMPLIANCE WITH ORDER No. PSC-01-1181-FOF-TP

In order to meet the requirements of Order No. PSC-01-1181-FOF-TP, BellSouth introduced its UCL-ND, element number A.13.12. According to BellSouth witness Caldwell, this all copper loop offering satisfies our requirement that BellSouth provision SL-1 loops and guarantee they will not be rolled to another facility or converted to another technology.

Witness Caldwell notes that the UCL-ND differs from other unbundled copper loops previously discussed in this docket. Specifically, the UCL-ND does not go through the design process, which means it is not provisioned with a test point and a DLR is not provided. Furthermore, the UCL-ND will not have a specific length limitation. However, since its resistance is restricted to 1300 ohms, the UCL-ND generally will be 18,000 feet or less. The costs for the UCL-ND were developed assuming loops only out to 24,000 feet from the central office.

According to witness Caldwell, the UCL-ND has a unique identification when it is ordered by an ALEC. The special ordering identification goes into BellSouth's records, which means the loop will never be moved from the existing copper pair that it is on. Unlike the UCL-ND, an SL-1 loop can be any loop in the network and can be on copper today and switched to fiber the next day.

As stated in Order No. PSC-01-1181-FOF-TP, one purpose of the modified cost studies is to provide us with sufficient information to set rates for a menu of separate provisioning options. To this end, we consider the options below.

1. Test Points

According to BellSouth witness Caldwell the test point is a physical plug-in. It is both a physical location in the central office and a physical piece of equipment that allows BellSouth's technicians to remotely test a loop. There is not a separate offering for the test point piece of equipment, but BellSouth does offer Loop Testing Beyond Voice.

Loop Testing Beyond Voice tests the data portion of the loop. Based on discussions with BellSouth's Network personnel, BellSouth witness Caldwell learned " . . . what the CLECs really are looking

at there is testing that's more or less a joint acceptance testing." She explains that while no test point is provisioned with the UCL-ND, an ALEC may desire a joint acceptance test to benchmark the transmission quality of the loop and to ensure compatibility with the xDSL service they wish to provide. BellSouth's previous filing in this docket included the rate element Testing Beyond Voice (the A. 19 elements). These costs, however, only considered testing a designed loop that had been conditioned. The revised loop testing elements now also consider testing parameters for non-designed loops (SL1 or UCL-ND).

## 2. Engineering Information

A design layout record (DLR) is not provided with the UCL-ND.<sup>2</sup> However, if an ALEC desires DLR type information it may purchase the separate offering known as Engineering Information (EI). The information provided in the EI regarding the physical characteristics of the loop is the same information provided to an ALEC that does a Loop Make-Up query.

## 3. Order Coordination

Order coordination is precisely what the name indicates. We note that there was limited testimony addressing this issue. No party other than BellSouth took a position on order coordination. AT&T simply stated "The input revisions recommended by John Donovan in his rebuttal testimony of December 10, 2001 apply equally to BellSouth's UCL-ND BSTLM."

## DECISION

We find that BellSouth has complied with our directives that it develop xDSL loop nonrecurring costs that exclude the DLR, test point, and order coordination. Furthermore, it appears that sufficient information has been provided so that rates may be set for various provisioning options. As was required in our order, BellSouth has implemented a unique identifier for its UCL-ND loops which will guarantee they will not be converted to an alternative technology.

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<sup>2</sup> A DLR provides the information about the physical make-up of a loop beginning at the central office to the customer's premises.

B. MODIFICATIONS AND RATES

As was argued by BellSouth in Issue 1, it believes that its studies comply with our order. However, witness Caldwell does not believe that the "bottoms-up" approach develops a more representative result than does the use of factors. She notes that BellSouth has filed the UCL-ND elements in Docket No. 960786-TP (271 docket) based on the use of in-plants and loading factors. She explains that those cost studies reflect our ordered adjustments except for the reinstatement of inflation. The BellSouth witness believes that we should establish rates for the UCL-ND related elements in Docket No. 960786-TP once inflation is considered.

BellSouth currently offers the UCL-ND in Florida. The current recurring and nonrecurring rates for this offering are contained in the BellSouth/Covad Interconnection Agreement.<sup>3</sup> Those rates were reached as part of a settlement agreement of a case in Georgia. Although the agreement was reached in Georgia, BellSouth agreed to apply those rates to all ALECs regionwide. In addition, BellSouth developed a study for the UCL-ND using the non-structure cost (non-SC) version of the BSTLM (i.e., using loading factors). The study included inflation factors as called for in the UNE Reconsideration Order. See Order No. PSC-01-2051-FOF-TP, p. 7.

With regard to modifications to establish UCL-ND rates, AT&T/MCI states that the input revisions recommended by witness Donovan in issue 1 apply equally to BellSouth's UCL-ND BSTLM scenario.<sup>4</sup> In that same response they also note that BellSouth failed to comply with "this Commission's directive to provide a bottoms-up cost analysis. The modifications to the cost model inputs proposed by John Donovan and Brian Pitkin apply equally to BellSouth UCL-ND BSTLM scenario."

DECISION

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<sup>3</sup>The Covad/BellSouth arbitrated interconnection agreement was approved by the Commission in Order No. PSC-02-0252-FOF-TP, issued February 27, 2002. The rates for the UCL-ND are found on page 179 of 633.

<sup>4</sup>AT&T/MCI did not propose any non-recurring rates in this proceeding.

As previously discussed, while we believe that the "bottoms-up" approach presented in this case is not without imperfections, loop rates should nevertheless be revised. These recurring rates are shown in Appendix A. The rates for Engineering Information and Test Points should be those proposed by BellSouth in its UCL-ND cost study filing in this phase of this docket. We note that the rates for Loop Testing Beyond Voice Grade were significantly reduced, since loops other than designed loops are now being considered. The rates for Order Coordination should be those rates approved by us in Order No. PSC-01-2051-FOF-TP. Table 3-1 provides a summary of the non-recurring rates for all the UCL-ND elements.

<b>Table 3-1 UCL-ND Element Rates</b>				
<b>Element Number &amp; Description</b>	<b>Non-Recurring</b>		<b>Disconnect</b>	
	<b>First</b>	<b>Add'l</b>	<b>First</b>	<b>Add'l</b>
<b>A.1.8 - Engineering Information</b>	\$13.49			
<b>A.13.12 - UCL-ND</b>				
<b>Zone 1</b>	\$44.98	\$20.90	\$24.88	\$6.45
<b>Zone 2</b>	\$44.98	\$20.90	\$24.88	\$6.45
<b>Zone 3</b>	\$44.98	\$20.90	\$24.88	\$6.45
<b>A.19.1-Loop Test Beyond Voice Grade-Basic per 1/2 hour</b>	\$48.65	\$23.95		
<b>A.19.2-Loop Test Beyond Voice Grade-Overtime per 1/2 hour</b>	\$63.48	\$31.35		
<b>A.19.3-Loop Test Beyond Voice Grade-Premium per 1/2 hour</b>	\$78.30	\$38.74		
<b>N.1.5-Order Coordination</b>	\$9.00			
<b>N.1.6-Order Coordination for Specific Conversion Time</b>	\$23.02			

Source Information:

Elements A.1.8 and A.13.12 - Exhibit 3, p. 4.

Elements A.19.1, A.19.2, A.19.3 - Exhibit 1, p. 2.

Elements N.1.5 and N.1.6 - Order No. PSC-01-2051-FOF-TP, p. 63.

We find that BellSouth has complied with our directives in Order No. PSC-01-1181-FOF-TP, as far as the UCL-ND cost study. It has determined xDSL loop nonrecurring costs that exclude the design layout record, test point, and order coordination. In addition, it



appears that BellSouth has provided sufficient information to set rates for a menu of separate provisioning options. Furthermore, as we ordered, BellSouth has developed a method to guarantee that UCL-ND loops will not be converted to an alternative technology.

We find that the recurring rates for the UCL-ND shall be those shown in Appendix A. The non-recurring rates for Engineering Information and Test Points shall be those proposed by BellSouth in its cost study filing in this docket, as noted in Table 3-1 above. The rates for Order Coordination should be those rates approved by us in Order No. PSC-01-2051-FOF-TP.

#### **IV. NID COST STUDIES AND RATE OR RATE STRUCTURE MODIFICATIONS**

First, we have been asked to address what revisions, if any, should be made to NIDs in both the BSTLM and the stand-alone NID cost study. We are then asked to consider to what extent, if any, should the rates or rate structure be modified.

Because of inconsistencies in BellSouth's application of exempt material costs for its NIDs, we ordered BellSouth to identify and explain all necessary revisions that should be made to its NID costs in the BSTLM and in its stand-alone NID study.<sup>5</sup> Specifically, we stated:

We find there are inconsistencies in BellSouth's material costs for the 2-line and 6-line NID housing. As we discuss in sub-section O of this Order with regard to loadings, it is our understanding that a component of the in-plant factors applied to investments is designed to recover the cost of exempt materials. However, in the BSTLM the revised inputs for both 2-line and 6-line NID housing include a \$9.68 adjustment for exempt materials. We find that because these inputs presumably would also be multiplied by the in-plant loadings which are meant to recover the costs of exempt material, BellSouth may be double counting exempt materials added to the NID investment, which is included in the various loop rates. Our review of BellSouth's work papers for the standalone NIDs (Elements A.2.44 and A.2.45) shows that the input

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<sup>5</sup>A NID is the device at a residential or business customer's premises, within which the drop wire terminates. Order No. PSC-01-1181-FOF-TP, p. 235.

values used for the NID housing (2-line and 6-line) do not include any costs for exempt materials. These work papers do not reflect the application of the in-plant factors which were designed to capture exempt materials; therefore, it does not appear that BellSouth has captured any exempt material costs in its standalone NID rate.

Order No. PSC-01-1181-FOF-TP, pp. 237-238.

Given these inconsistencies we found that an adjustment must be made; however, based on the record in the prior phase of this docket it was not clear what the correction should be. Accordingly, we ordered that BellSouth:

. . . identify and explain all necessary revisions that should be made to NIDs (both in the BSTLM and in its standalone NID study) when BellSouth refiles the BSTLM and the BSCC within 120 days of the date of the order, as addressed in sub-section O. If BellSouth believes revisions are necessary, BellSouth should, as appropriate, submit modified versions of the BSTLM and the BSCC. If BellSouth believes that no corrections are warranted, BellSouth shall provide a detailed explanation reconciling the apparent inconsistencies discussed above.

Order No. PSC-01-1181-FOF-TP, p. 238.

According to BellSouth witness Caldwell, adjustments are not required to the NID costs considered in the BSTLM (the NID provisioned with the loop). She believes that only the stand-alone NID cost studies require a revision.

Witness Caldwell explains how the NID provisioned with the loop and the stand-alone NID differ. To begin with, the witness notes that typically the NID is provisioned with the loop at the time the residence or business line is constructed and the drop wire is placed and treated as capitalized investment. For most cable placements in BellSouth's studies, exempt material is recovered through an in-plant factor. However, witness Caldwell explains that a different approach is taken for the NID and drop. Specifically, she states:

BellSouth, in the BSTLM, directly identifies items normally captured in an In-Plant factor (labor, exempt materials, sales tax, etc.) for the capitalized drop and NID. Thus, because the NID investment generated by the BSTLM already considers exempt material, taxes, labor, etc., the BellSouth Cost Calculator does not need to apply the In-Plant factors to drop and NID investments. BellSouth reflected this by assigning special "sub-FRCs" to the drop and NID. These special sub-FRC codes are 22C-01 or 45C-01. The "01" sub-FRCs instruct the BellSouth Cost Calculator not to apply In-Plant factors to those items of plant. Therefore, BellSouth's NID costs associated with unbundled loops are correct and no "double-counting" of In-Plant costs associated with the NID or drop occurs.

Unlike the NID provisioned with the loop, the stand-alone NID is a distinct UNE offering. This offering is designed for situations where the existing NID is not suitable for an ALEC's connection, where BellSouth terminates its loop directly to the inside wire, or when the ALEC specifically requests a particular NID. A nonrecurring fee is assessed for the installation, material, and cross connect (if appropriate) for the stand-alone NID. The witness explains that:

The stand-alone NID material (housing, interface, and protectors) is exactly the same as the NID placed with the loop. As found by the Commission in its Order, BellSouth did not apply exempt materials in the stand-alone NID study. In fact, BellSouth should indeed have included exempt material in its stand-alone NID costs. BellSouth has included this adjustment in this filing. Further, these are the appropriate costs to be used to establish rates for Stand-Alone NID/NID Access elements.

As part of its arguments as to why the BellSouth cost models fail to meet our ordered requirements, AT&T/MCI witness Pitkin alleges that "BellSouth still includes linear loading factors in the BSTLM - exactly the type of linear loading factors that this Commission previously concluded were the cause of cost distortions." As it relates to the NID, witness Pitkin believes that because the BSTLM explicitly models the costs of NIDs and

drops, the exempt material loading factor should exclude these items. Specifically, he states:

BellSouth did not remove any of the exempt materials associated with NIDs or drop wires in its calculation of the exempt material loading factor and thus double-counted these investments. In fact, BellSouth has not identified each item that is included in exempt material. Unless BellSouth produces information sufficient to determine that it properly eliminated all such inappropriate and double-counted material from the calculation of the exempt material loading factor, this Commission should reject BellSouth's loading factor estimates.

BellSouth witness Caldwell argues that witness Pitkin's assertions regarding exempt material loading factors are incorrect. The BellSouth witness provided a quote from her reply affidavit filed in connection with BellSouth's application to the FCC to provide in-region long distance service which she believes "fully explains why he is wrong." As stated in witness Caldwell's affidavit:

The labor-related costs of placing service drop wires and the associated NIDs are assigned to Asset Category Code ("ACC") 248 (Aerial cable - Metallic Drop) and ACC 548 (Buried Cable - Metallic Service Drop). The material costs of the service drop wires and associated NID units are classified to exempt material. The cost of exempt material, however, is distributed as part of the monthly allocations process to the various ACCs (including ACC 248 and ACC 548) based on the direct labor dollars associated with each ACC. In the development of in-plant factors for ACC 022 (Aerial Cable - Metallic) and ACC 045 (Buried Cable - Metallic), BellSouth does not include any of the assignments to ACC 248 or ACC 548. Therefore, the costs of placing service drops and NIDs are not reflected in the in-plant factors.

Caldwell Reply Affidavit, CC Docket 01-277, ¶37, (emphasis by witness). Witness Caldwell reiterated that BellSouth excluded ACCs 248 and 548, the asset accounts containing NID/drop costs, from the

development of the exempt material loading factors. Therefore, she believes witness Pitkin's claim is without merit.

Whether or not the cost models filed by BellSouth in this phase of the proceeding comply with our Order was addressed earlier in this Order, as well as the use of certain loading factors. We believe that the instant issues are meant to address what corrections, if any, are necessary to BellSouth's NID cost studies, and the appropriate rates for the stand-alone NID and the NID provisioned with the loop. As such, these issues can be resolved independently of any other issues in this Order.

DECISION

As specifically addressed in Order No. PSC-01-1181-FOF-TP, we ordered that BellSouth identify and explain all necessary revisions that should be made to its NID costs both in the BSTLM and in its standalone NID study because of inconsistencies in the application of exempt material costs for its NIDs. We believe BellSouth has satisfactorily explained why there were inconsistencies and how these inconsistencies have been corrected. Therefore, we find that the stand-alone NID rates shall be adjusted to include exempt materials. The appropriate rates for the stand-alone NID shall be those found in Table 4-1. No adjustment shall be made to the costs considered in the BSTLM for the NID provisioned with the loop. The appropriate rates for the NID provisioned with the loop are those rates we ordered in Order No. PSC-01-2051-FOF-TP.

Table 4-1 Stand-Alone NID Rates		
Element Number & Description	Non-Recurring First	Non-Recurring Additional
A.2.44-NID - 2 line	\$71.49	\$48.87
A.2.45-NID - 6 line	\$113.89	\$89.07

Source - EXH 48 (revised DDC-3)

V. HYBRID COPPER/FIBER X-DSL- CAPABLE LOOP: TECHNICAL  
FEASIBILITY, COMPLIANCE OF 120-DAY FILING, AND RATES/RATE  
STRUCTURE

We now consider what is a "hybrid copper/fiber xDSL-capable loop" offering, and is it technically feasible for BellSouth to provide it. We also consider the appropriateness of BellSouth's compliance filing as well as what should the rate structure and rates be.

By Order No. PSC-01-1181-FOF-TP (Order 1181), issued May 25, 2001, we recognized that there was record testimony regarding DSL service being provisioned over a hybrid copper/fiber loop.

The Data ALECs apparently view this technology as one worthy of an UNE status. Nevertheless, there is insufficient record evidence regarding the specific components of these loops, such as line cards, vendors, and their associated prices.

Further, Order 1181 stated:

. . . because we believe that BellSouth is obligated, if technically feasible, to provide hybrid copper/fiber xDSL-capable loops to Data ALECs, BellSouth shall be required to submit a cost study for hybrid copper/fiber xDSL-capable loops within 120 days from the issuance of this Order for further consideration by this Commission. (Order 1181 at p. 75)

Order No. PSC-01-2051-FOF-TP (Reconsideration Order) clarified our position. The Reconsideration Order stated:

While BellSouth appears to believe that we have already reached a conclusion that BellSouth must provision xDSL service over hybrid loops, we clearly stated in our Order that this obligation applies "if technically feasible." We have drawn no conclusions as to the feasibility of this proposal. In fact, we recognized that there was insufficient record evidence regarding even the components of such a loop. We did, however, find that there was enough evidence in the record to warrant further investigation of hybrid loops.

However, we recognized that the reference to "hybrid copper/fiber xDSL-capable loops" in Order 1181 could be considered somewhat ambiguous. For this reason, we clarified in the Reconsideration Order ". . . that hybrid copper/fiber xDSL-capable loops are those deployed over fiber/DLC loops." Reconsideration Order at p. 11.

A. HYBRID COPPER/FIBER XDSL-CAPABLE LOOP COMPONENTS

BellSouth witness Milner comments on BellSouth's hybrid copper/fiber xDSL-capable loop product design; witness Williams discusses BellSouth's unbundling requirements as it relates to line sharing and line splitting; and witness Caldwell expounds on the cost development of the loop. Witnesses Caldwell and Milner describe BellSouth's modeled hybrid copper/fiber xDSL-capable loop required by Order 1181. The provisioned loop will allow an ALEC to provide Digital Subscriber Line (DSL) capability to its customers over a BellSouth loop served by fiber-fed digital loop carrier systems (DLC), without unbundling packet switching. The Unbundled Network Element (UNE) consists of: (1) a dedicated, non-designed two-wire copper physical transmission facility that connects the Alternative Local Exchange Carrier's (ALEC's) Network Interface Device (NID) at the end user's premises to a Digital Subscriber Line Access Multiplexer (DSLAM) at the remote terminal (RT); (2) a DSLAM located at the RT; and (3) a dedicated DS1 facility from the DSLAM at the RT to the BellSouth central office (CO). Witness Milner asserts that BellSouth's modeled hybrid xDSL UNE loop incorporates the DSLAM functionality, which negates any requirement for ALECs to collocate their own DSLAMs in BellSouth's RTs. The witness opines that this particular loop offering was requested as a result of the expressed desire of ALECs not to have to deploy DSLAMs in RTs.

Witness Milner asserts that BellSouth's cost study only includes the packet switching functionality contained in the DSLAM at the remote terminal (RT); BellSouth has not included any packet switching functionality at the central office (CO). BellSouth's proposed hybrid copper/fiber xDSL-capable loop architecture is designed to terminate the loop into the ALEC's own packet switch for further processing and switching to distant locations. BellSouth witnesses Milner and Williams assert that we only asked BellSouth to submit a cost study for a hybrid copper/fiber xDSL-capable loop. Witness Williams adds that the study is not, and

never was intended to be a total system or an end-to-end offering that included the unbundling of BellSouth's packet switched network. Witness Milner argues that a packet switch is a completely separate and distinct component from the loop which the FCC has addressed and concluded that ILECs are not required to provide as a UNE except in limited circumstances.

As witness Milner explains, the subloop feeder facility, a dedicated DS1, is designed as fiber feeder and provides the transport from the RT to the CO. The facility is assumed to be dedicated to the ALEC. If the facility were not dedicated, a packet switch would be required to disaggregate the packet stream to various service providers. Witness Milner notes that, while BellSouth is opposed to sharing its DSLAM with the ALECs at TELRIC rates, it is not opposed to the ALECs sharing the transport among themselves. However, shared transport implies a packet switch is involved. When questioned regarding the costs of a dedicated circuit and a shared circuit, BellSouth witness Milner contends that the underlying costs would be the same, but the difference would be in the allocation of those costs. If shared transport is used in the feeder portion of the hybrid copper/fiber loop rather than a dedicated circuit, the BellSouth witness asserts that this would result in BellSouth unbundling not only the DSLAM but also a packet switch.

BellSouth witnesses Milner and Williams agree that both ALECs and BellSouth would benefit from the shared placement of DSLAMs at RTs. Further, witness Milner affirms that it is technically feasible for BellSouth and the ALEC to share use of the DSLAM at the RT in providing services, although asserting it is not proper from a regulatory perspective. Assuming there could be an arrangement between the companies to share the DSLAM, witness Milner suggests the costs could be allocated on the basis of the number of ports. However, some costs associated with the DSLAM are more sensitive to the amount of packet traffic that is conveyed by each individual customer. "For example, the ALEC may have half the customers but those customers may generate 95% of the traffic which is carried over the shared facility." In that case, witness Milner suggests an allocation of the transport traffic-sensitive costs based on the number of packets sent. The witness notes that there might also need to be some blending of both traffic-sensitive and non-traffic sensitive costing to accurately assess the right amounts to each party. Finally, witness Williams asserts, in



response to our questions regarding the sharing of DSLAMs, that BellSouth would be interested in an arrangement where it could provide RT DSLAMs at market rates. BellSouth is not willing, however, to provision RT DSLAMs at TELRIC rates.

Contrary to BellSouth, AT&T and MCI witness Darnell and Florida Digital Network, Inc. (FDN) witness Gallagher assert that the hybrid copper/fiber xDSL-capable loop should include the DSLAM at the RT, unbundled packet switching, as well as shared transport. Additionally, FDN witness Gallagher asserts that the characteristics of a hybrid/copper fiber xDSL-capable loop should not be dependent upon a particular type of DLC infrastructure. Whether the DLC is copper-fed or fiber-fed, witness Gallagher argues that the DSL traffic still must be multiplexed at the RT.

FDN witness Gallagher further asserts that the broadband UNE loop as proposed in Docket No. 010098-TP (the FDN Arbitration) should be the hybrid copper/fiber xDSL-capable loop offering under consideration here, rather than the offering configured by BellSouth. The witness explains that for a DLC loop to be xDSL-capable, packet switching must be performed by a DSL line card (combo card or integrated DLC card), or by a DSLAM at the RT. Witness Gallagher asserts that consideration of a new UNE loop without unbundled packet switching at the RT would serve no purpose. The witness argues that ALECs need to be able to purchase a port-at-a-time rather than an entire 16-port DSLAM, and shared DS1 feeder rather than a dedicated DS1. Witness Gallagher explains that there are three components in a hybrid copper/fiber loop.

The first two components are subloops: (1) the copper subloop between a remote terminal and a customer ("distribution"), and (2) the fiber subloop between a remote terminal and a central office ("feeder"). The third component is the DLC that connects the two subloops, together with any supporting equipment necessary to perform whatever switching functions may be required based upon the nature of the transmission. For circuit-switched voice traffic, this third component includes voice-grade DLC line cards that are used to pass the transmission from the distribution to the feeder. To be "xDSL-capable," however the DLC component must either include DSL-capable line cards or, if such cards are not supported by the DLC system, a DSLAM. The DSL line card

or DSLAM performs packet switching functionality at the remote terminal so that it is possible to transmit the DSL-based services between the distribution pairs and the feeders.

As noted above, the basic difference between BellSouth's modeled hybrid copper/fiber xDSL-capable loop and the loop that AT&T/MCI and FDN advocate is that the ALECs propose a loop with shared rather than dedicated transport and access to the DSLAM at a "line-at-a-time." However, it is important to remember that while BellSouth's modeled UNE loop includes unbundling the packet switching function at the RT, BellSouth is adamant that while this modeled loop has been submitted at our direction to gather additional information, it should not be required. BellSouth believes that in order for an ALEC to provide DSL service to a customer served behind an RT, it should have to locate a DSLAM at the RT.

B. TECHNICAL FEASIBILITY

The parties agree that the hybrid copper/fiber xDSL-capable loop modeled by BellSouth is technically feasible. Moreover, the parties agree that the added unbundling of the DSLAM at a "line-at-a-time" as FDN and AT&T/MCI have recommended, is also technically feasible. However, BellSouth and FDN witnesses agree that allowing access to a DSLAM on a "line-at-a-time" would require the ATM packet switch at the central office to be included in the configuration. The commingling of the packets from the DSLAM at the RT to the CO would require an ATM switch at the CO to separate and send the packets to their respective destinations, whether that be a BellSouth, an FDN, or some other ALEC destination.

While BellSouth witnesses Milner and Williams affirm it is technically feasible for BellSouth to provide the offering it has modeled, they note that one of the elements of this offering is the DSLAM which the FCC has exempted as a UNE except under limited circumstances, none of which exist in Florida. The witnesses reference the FCC's 1999 UNE Remand Order<sup>6</sup>, in which the FCC states

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<sup>6</sup> Order No. FCC 99-238, Local Competition Third Report and Order and Fourth Notice of Proposed Rulemaking, CC Docket No. 96-98, released November 1999.

that "[t]he packet switching network element includes the necessary electronics (e.g., routers and DSLAMs)." (UNE Remand Order at ¶304) The FCC also states that "We decline at this time to unbundle the packet switching functionality, except in limited circumstances." (UNE Remand Order at ¶306) The "limited circumstances" in which ILECs are required by the FCC to unbundle packet switching are contained in 47 C.F.R. Section 51.319 (Rule 51.319) Rule 51.319(c)(5) states:

(5) An incumbent LEC shall be required to provide nondiscriminatory access to unbundled packet switching capability only where each of the following conditions are satisfied.

(i) The incumbent LEC has deployed digital loop carrier systems [DLC], including but not limited to, integrated digital loop carrier or universal digital loop carrier systems; or has deployed any other system in which fiber optic facilities replace copper facilities in the distribution section (e.g., end office to remote terminal, pedestal or environmentally controlled vault);

(ii) There are no spare copper loops capable of supporting xDSL services the requesting carrier seeks to offer;

(iii) The incumbent LEC has not permitted a requesting carrier to deploy a Digital Subscriber Line Access Multiplexer in the remote terminal, pedestal or environmentally controlled vault or other interconnection point, nor has the requesting carrier obtained a virtual collocation arrangement at these subloop interconnection points as defined by paragraph (b) of this section; and

(iv) The incumbent LEC has deployed packet switching capability for its own use.

BellSouth witness Williams asserts that the premise of the FCC finding was that advanced services were being deployed timely in certain market segments in the business area. He notes that the FCC concluded that competitors may be impaired in their ability to

offer service without access to ILEC facilities due in part to the cost and delay of obtaining collocation in every CO, namely the residential and small business market segment. However, BellSouth witness Ruscilli notes that the FCC concluded that the existence of competition alone precludes a finding of impairment.

As part of Docket No. 010098-TP, the FDN and BellSouth arbitration, BellSouth and FDN agreed that we "may establish a new UNE if the carrier seeking the new UNE carries the burden of proving the impairment test set forth in the FCC's UNE Remand Order." Moreover, BellSouth and FDN agreed that the "impair" standard contained in Rule 51.317 is controlling when a state commission determines whether to mandate UNEs in addition to those established by the FCC. FCC Rule 51.317(b)(1) states:

A requesting carrier's ability to provide service is "impaired" if, taking into consideration the availability of alternative elements outside the incumbent LEC's network, including self-provisioning by a requesting carrier or acquiring an alternative from a third-party supplier, lack of access to that element materially diminishes a requesting carrier's ability to provide the services it seeks to offer. . . . If the Commission determines that lack of access to an element impairs a requesting carrier's ability to provide service, it may require the unbundling of that element . . . .

In considering whether lack of access to a network element "materially diminishes" a requesting carrier's ability to provide service, state commissions should consider whether alternatives in the market are available as a practical, economic, and operational matter. In doing so, the state commissions are to rely on factors such as cost, timeliness, quality, ubiquity, and impact on network operations, to determine whether alternative network elements are available. See FCC Rule 51.317(b)(2). State commissions may also consider additional factors, such as whether unbundling of a network element promotes the rapid introduction of facilities-based competition; investment and innovation; and reduced regulation. The state commission may also consider whether unbundling the network element will provide certainty to requesting carriers regarding the availability of the element, and whether it is administratively practical to apply. See FCC Rule 51.317(b)(3).

BellSouth witness Ruscilli contends that BellSouth offers UNES that allow an ALEC to transport data from the ALEC's packet switch to a DSLAM it collocates at a remote terminal, and BellSouth provides UNES that allow an ALEC to transport data from a DSLAM it collocates at a RT to its end user's premises. Further, BellSouth will permit a requesting carrier to deploy a DSLAM at the RT, pedestal, or environmentally controlled vault or other interconnection point. If BellSouth cannot accommodate such collocation of a DSLAM, BellSouth will provide unbundled packet switching to that particular location, as required by the FCC's UNE Remand Order.

BellSouth witness Ruscilli further asserts that ALECs are not impaired by the fact that BellSouth provides neither packet switching nor the DSLAM as a UNE because ALECs can purchase, install, and utilize these elements just as easily and as cost-effectively as BellSouth. Once the ALEC has the requisite equipment, the ALEC can use third-party equipment in combination with its own facilities, facilities of a third party, or with UNES it obtains from BellSouth to provide its own xDSL service to its customers. Besides not meeting the impairment standard, witness Ruscilli argues that unbundling of the packet switching functionality and provisioning the DSLAM as a UNE is not good public policy. BellSouth witness Williams indicates that no ALEC has collocated a DSLAM at a RT in Florida.

On the other hand, FDN witness Gallagher asserts that FDN has collocated in over 110 locations in Florida where it is unable to gain access to DSL-capable loops from those locations to RTs to almost 70% of the addressable DSL market. The result is that BellSouth possesses more than a 90% share of the DSL market in Florida and is the only carrier offering DSL service where DLCs are deployed in RTs. Witness Gallagher asserts that FDN is therefore impaired with regards to the scope and scale of collocation. Additionally, witness Gallagher admits that FDN's impairment is one of financial constraints.

To this, BellSouth witness Ruscilli responds that the FCC addressed impairment in its UNE Remand Order, concluding that:

Because the ILEC does not retain a monopoly position in the advanced services market, packet switch utilization rates are likely to be more equal as between requesting

carriers and incumbent LECs. It therefore does not appear that incumbent LECs possess significant economies of scale in their packet switches compared to the requesting carriers.

UNE Remand Order at ¶308.

Regarding FDN's desired offering, which would require the unbundling of the DSLAM at the RT and the ATM switch at the CO, BellSouth argues that to include ATM packet switching in a UNE offering requires us to find that lack of access to such switching materially impairs an ALEC's ability to provide the services it seeks to offer. FDN witness Gallagher argues that "for a DLC loop to be xDSL-capable, packet switching must be performed by the DSL line card or DSLAM at the remote terminal." However, witness Gallagher agreed that if ALECs were given access to BellSouth's DSLAM a "line-at-a-time" as he wants, the ATM switch at the CO also would have to be unbundled in order to disaggregate the intermingled packets of the ALEC and BellSouth.

BellSouth witness Williams asserts that BellSouth does not currently deploy DLC equipment capable of using the integrated voice and data line cards. The very limited number of Next Generation Digital Loop Carrier (NGDLC) systems deployed by BellSouth support voice only and are not capable of using the combo card, except for a small number used solely for testing purposes. Notwithstanding the inability of BellSouth to provide a NGDLC that uses an integrated combo card and the fact that BellSouth does not offer a hybrid copper/fiber xDSL-capable UNE loop offering, witness Williams argues that FDN is not limited to line sharing only over copper facilities. "For example, FDN could collocate a DSLAM in BellSouth's RT. Alternatively, FDN could provision its own fiber optic cable, install DSLAMs in its own cabinetry in proximity to BellSouth's RT, and acquire only the unbundled loop distribution subloop element." Thus, witness Williams claims that BellSouth does not preclude ALECs from serving customers regardless of whether or not those customers are served by copper loops.

FDN witness Gallagher asserts that if a hybrid copper/fiber xDSL-capable UNE loop is not created that includes DSLAMs provided on a "line-at-a-time" basis, FDN will incur significant delays in deploying service. BellSouth witness Ruscilli responds, noting that the FCC specifically stated in its January 19, 2001 Order in

CC Docket No. 96-98 "that ILECs have no obligation to provide DSLAMs, much less provide them on a 'port-by-port' basis." Additionally, witness Ruscilli asserts that ALECs should not be provided all of the benefits and none of the time or risks that BellSouth has had to incur with its deployment of DSLAMs in RTs. The witness asserts that ALECs can obtain unbundled xDSL loops with the same speed that BellSouth could provide for itself without the proffered UNES. Obtaining a DSLAM and DS1 feeder at the RT, and the time delays experienced in initiating service to an initial customer served by a RT, are the same for FDN as BellSouth experienced when it first began deployment two years ago.

FDN witness Gallagher further asserts that the use of shared DSL facilities would be more efficient than the use of separate, dedicated facilities, and would increase the deployment of broadband to Florida consumers and businesses. "The aggregation of all ILEC and ALEC traffic through shared DSLAMs would be the best way to ensure efficiency not only for ALECs, but also for BellSouth." Witness Gallagher argues that the higher utilization rate resulting from the shared use of DSLAMs will enable all carriers to reduce their per customer costs, thereby reducing prices. Further, sharing could generate sufficient demand to enable the use of higher capacity facilities, such as 96-port DSLAMs or DS3 feeders, which are more efficient and cost-effective. Additionally, witness Gallagher asserts that sharing of facilities will enable consumers to enjoy the benefits of line sharing, that is, obtaining voice and data services from separate carriers on the same line. Finally, witness Gallagher claims that in a shared facilities architecture, it will be easier and less costly for customers to switch DSL providers.

BellSouth witnesses Milner and Williams respond to FDN's proposal for shared facilities stating that sharing discourages ALECs from building facilities and discourages diversity and innovation. Moreover, witness Williams asserts that FDN's proposal would necessitate very extensive and expensive BellSouth support system re-writes. However, witness Williams admits that there is no evidence or documentation detailing what the cost would be and the details of the changes required. Regarding FDN witness Gallagher's assertions of the benefits of line sharing as a result of the sharing of DSLAMs, witnesses Milner and Williams argue that the noted benefits are without merit because there are no difficulties with cross-connections or alleged potential space and

resource limitations. BellSouth witness Milner asserts that line sharing in a shared condition is no different than in circumstances where the ALEC provides its own DSLAM at the RT. Finally, witness Williams asserts that FDN's shared facilities proposal puts BellSouth at risk of not recovering the cost of the DSLAM investment in the event of underutilization. Notwithstanding this, witness Williams admits that a customer is precluded from obtaining BellSouth DSL service and FDN voice service over the same line. Additionally, a customer currently receiving BellSouth FastAccess service is precluded from obtaining voice service from another provider without losing the BellSouth service.

BellSouth witness Williams concludes that if BellSouth is ordered to unbundle its packet switched network, no additional end users would have broadband access because ALECs would then only target those customers who currently have BellSouth ADSL available to them. The witness argues that such a result contradicts wide scale deployment of competitive broadband networks. Instead, he says, what would result will be nothing more than "customer swapping," as no new deployment would result. In fact, such an unbundling requirement would dissuade ALECs from deploying their own equipment. In contrast, if an ALEC deployed its own DSLAM at a remote terminal where BellSouth has not yet deployed its own DSLAM, that ALEC would get a leg up on other ALECs and on BellSouth, and customers who had previously been unable to receive ADSL service could get the service. This, witness Williams asserts, would make DSL services available to more Floridians than FDN's proposal.

Witness Williams agrees that the hybrid copper/fiber loop designed by BellSouth in the 120-Day filing puts ALECs in the same basic position with regard to having their own dedicated DSLAM and dedicated transport, similar to self-provisioning which is claimed to impair ALECs. While witness Williams agrees that no ALEC has collocated a DSLAM at any RT in Florida, he notes that there are several ALEC collocations underway in other states. Witness Williams notes that these collocations are not the result of any action from a state commission and the rates are negotiated through the interconnection agreement process.

Witness Williams states that TELRIC pricing does not permit BellSouth to recover its costs because TELRIC is based on forward-looking technology and not BellSouth's actual facilities. However, as the witness agreed, "that's what competition is all about; that



if the cost of providing service goes down, it doesn't matter what you have on your books and what you invested years ago, you're limited by competition to what it costs now to provide service. . . ." Of course, witness Williams asserts that this same argument applies to all of the components that BellSouth is now required to unbundle.

According to witness Williams, BellSouth's goal is to be able to provide DSL service to 76% of its customers in Florida by the end of 2002. In fact, BellSouth plans to begin deployment of integrated DLC line cards into more rural communities. The integrated line cards will allow BellSouth to retrofit its older DLCs to potentially serve one or two customers. As witness Williams explains, the integrated line card, or combo card, is basically a DSLAM on a card. BellSouth is currently conducting a study to determine the market rate for sharing these new integrated DLC line cards. However, witness Williams asserts that the deployment of integrated line cards is on hold pending the outcome of this proceeding. While BellSouth plans to deploy integrated line cards to support its wholesale ADSL service, given the cost of the technology, witness Williams argues that the line cards cannot be justified at TELRIC rates.

AT&T/MCI witness Darnell disagrees with BellSouth witness Milner's assertion that the FCC has exempted the DSLAM from being a UNE. To the contrary, witness Darnell asserts that the FCC simply does not require BellSouth to provide DSLAMs as UNEs, provided certain conditions are met.

Simply because the FCC does not require BellSouth to provide DSLAMs as UNEs in all cases does not mean that BellSouth is exempt from ever having to do so. This Commission certainly can require BellSouth to provide DSLAMs as UNEs.

Further, witness Darnell contends that BellSouth's refusal to provide a DSLAM as an UNE will impair an ALEC's ability to compete with BellSouth. He asserts that the additional bandwidth achieved from the DSLAM opens the door for new applications and will help facilitate economic development. "An effectively competitive broadband market is a worthwhile objective of any public service commission." However, witness Darnell is unsure whether we must

determine that ALECs are impaired by lack of access to the DSLAM before we can require that it be unbundled as a UNE.

C. APPROPRIATENESS OF BELL SOUTH'S COST STUDY

Order 1181 noted insufficient record evidence regarding the specific components of a hybrid copper/fiber xDSL-capable loop, such as line cards, vendors, and their associated prices. The hybrid copper/fiber xDSL-capable loop cost study required by Order 1181 was to "explicitly model the costs of hybrid copper/fiber xDSL-capable loops and incorporate all approved adjustments set forth herein, breaking out the additive costs for test points, order coordination, and DLR." Order 1181 at 76. Further, the Reconsideration Order clarified that hybrid copper/fiber xDSL-capable loops "are those deployed over fiber/DLC loops." Reconsideration Order at p. 11.

The BellSouth configuration of a hybrid copper/fiber xDSL-capable loop is comprised of subloop distribution, subloop feeder, and a DSLAM. The subloop feeder as well as the DSLAM are dedicated to the ALEC. In other words, the ALEC is required to purchase an entire 16-port DSLAM regardless of the quantity of customer lines the ALEC serves. Witness Milner explains that the loop element is priced the same whether the ALEC chooses to use it as only a voice circuit or to use it for its higher capacity capability of voice plus broadband. "BellSouth has no obligation to bifurcate its loop offerings between multiple ALECs, although nothing prevents an ALEC from sharing the loops it leases from BellSouth with other ALECs. Of course, if the ALECs desire not to purchase the BellSouth provided DSLAM at the remote, the ALEC always has the option to deploy its own DSLAM."

Regarding the concept of shared DSLAMs, witness Milner responds that "the aggregation of ALEC and ILEC traffic through shared DSLAMs at the remote site would require the use of a packet switch at the central office end of the circuit to disaggregate the packets by service provider and route them to their appropriate destination (such as the ALEC's collocation arrangement). This in effect would equate to a requirement upon BellSouth to provide unbundled packet switching." Witness Milner emphasizes that the FCC has determined that BellSouth is not required to provide unbundled packet switching. However, he notes that nothing

prevents a group of ALECs from incorporating their own sharing arrangements with DSLAMs, transport, and packet switching.

Nonetheless, BellSouth witness Williams asserts that FDN's witness Gallagher is asking us to require BellSouth to unbundle its packet switched network and accommodate FDN's request for a port-at-a-time, while both us and the FCC have ruled previously that BellSouth is not required to do so. Furthermore, FDN's proposal places 100% of all investment and risk on BellSouth, with FDN receiving all of the benefits. Moreover, witness Williams contends that FDN's arguments regarding its inability to provide xDSL services to end users using BellSouth's network are based on speculation rather than fact. He claims that BellSouth provides reasonable and workable solutions to ALECs to offer xDSL services to end users served from a DLC RT. Finally, witness Williams asserts that FDN's request would not increase the number of broadband users, but rather would only change the provider of these services.

Witness Williams notes that in the UNE Remand Order, the FCC stated that "regulatory restraint. . . may be the most prudent course of action in order to further the Act's goal of encouraging facilities-based investment and innovation." UNE Remand Order at ¶316. Further, the FCC declined to require ILECs to unbundle packet switching out of concern that such a requirement would impede competition and stifle innovation. *Id.*, ¶314-316. Witness Williams argues that there have been no significant changes in the telecommunications environment that would warrant any reconsideration of this issue, and accordingly, we should not rule inconsistently with the FCC.

Witnesses Milner and Williams assert that FDN's port-at-a-time proposal exposes BellSouth to the following risks: obsolescence of technology; underutilization of equipment, especially DSLAMs; and, unrecovered BellSouth investment. Regarding the risk of technology obsolescence, witness Williams asserts the risk arises that the ILEC is granted TELRIC based interim rates and then, during a cost proceeding, is ordered to comply with the TELRIC principle of using forward-locking design of the newest equipment. Unfortunately, this may mean that the TELRIC-based rates are significantly lower than the ILEC's actual costs for deployment. Thus, the ILEC could possibly not be able to recover its costs.

Regarding underutilization risks, witness Williams argues that this could mean that BellSouth would be required to deploy a DSLAM at a RT and an ALEC take only one port of the DSLAM. This port could potentially be disconnected in a relatively short period of time, leaving BellSouth with a DSLAM in a RT with no users attached. In this case, the DSLAM may become stranded investment for BellSouth. However, witness Williams stated that his stated risk of underutilization is premised on the presumption of unbundling DSLAMs even in areas where BellSouth does not presently have a DSLAM. The concern is eliminated if unbundling is required only in areas where BellSouth presently has a DSLAM. Additionally, witness Williams agrees that his argument regarding obsolescence, underutilization, and under-recovery goes directly to the matter of TELRIC pricing.

According to the witness, an additional risk remains that, in the name of fostering competition or broadband deployment, a regulatory body could order BellSouth to reduce its rates to some level below BellSouth's costs. While in theory BellSouth may recoup its investment in the future, witness Williams states that this probably will not be the case, much less enable BellSouth to provide a return on investment to its shareholders. Moreover, witness Williams asserts that although an ALEC claims that they have to have an offering, they may not actually purchase it; thus, the significant amount of funds and other resources expended to deliver the offering will never be recouped.

Witness Williams argues that FDN's proposal stifles any potential investment an ILEC might be considering in new technologies, like DLC combo cards. In such a case, BellSouth would simply abort further deployment. If granted unbundled access to a DSLAM, FDN witness Gallagher admits that the footprint of Floridians who are able to get DSL service may not be expanded; FDN would provide innovations to customers who potentially could already be receiving DSL service from BellSouth.

An ALEC can currently provide xDSL service to an end user served by a DLC RT. All of the components are currently available through collocation and UNE offerings for an ALEC to serve end users, regardless of the facilities serving the end user. When BellSouth provides its own ADSL service where DLC is deployed, DSLAM equipment at the DLC RT location is deployed. An ALEC desiring to provide its xDSL service where DLC is deployed must

also collocate its DSLAM equipment at the DLC RT location. This will allow the ALEC to provide the high speed data service in the same manner as BellSouth.

If sufficient space exists within a DLC RT, BellSouth witness Williams asserts that BellSouth will allow an ALEC to collocate its DSLAM in the RT, regardless of whether BellSouth has installed its own DSLAM at that RT. If sufficient space does not exist within the DLC RT and BellSouth has not installed its own DSLAM at that DLC RT location, witness Williams states that BellSouth will file a collocation waiver request with us for that DLC RT site. If sufficient space does not exist within the DLC and BellSouth has installed its own DSLAM at the DLC RT location, then BellSouth will make good faith efforts to augment the space at that DLC RT, such that the ALEC can install its own DSLAM at that DLC RT. In the very unlikely event that BellSouth could not accommodate collocation at the particular RT where BellSouth has a DSLAM, BellSouth will unbundle the BellSouth packet switched network at that RT in accordance with FCC requirements. BellSouth, therefore, provides ALECs the same opportunity to offer DSL service where a DLC is deployed as BellSouth provides itself.

Witness Williams claims that FDN witness Gallagher's concerns regarding RT collocation, rights-of-way, construction of new facilities, and other difficulties are speculative since FDN has not submitted a single RT collocation application. While an ALEC may construct its own facilities, this is not necessary since BellSouth offers subloop DS1, DS3, and OC3 feeder UNEs that would provide all of the capacity required from an RT to a CO. Accordingly, obtaining rights-of-way and constructing new facilities are not necessary.

Witness Williams argues that BellSouth is not depriving ALECs of the opportunity to provision competing DSL services. For example, since the inception of line sharing and line splitting, BellSouth has hosted an industry-wide collaborative for the express purpose of having ALECs assist with the development of line sharing and line splitting offerings and related systems. FDN has chosen not to participate, nor expressed any desire for information relating to the issues discussed and resolved through the collaborative.

Witness Williams notes that business plans are developed by targeting deployment in areas where the provider expects a large percentage of end users to subscribe. Accordingly, BellSouth selectively placed DSLAMs in its COs for several years before the first RT-based DSLAM was placed. CO-based xDSL is far less expensive than RT-based xDSL. BellSouth waited until demand increased before it deployed the more expensive RT infrastructure. Accordingly, if FDN anticipates the low take rate indicated in witness Gallagher's testimony, FDN may be best served by waiting until the anticipated take rate is more significant and not consider deployment in RTs at this time.

If an ALEC does not want RT collocation, BellSouth will allow an ALEC to offer resold BellSouth voice service, with BellSouth's wholesale ADSL service at a price of \$33. If the ALEC is an Internet Service Provider (ISP), it can purchase the BellSouth wholesale ADSL transport service and provide xDSL data service to its end users. If the ALEC is not an ISP, it can provide BellSouth FastAccess Internet Service as an authorized sales representative or independently contract with an ISP of its choice. An alternative for an ALEC would be to enter into a line splitting agreement with another data-ALEC, or an ALEC could pursue an available 'home-run' loop. Witness Williams notes that there are other alternatives for broadband service, including satellite, fixed wireless, and cable modem.

However, if the ALEC wants to provide UNE or UNE-P voice service, BellSouth's wholesale ADSL service would not be available. Furthermore, BellSouth will not allow ISPs using BellSouth ADSL wholesale service to work with ALEC voice service. Moreover, it would be unusual for BellSouth to have an available home-run loop that meets DSL tolerances and qualifications.

AT&T/MCI witness Darnell claims that BellSouth's hybrid copper/fiber xDSL-capable loop offering will not help the development of competition. He states that:

The rigid way BellSouth has designed this UNE and the rates BellSouth has proposed for this UNE eliminate any usefulness it could have.

Witness Darnell asserts that BellSouth's modeled loop is overly rigid because: 1) BellSouth only offers a 16-port DSLAM when

different sizes are available, 2) BellSouth assumes that each ALEC must have a dedicated DSLAM rather than a sharing arrangement between BellSouth and the ALECs, and 3) BellSouth has assumed that the offering is only provided with 1 to 4 DS1s between the DSLAM and the CO, and those facilities are dedicated to the ALEC that purchased the DSLAM. The witness argues that there is no reason why the packet transport from the DSLAM to the CO could not be on DS3 and the transport facilities shared. Witness Darnell argues that ALECs must be able to purchase packet transport at a rate that reflects the same economies of scale as BellSouth; the offering modeled and costed by BellSouth will be of no use to ALECs.

FDN witness Gallagher asserts that BellSouth's hybrid copper/fiber xDSL-capable loop configuration is not a viable option. The witness asserts that the DSLAM functionality at the RT must be unbundled. Because BellSouth's cost study is deficient in this regard, FDN proposes that BellSouth be ordered to file a new cost study based on a hybrid loop offering that unbundles packet switching at the RT.

D. RATES AND RATE STRUCTURE

BellSouth filed recurring and nonrecurring costs associated with providing its modeled hybrid copper/fiber xDSL-capable loop. As discussed earlier, the basic recurring cost components of BellSouth's modeled hybrid copper/fiber xDSL-capable loop are the subloop feeder, the subloop distribution, and the DSLAM.

On the other hand, FDN witness Gallagher contends that the rate structure should include two basic product types: data-only and voice-and-data. Further, each should be offered on a line-at-a-time basis, with a single loop rate for each zone. Witness Gallagher asserts that the rates should simply represent the addition of unbundled packet switching to the different types of existing loops. For data-only xDSL loops, the surcharge would be added to the applicable rate for a line shared loop. For combined voice and data xDSL loops, witness Gallagher proposes adding the surcharge to the applicable rate for a UNE loop. Witness Gallagher believes the approximate rate for the UNE, including the loop, should be between \$16 and \$22, based on BellSouth's existing retail and wholesale rates for DSL-based services.

BellSouth witness Caldwell maintains that the BSTLM developed the investments associated with the DS1 component of the hybrid copper/fiber loop. The witness notes that the subloop feeder DS1 (element A.20.1) is different from the unbundled subloop feeder 4-wire DS1 (element A.9.2). Witness Caldwell explains that the subloop feeder DS1 (A.9.2) includes the feeder portion of all DS1 loops served by both copper feeder and fiber feeder facilities to a remote DLC terminal. On the other hand, the hybrid copper/fiber DS1 (A.20.1) only considers locations served by a remote DLC terminal with fiber. Therefore, not all the locations used in the calculation of A.9.2 are included in the calculation of the hybrid copper/fiber 4-wire DS1 (A.20.1).

AT&T/MCI witness Darnell questions the difference in recurring costs between the hybrid copper/fiber DS1 (A.20.1) and the subloop feeder DS1 (A.9.2). In response to these concerns, BellSouth witness Caldwell asserts that the hybrid DS1 (A.20.1) is purely fiber and longer in length since, in the BSTLM, DS1s are provisioned on fiber-fed DLCs only if the DS1 loop length is greater than 12,000 feet. The witness notes that the average length of the DS1 subloop (A.9.2) is 10,407 feet while the average length of the hybrid DS1 (A.20.1) is 21,029 feet.

Witness Caldwell argues that the material prices for the 16-port DSLAM were obtained from vendor contracts. Regarding nonrecurring costs, witness Caldwell explains that these costs reflect the work activities required to connect and turn-up the DS1 and the 2-wire transmission facility onto the DSLAM.

Witness Caldwell explains that in order to make this a functional loop and to reflect the manner in which the loop will be provisioned, the individual network components are summed into (1) System, (2) DS1, and (3) Activation elements. The System element represents the cost of the DSLAM (element A.20.3) with an administrative DS1 (A.20.1), which is used for BellSouth's management of the DSLAM. The administrative DS1 terminates into a DSL hub bay at the CO in order to allow BellSouth to control the provisioning, maintenance, and repair of the hybrid copper/fiber loop. Witness Caldwell notes that the cost of the administrative DS1 is the same as the DS1 that terminates into the ALEC's collocation space.



The DS1 element is comprised of the cost of the fiber DS1 that connects the DSLAM at the RT to the ALEC's collocated space in the CO. Witness Caldwell asserts that the recurring cost is the same as the hybrid copper/fiber DS1 (A.20.1). The nonrecurring cost is the sum of the DS1 establishment element (A.20.2) and the nonrecurring cost associated with the subloop feeder per 4-wire DS1 element (A.9.2). Witness Caldwell notes that element A.9.2 was not restudied as a rate was established by Order 1181. The rate of \$133.77 was hard-coded into the final cost summary.

Regarding the Activation element, witness Caldwell explains that this cost is the sum of the channel activation cost (element A.20.4) and the nonrecurring cost associated with the 2-wire distribution subloop (element A.2.2).

Notwithstanding his argument that BellSouth's modeled hybrid copper/fiber xDSL-capable loop is not the product desired by the ALECs and will be of no use to the ALECs, AT&T/MCI witness Darnell discusses the specific cost elements of BellSouth's modeled loop. First, witness Darnell asserts that there should be no nonrecurring charge for channel activation (element A.20.4) associated with the 2-wire subloop distribution UNE. Witness Darnell claims that "the nonrecurring charges for element A.2.2 subloop already recover those costs." Further, witness Darnell asserts that the monthly recurring and nonrecurring costs of subloop DS1 feeder, element A.9.2, "already determined by the Commission in Order 1181, already cover the cost of connect and turn-up testing, including central office installation and maintenance and Special Service installation and maintenance." The witness concludes that the only rates that should apply for the DS1 subloop feeder are those already established.

Second, witness Darnell alleges that BellSouth's cost support for the DSLAM is not compliant with TELRIC principles and is not based on forward-looking inputs. Witness Darnell argues that the most fundamental error is BellSouth's "failure to assume total demand in the development of [the DSLAM] rate."

In the cost support for the DSLAM, BellSouth never evaluates its demand or ALEC demand and unilaterally determines that each ALEC must purchase the DSLAM functionality in increments of a 16-port DSLAM.

Witness Darnell argues that ALECs and BellSouth should share the DSLAM. Further, packet transport should be sold on a per port basis, and the rate per port should be based on the total forward-looking cost of the DSLAM functionality, divided by the total retail and wholesale demand. The witness also proposes that the RT housing cost be removed from the DSLAM rate. The DSLAM rate element should not be developed to recover a portion of the cost of replacing the RT.

Third, witness Darnell alleges that the material prices (i.e., DSLAM, Hub Bay, and DS1 Card) and installation times (i.e., service inquiry) that BellSouth used for the DSLAM recurring and nonrecurring rates do not reflect those of a forward-looking, least cost telecommunications service provider. To this, BellSouth witness Caldwell responds that the cost study "accurately reflects the product description provided by the product team and the equipment and labor resources identified by subject matter experts in BellSouth's Network department." However, witness Caldwell was unable to provide the nature of the subject matter experts' (SMEs) opinions, a description of the data the SMEs relied upon, or the individual SME's expertise being relied upon.

In short, witness Darnell argues that BellSouth's modeled and costed hybrid copper/fiber xDSL-capable loop will be of no use to ALECs.

When added up, this offering would cost ALECs approximately \$150 per month per ADSL line. ALECs cannot pay \$150 for an ADSL line and then attempt to use it to compete in a market where the retail rate is about \$50. BellSouth sells its Fast Access DSL service for \$49.95 in Florida and this includes access to the internet service provider. Just like this Hybrid Copper/Fiber loop proposal, BellSouth often provisions its Fast Access DSL service using subloop copper distribution facilities, DSLAMs and remote terminal to central office packet transport. As such, either BellSouth's cost support for this proposal is seriously wrong or BellSouth is using funds from other services to cross subsidize its Fast Access DSL offering.

In response to witness Darnell's allegations, BellSouth witness Caldwell asserts that the input file for the nonrecurring

charge for channel activation (A.20.4) identifies a work group (Data Support Group) and associated work activity not contained in the input file of the subloop element A.2.2. Witness Caldwell asserts that since the hybrid copper/fiber loop and the DS1 are designed to handle data transmissions, while the distribution subloop is primarily designed to carry only voice traffic, additional work activity is required.

Additionally, witness Caldwell asserts that in a long-run study, such as TELRIC, "all costs are considered variable, i.e., that they will exhaust." The witness argues that since the deployment of the hybrid copper/fiber loop utilizes components of the RT, they should be considered in the cost development.

The model assumes that a certain percentage of the time there will be insufficient space in an RT to accommodate a new DSLAM. However, neither BellSouth witness Ruscilli nor witness Williams could attest to personal knowledge as to whether or not BellSouth has available space in its RTs for ALECs to collocate DSLAMs. BellSouth witness Milner asserts that while DSLAM manufacturers offer various capacities of customer lines, most DSLAM manufacturers do not offer DSLAMs with less than eight customer line capability. According to witness Milner, BellSouth chose a 16-port DSLAM believing that this capacity would economically serve an ALEC's demand at a given RT.

FDN witness Gallagher asserts that it would be impossible to profitably sell DSL service using the rates from BellSouth's cost study. Witness Gallagher argues it is financially impaired due to BellSouth's requirement that it purchase an entire 16-port DSLAM as well as its resulting cost study and rate structure. BellSouth witness Ruscilli argues that the pricing standard is not whether UNE-based entry is profitable, but whether the UNE rates are cost-based.

#### DECISION

As mentioned earlier, Order 1181 and the Reconsideration Order noted our belief that BellSouth is obligated, if technically feasible, to provide hybrid copper/fiber xDSL-capable loops to ALECs, and required BellSouth to submit a cost study for such hybrid loops. Moreover, the Reconsideration Order clarified that hybrid copper/fiber xDSL-capable loops are those deployed over

fiber/DSL loops. The purpose of the hybrid copper/fiber xDSL-capable loop cost study is to address the feasibility of such a loop, and to develop record evidence regarding the components and costs of those loops.

In addressing the technical attributes of the hybrid copper/fiber xDSL-capable loop in this proceeding, we address whether the loop should include: 1) the unbundling of the DSLAM and 2) the ATM packet switch at the CO. Regarding unbundling of the DSLAM, while the ALECs may have financial constraints in deploying DSLAMs in RTs, these constraints are no more than BellSouth faces itself.

The record is clear that shared transport, as FDN and AT&T/MCI request, will require the unbundling of a BellSouth ATM packet switch at the CO. However, no party's testimony specifically requested or discussed this unbundling. FDN witness Gallagher admits that there is no record evidence supporting a rate for such unbundling. Accordingly, we believe there is insufficient record evidence to require the unbundling of packet switching at the CO, at this time.

Given the direction in Order 1181 and the Reconsideration Order available from the prior record in this proceeding, there is no doubt that BellSouth's hybrid copper/fiber xDSL-capable loop product and design is compliant. While the DSLAM is a component of the "hybrid loop," the ATM packet switch located in the CO is not.

The ALECs do not agree with the product as defined by BellSouth, but we believe their proposed "line-at-a-time" and non-dedicated transport facility goes further than envisioned by Order 1181 and the Reconsideration Order. Accessing DSLAMs located at RTs on a line-at-a-time basis is not technically feasible without unbundling the ATM packet switch at the CO. Without a dedicated DS1 transport, the data packets of BellSouth and the ALECs will be commingled. To separate these packets and send them to their respective destinations, the packets would have to go through BellSouth's ATM switch at the CO. This will require the unbundling of the ATM switch, an element which was not requested by the ALECs in their product design.

Notwithstanding this, in order to require the unbundling of the ATM packet switch at the CO, we would be required to show that

the ALEC community is impaired from providing services they seek to offer. To this end, we believe evidence is needed that shows that ALECs are impaired absent access to the BellSouth ATM switch in the CO or an impairment absent access to the BellSouth DSLAM. In this proceeding, FDN argues that "for a DLC loop to be xDSL-capable, packet switching must be performed by a DSL line card or DSLAM at the remote terminal." However, no impairment evidence was presented in this proceeding that addresses packet switching at the CO. For this reason, the ALECs' proposal for access to DSLAMs at RTs on a "line-at-a-time" basis is rejected.

Regarding the unbundling of the DSLAM, such a requirement could very well have a chilling impact on technology deployment, as BellSouth claims. BellSouth began its deployment of DSLAMs in 1998, with initial placement in its COs based on market conditions. It was not until 2000 that BellSouth began deployment of DSLAMs in RTs, and again this deployment was done selectively in RTs where the market forces dictated. The key reason FDN proffered it was impaired from deploying DSLAMs in RTs was one of financial constraints.

We note that FDN made essentially the same impairment arguments in Docket No. 010098-TP, its arbitration with BellSouth, as it has made in this proceeding. Consistent with our decision in that proceeding, we do not believe that FDN has established it is impaired, absent access to an unbundled DSLAM in a BellSouth RT. The record in this proceeding reflects that, in accord with the FCC's existing requirements, BellSouth will allow FDN or any ALEC to collocate its DSLAM in a BellSouth RT. In those limited instances where this cannot be accomplished, BellSouth acknowledges that it will unbundle packet switching. We find it most telling that BellSouth itself first deployed DSLAMs in its remote terminals in 2000, a mere two years ago. Since ILECs have been obligated to allow ALECs to collocate their DSLAMs in ILEC RTs since November 1999, when the FCC issued its UNE Remand Order, we believe that ILECs and ALECs essentially started from the same place. The only distinguishing factor is perhaps the relative financial wherewithal of various providers; however, we do not believe that differences in the capitalization of parties support a finding of impairment.

Accordingly, at this time we do not require BellSouth to unbundle its DSLAMs located in remote terminals, or packet switches located elsewhere in its network. Thus, the remaining subparts of

this issue are largely moot. Notwithstanding this, we find that a hybrid copper/fiber xDSL-capable loop is a configuration that allows an ALEC to provide xDSL services to its customers that are served off of a BellSouth digital loop carrier remote terminal (DLC RT). Such a configuration is technically feasible and consists of, at a minimum, copper loop facilities between an end user and the RT, a DSLAM located at the RT, and feeder facilities between the RT and the central office.

**VI. ACCOUNTING FOR INFLATION IN 120-DAY FILING**

We now examine whether BellSouth has accounted for the impact of inflation in its 120-day filing, in a manner consistent with Order No. PSC-01-2051-TP.

As noted earlier, as a result of our concern with linear loading factors and the resulting distortion of costs between rural and urban areas, Order 1181 required BellSouth to file a "bottoms-up" cost study explicitly modeling all cable and associated supporting structures, engineering and installation placements. The purpose of this cost study was to address the magnitude of any differences in results between modeling based on loading factors as opposed to using a "bottoms-up" approach, and to determine whether the loop rates should be modified prospectively. Notwithstanding this, we found BellSouth's inflation factors to be appropriate in Order No. PSC-01-2051-FOF-TP.

BellSouth witness Caldwell and AT&T/MCI witness Pitkin provided testimony addressing the inflation issue in the "bottoms-up" cost study. BellSouth witness Caldwell asserts that BellSouth's cost studies are in compliance with our directive on inflation. Witness Caldwell notes that we found in our Reconsideration Order that the application of inflation factors to both the investment and to labor rates is appropriate. For this reason, the "bottoms-up" cost study reflects the impact of inflation based on factors submitted in BellSouth's previously filed 2001 "tops-down" cost study with no adjustment.

BellSouth argues in its brief that the ALECs have not requested any additional issue regarding inflation be decided in this proceeding. Consequently, BellSouth asserts that we should not consider the new inflation arguments of AT&T/MCI witness Pitkin that were not timely and properly raised.

AT&T/MCI witness Pitkin agrees that the inflation factors that BellSouth uses in its "bottoms-up," 120-day filing, are the same as used in the "tops-down" Phase 1 filing. However, witness Pitkin argues that the issue is with the application of the inflation factors in the 120-day cost study. He alleges that the inflation factors in BellSouth's "bottoms-up" 120-day approach are not applied in a manner we have approved. Witness Pitkin notes that an overall blended inflation factor in a "tops-down" approach, which includes inflation for both material and labor, is not appropriate in a "bottoms-up" approach. Furthermore, witness Pitkin asserts that BellSouth's inflation factors should be updated to reflect more recently available data rather than continuing to rely on projections made in 1998.

A. INFLATION DATA

According to BellSouth witnesses Caldwell and Stegeman, the inflation factors are applied against the material investments in the BellSouth Telecommunications Loop Model (BSTLM). Also, any nonrecurring costs included in the "bottoms-up" study reflect inflated labor rates in the BellSouth Cost Calculator (BSCC). The same inflation rates used in BellSouth's "tops-down" (Phase 1) approach were used in the "bottoms-up," 120-day approach.

BellSouth witness Caldwell argues that the inflation rates used in BellSouth's 120-day cost study are based on a 1998 forecast for a three-year study period of 2000-2002. Witness Caldwell explains that since the material prices and other factors in the Phase 1 cost study, as well as in the 120-day cost study, were based on 1998 data, BellSouth continued its use of the 1998 inflation factors for consistency.

On the other hand, AT&T/MCI witness Pitkin claims that BellSouth's inflation factors should reflect more recently available data. Witness Pitkin questions the reliance on forecasting when actual data is now available. A comparison of the actual inflation BellSouth experienced for 1999-2001 to the inflation factors used in Phase 1 shows that actual inflation has been less than the 1998 projections. For this reason, witness Pitkin proposes revised inflation factors developed using actual 2000 and 2001 inflation data, and linear trending for 2002.

BellSouth witness Caldwell admits that it is not totally inappropriate to use more updated inflation factors. However, BellSouth notes that actual inflation is only known through year 2000. Therefore, an update using actual inflation data would still require projected estimates for 2001 and 2002, two of the three years involved for the 2000-2002 study period in BellSouth's cost study. BellSouth asserts that while there is some merit to the argument that the most recent view of inflation is probably the best available view, there are numerous other areas in BellSouth's cost study where a more recent view of a factor development could hypothetically be utilized. BellSouth views this as a question of consistency throughout the study. Beginning with the initial filing in this docket, BellSouth has consistently utilized 1998 base period data as its fundamental source for factor and labor rate development.

BellSouth argues in its brief that we should not use data that is now available, but was not known at the time BellSouth developed its inflation factors. BellSouth refers to such criticism as being unfair and outside the control of the cost study proponent. Finally, BellSouth argues that it would be inconsistent and unfair to allow the ALECs to selectively update the data as it suits them.

B. Appropriateness of using the same inflation factors in a "bottoms-up" cost study as in a "tops-down" cost study

BellSouth witness Caldwell explains that BellSouth's inflation factors represent a composite or blending of a material component and a labor component for consistency with the factors used in the Phase 1 cost study. On the other hand, AT&T/MCI witness Pitkin asserts that BellSouth inappropriately applies the same inflation rates in its "bottoms-up," 120-day cost study as it used in the "tops-down" cost study. Specifically, witness Pitkin argues that BellSouth applies an overall blended inflation factor, which includes inflation for both material and labor as well as material-only investments, thereby overstating costs.

AT&T/MCI witness Pitkin asserts that a cardinal rule of costing is that cost factors should be developed in a manner consistent with the way they are to be applied. If BellSouth is applying inflation factors to material-only investments, witness Pitkin argues that the inflation factor itself should reflect material-only inflation, not a blend of material and labor.



Witness Pitkin explains that in BellSouth's "tops-down" Phase 1 cost studies, only material investments were generated by the BSTLM. These material investments were then multiplied by in-plant loading factors to develop total installed investment amounts, including both material and labor. The total installed investment amounts were multiplied by blended inflation factors, reflecting inflation of both material and labor, in the BSCC to develop inflated investment amounts. As such, witness Pitkin notes that the blended inflation factors were consistent with the application to combined material and labor investments.

However, in the "bottoms-up" model BellSouth submitted in the 120-day filing, witness Pitkin argues that inflation should be applied separately to labor and material investment. While BellSouth applies a labor-only inflation factor to its labor investment, a material-only inflation factor is not applied to its material investment. Instead, data provided by BellSouth indicates that a blended inflation factor continues to be applied to the material component.

Witness Pitkin notes that material inflation has been significantly lower than labor inflation. Based on witness Pitkin's analysis, he concludes that use of a blended inflation factor in a "bottoms-up" approach overstates material investments. As an illustration, witness Pitkin provided a comparison of BellSouth's application of blended inflation factors and material-only inflation for a 1200-pair aerial copper cable. The illustration shows that use of a blended inflation factor overstates the total investment for a 1200-pair aerial copper cable by about 10%. Therefore, witness Pitkin proposes that a labor-only inflation factor should be applied to labor investment, and a material-only inflation factor should be applied to the material investment.

Witness Pitkin also alleges that BellSouth has erred in its application of the labor-only inflation factor to the labor rate for placing and splicing. The costs for placing and splicing cable are addressed in Section I of this Order.

In response to AT&T/MCI's allegations, BellSouth witness Caldwell agrees that theoretically where material investments and labor costs are developed separately in a "bottoms-up" approach, material-only inflation should be applied to the material-only

investments. However, if that is done, witness Caldwell asserts that engineering should be inflated as well.

Witness Caldwell agrees that using a composite or blended inflation factor in a "bottoms-up" approach will tend to overstate material investments. However, since inflation was not applied to engineering, for accounts where engineering was included, these investments are understated. While BellSouth has looked at individual accounts, witness Caldwell states that the cost model has not been rerun correcting the inflation. Therefore, BellSouth does not know the materiality of the differences if the inflation rates are correctly applied. Additionally, when asked if BellSouth had found any errors in AT&T/MCI's witness Pitkin recommended material inflation factors, witness Caldwell was unable to answer with certainty.

Table 6-1 shows a comparison of the inflation rates proposed by the parties. The first column shows the blended inflation rates originally filed by BellSouth in Phase 1 of this proceeding, as well as a separation of the material and labor components. These inflation factors reflect BellSouth's 1998 forecast. The second column denotes BellSouth's updated inflation factors based on its November 2001 forecast that recognizes actual inflation for 1998-2000. The third column shows the inflation rates recommended by AT&T/MCI witness Pitkin. As noted earlier, these inflation rates reflect BellSouth's actual inflation experience for 2000 and 2001 and BellSouth's projected inflation for 2002.

Table 6-1: Inflation Factors

Account	Inflation Factors		
	BellSouth Original*	BellSouth Updated**	AT&T WorldCom
Poles (Blended)	1.0768	1.0374	
Material Only	1.0737	0.9607	0.9616
Telco OSP Labor	1.0822	0.0448	
Contract Labor	1.0727	0.0700	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Aerial Ca.-Copper (Blended)	1.0822	1.0163	
Material Only	1.0914	0.9672	0.9625
Telco OSP Labor	1.0822	1.0448	
Telco Contract Labor	1.0727	1.0748	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Aerial Cable-Fiber (Blended)	1.0201	1.0035	
Material Only	0.9605	0.9693	0.9789
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0727	1.0748	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Underground Cable-Copper (Blended)	1.0926	1.0036	
Material Only	1.0870	0.9690	0.9735
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0696	1.0557	
Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Underground Cable-Fiber (Blended)	1.0000	0.9941	
Material Only	0.9605	0.9693	0.9789
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0696	1.0557	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Buried Cable-Copper (Blended)	1.0715	1.0379	
Material Only	1.0795	1.0115	1.0098
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0696	1.0557	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Buried Cable-Fiber (Blended)	1.0405	1.0275	
Material Only	0.9605	0.9693	0.9789
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0696	1.0557	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Intrabuilding Cable-Copper (Blended)	1.0926	1.0092	
Material Only	1.0914	0.9574	0.9515
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0727	1.0748	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Intrabuilding Cable-Fiber (Blended)	1.0405	1.0147	
Material Only	0.9605	0.9693	0.9515
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0727	1.0748	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	
Conduit (Blended)	1.0700	1.0458	
Material Only	1.0467	1.0266	1.0000
Telco OSP Labor	1.0822	1.0448	
Contract Labor	1.0727	1.0485	
Telco Engineering	1.0980	1.0163	
Contract OSP Engineering		1.0857	

(Source: EXH 22, pp. 72-76, 92-95; EXH 58, BFP-18, pp. 1, 6)  
 \* Based on 1998 projections.  
 \*\*Based on November 2001 updated projections.

BellSouth asserts that if the blended inflation factors are separated between material-only and labor-only inflation, then engineering-related costs should be updated to properly recognize the projected inflationary impacts on engineering costs. As discussed in Section I, BellSouth developed its engineering factors based on data from its Resource Tracking Analysis and Planning database and relationships between engineering costs and the total non-engineering investments for each plant account. AT&T/MCI did not specifically address engineering inflation, only to assert that BellSouth's labor rates have already been inflated due to BellSouth including the effects of its August 1998 union wage agreement. However, as noted by witness Caldwell, the inflated labor rates to which witness Pitkin is referring are in the BSCC and are used in developing nonrecurring costs.

#### DECISION

BellSouth argues that its studies comply with Order 1181 and the Reconsideration Order regarding inflation. Witness Caldwell asserts that we extensively reviewed inflation factors in a specific issue in Phase 1 of this proceeding and found that BellSouth's inflation factors, as originally filed, are appropriate. As discussed above, BellSouth is using the same inflation factors in its 120-day "bottoms-up" approach as in the original Phase 1 "tops-down" approach. BellSouth contends that inflation is a non-issue since we approved the use of inflation in the Reconsideration Order.

AT&T/MCI assert that BellSouth uses inappropriate blended inflation rates in the "bottoms-up" approach. AT&T/MCI recommend that the BSTLM inputs for inflation should be adjusted to 1) use actual inflation data where available, 2) use more recent inflation projections, and 3) use material-only inflation factors for application to the material investment. AT&T/MCI's proposed inflation inputs are shown in Table 6-1.

Tracking to our finding in Section I that changes to BellSouth's loop rates and rate structure should be made based on the "bottoms-up" study, a material-only inflation shall be applied to the material investments, as shown in Table 6-1. Engineering factors shall also should be adjusted to reflect projected inflationary impacts. Likewise, a labor-only inflation factor should apply to the labor cost. A blended inflation rate that includes inflation for both material an labor should not be applied to material-only investment. The result is an overstatement in material investments

Regarding whether BellSouth's inflation rates should be updated to reflect the most current actual data, certainly when 1998-2000 actual inflation is now known, there is some sense to recognizing the actual data. BellSouth even agrees with this. However, as BellSouth notes, material prices and other factors in the cost study are based on 1998 data. For consistency, BellSouth continued its use of inflation rates based on 1998 projections. We also note that the UNE prices reflected in Order 1181 and the Reconsideration Order are based on 1998 data and inflation projections. Only loop rates are being considered for revision in this case as a result of the "bottoms-up" cost approach. For consistency between all UNE rates, we believe 1998 projected inflation rates should continue to be used.

If 1998 projections continue to be utilized, the only inflation rates separating the material and labor inflation components based on these projections are those BellSouth provided in response to discovery. AT&T/MCI's disagreement is centered on the need to update the projections to reflect more recent actual data. AT&T/MCI did not address specific disagreement with the component inflation factors BellSouth provided based on the 1998 projections.

Additionally, if a material-only inflation factor is used to develop material costs, BellSouth asserts that engineering factors should recognize projected inflationary impacts as well. AT&T/MCI did not voice any specific opposition to BellSouth's assertion. In a "bottoms-up" approach, material and installation costs are developed in the BSTLM. Just as it is appropriate to apply a material-only inflation to material costs, we find that it is also appropriate to consider the impacts of inflation on engineering costs for installation and placement.

#### **VII. RESIDUAL CONSISTENCY OF BELLSOUTH'S 120-DAY FILING**

We now address if, beyond matters already addressed, BellSouth's 120-day filing is consistent with our Orders in this docket.

Our Order No. PSC-01-1181-FOF-TP, issued May 25, 2001, outlined a number of issues that required a response from BellSouth within 120 days. Specifically we required:

. . . BellSouth to file modified versions of its xDSL nonrecurring cost studies, which

exclude the following: 1) the DLR, 2) a test point, and 3) order coordination.

Order No. PSC-01-1181-FOF-TP, p. 73.

. . .

. . . to the extent BellSouth can come forward with information in its refiling indicating an appropriate inflation adjustment that eliminates the growth mismatch, we will consider that information at that time.

Order No. PSC-01-1181-FOF-TP, p. 313.

. . .

BellSouth Telecommunications, Inc., shall refile within 120 days of the issuance of this Order revisions to its cost study addressing xDSL-capable loops, network interface devices, and cable engineering and installation placements . . . the parties to this proceedings shall refile within 120 days of the issuance of this Order proposals addressing network reliability and security concerns as they pertain to access to subloop elements, as set forth in the body of this Order.

Order No. PSC-01-1181-FOF-TP, p. 543.

We revised our ruling on inflation in Order No. PSC-01-2051-FOF-TP and stated that:

Upon consideration, we find that BellSouth has identified a mistake of fact or law in our decision on this point. Based on further scrutiny of the existing record, we have determined that what previously appeared to be a mismatch is not.

. . .

We find that it is important for us to reconsider our decision regarding the

inflation factor at this time, rather than as a part of the 120-day filing, due to the significant impact that the inflation factor has on costs.

Order No. PSC-01-2051-FOF-TP, pp. 6-7.

Therefore, the inflation issue was not one of our requirements for BellSouth's 120-day filing.<sup>7</sup>

According to BellSouth witness Caldwell, the cost studies filed by BellSouth incorporate all of the adjustments we ordered. The witness notes that her testimony provides a description of the modifications and that the cost study contains a detailed discussion of the adjustments made in order to comply with our directives. No other party provided any testimony on this issue nor did any party, other than BellSouth, take a position on this issue.

#### DECISION

We have reviewed our Orders in this docket and apart from the requirements addressed in Issues 1-6, it does not appear that there are any issues that BellSouth has failed to address. Therefore, we find that apart from Issues 1-6, BellSouth's 120-Day filing is consistent with our Orders in this docket.

#### VIII.

#### DOCKET CLOSING

Having made our findings and adopted the appropriate positions on the issues, this track of this docket may be closed. BellSouth's UNE rates, as established herein, may be incorporated as amendments to existing interconnection agreements. Therefore, upon consideration, we find that it is appropriate for the rates to become effective when the interconnection agreements are amended to reflect the approved UNE rates and the amended agreement becomes effective under the law. For new interconnection agreements, the rates shall become effective when we approve the agreement. Pursuant to Section 252 (e)(4) of the Telecommunications Act of 1996, should we fail to act to approve or reject the agreement adopted by negotiation within 90 days after submission by the

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<sup>7</sup>Inflation was made an issue by the ALECs at the issue identification meeting.

parties, the agreement is deemed approved. Having made our findings, this track of this docket shall be closed.

Based on the foregoing, it is therefore

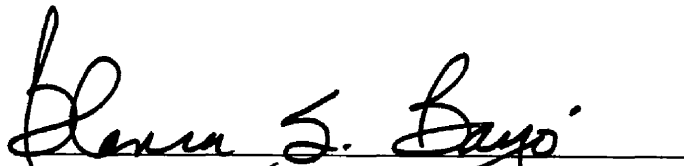
ORDERED by the Florida Public Commission that the findings set forth herein regarding the appropriate methodology, assumptions, and inputs for establishing rates for unbundled network elements for BellSouth Telecommunications, Inc., are herein approved. It is further

ORDERED that the rates set forth in Appendix A, which is attached and incorporated in this Order, and the rates found in Tables 3-1 and 4-1 herein, are hereby approved. It is further

ORDERED that the approved rates shall become effective when existing interconnection agreements are amended to incorporate the approved rates, and those agreements become effective. It is further

ORDERED that Docket No. 990649A-TP shall be closed.

By ORDER of the Florida Public Service Commission this 27th Day of September, 2002.

  
BLANCA S. BAYÓ, Director  
Division of the Commission Clerk  
and Administrative Services

( S E A L )

WDK



NOTICE OF FURTHER PROCEEDINGS OR JUDICIAL REVIEW

The Florida Public Service Commission is required by Section 120.569(1), Florida Statutes, to notify parties of any administrative hearing or judicial review of Commission orders that is available under Sections 120.57 or 120.68, Florida Statutes, as well as the procedures and time limits that apply. This notice should not be construed to mean all requests for an administrative hearing or judicial review will be granted or result in the relief sought.

Any party adversely affected by the Commission's final action in this matter may request: 1) reconsideration of the decision by filing a motion for reconsideration with the Director, Division of the Commission Clerk and Administrative Services, 2540 Shumard Oak Boulevard, Tallahassee, Florida 32399-0850, within fifteen (15) days of the issuance of this order in the form prescribed by Rule 25-22.060, Florida Administrative Code; or 2) judicial review by the Florida Supreme Court in the case of an electric, gas or telephone utility or the First District Court of Appeal in the case of a water and/or wastewater utility by filing a notice of appeal with the Director, Division of the Commission Clerk and Administrative Services and filing a copy of the notice of appeal and the filing fee with the appropriate court. This filing must be completed within thirty (30) days after the issuance of this order, pursuant to Rule 9.110, Florida Rules of Appellate Procedure. The notice of appeal must be in the form specified in Rule 9.900(a), Florida Rules of Appellate Procedure.

APPENDIX A

**RATE COMPARISON**

The following rate tables show the rates that are produced using BellSouth's revised model. The columns BellSouth Filing and Staff Adjusted are for comparative purposes. The rates are not recommended for adoption, as discussed in the body of the recommendation.

Not all rates that were previously approved are included. Some rates are not impacted by the changes incorporated into the model. Additionally, non-recurring rates are not affected.

**Source of Rates**

BELLSOUTH APPROVED RATES--Order No. PSC-01-2051-FOF-TP, Appendix A

BELLSOUTH FILING--EXH 47, Revised prefiled exhibit DDC-1 of Daonne D. Caldwell.

AT&T/MCI PROPOSED--EXH 58, Prefiled exhibit BFP-19 of Brian F. Pitkin.

STAFF ADJUSTED--Fallout from staff inputs into BellSouth's proprietary cost model.

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
A.0	UNBUNDLED LOCAL LOOP						
A.1	2-WIRE ANALOG VOICE GRADE LOOP						
	A.1.1	2-Wire Analog Voice Grade Loop - Service Level 1					
			1	\$12.79	\$14.59	\$6.02	\$10.69
			2	\$17.27	\$19.77	\$9.19	\$15.20
			3	\$33.36	\$50.08	\$19.41	\$26.97
	A.1.2	2-Wire Analog Voice Grade Loop - Service Level 2					
			1	\$14.50	\$16.79	\$7.36	\$12.24
			2	\$19.57	\$21.98	\$10.52	\$17.40
			3	\$37.82	\$52.29	\$20.74	\$30.87
A.2	SUB-LOOP						
	A.2.1	Sub-Loop Feeder Per 2-Wire Analog Voice Grade Loop					
			1	\$8.05	\$7.89	\$4.71	\$6.41
			2	\$10.87	\$9.86	\$6.20	\$9.10
			3	\$21.00	\$20.50	\$10.98	\$16.15
	A.2.2	Sub-Loop Distribution Per 2-Wire Analog Voice Grade Loop					
			1	\$7.61	\$10.57	\$3.39	\$6.46
			2	\$10.27	\$13.38	\$5.08	\$9.18
			3	\$19.85	\$33.37	\$10.57	\$16.29
	A.2.11	Sub-Loop Distribution Per 4-Wire Analog Voice Grade Loop					
			1	\$8.12	\$14.87	\$4.77	\$7.37
			2	\$10.96	\$32.09	\$10.68	\$10.47
			3	\$21.18	\$43.02	\$14.13	\$18.58
	A.2.14	2-Wire Intrabuilding Network Cable (INC)					
				\$3.50	\$3.96	\$3.96	\$3.96
	A.2.15	4-Wire Intrabuilding Network Cable (INC)					
				\$6.68	\$9.37	\$9.37	\$9.37
	A.2.24	Sub-Loop - Per 4-Wire Analog Voice Grade Loop / Feeder Only					
			1	\$17.26	\$17.50	\$10.69	\$12.47
			2	\$23.29	\$29.39	\$19.42	\$17.73
			3	\$45.00	\$55.70	\$32.26	\$31.45
	A.2.25	Sub-Loop - Per 2-Wire ISDN Digital Grade Loop / Feeder Only					
			1	\$17.04	\$18.76	\$12.41	\$14.83

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
	2	\$23.00	\$24.14	\$15.74	\$21.07	
	3	\$44.43	\$47.58	\$26.44	\$37.39	
A.2.29	Sub-Loop - Per 4-Wire 56 or 64 Kbps Digital Grade Loop / Feeder Only	1	\$18.68	\$18.58	\$11.41	\$14.48
		2	\$25.21	\$27.02	\$18.03	\$20.59
		3	\$48.71	\$29.69	\$17.78	\$36.53
A.2.30	Sub-Loop - Per 2-Wire Copper Loop / Feeder Only	1	\$7.25	\$8.27	\$3.41	\$3.76
		2	\$9.79	\$5.58	\$3.28	\$5.35
		3	\$18.92	\$4.30	\$2.73	\$9.49
A.2.32	Sub-Loop - Per 4-Wire Copper Loop / Feeder Only	1	\$14.22	\$12.01	\$6.10	\$7.32
		2	\$19.20	\$9.85	\$5.71	\$10.40
		3	\$37.09	\$9.18	\$5.47	\$18.46
A.2.40	Sub-Loop - Per 2-Wire Copper Loop / Distribution Only	1	\$6.25	\$9.12	\$3.16	\$5.15
		2	\$8.44	\$10.93	\$4.55	\$7.31
		3	\$16.30	\$16.00	\$6.92	\$12.98
A.2.42	Sub-Loop - Per 4-Wire Copper Loop / Distribution Only	1	\$5.20	\$12.11	\$4.40	\$5.36
		2	\$7.02	\$17.39	\$6.95	\$7.61
		3	\$13.55	\$24.68	\$11.06	\$13.51
<b>A.4</b>	<b>4-WIRE ANALOG VOICE GRADE LOOP</b>					
A.4.1	4-Wire Analog Voice Grade Loop	1	\$23.02	\$29.39	\$14.44	\$18.89
		2	\$31.07	\$59.21	\$29.06	\$26.84
		3	\$60.02	\$97.26	\$45.25	\$47.62
<b>A.5</b>	<b>2-WIRE ISDN DIGITAL GRADE LOOP</b>					
A.5.1	2-Wire ISDN Digital Grade Loop	1	\$21.76	\$25.14	\$14.19	\$19.28
		2	\$29.38	\$36.33	\$19.37	\$27.40
		3	\$56.76	\$67.42	\$32.80	\$48.62
A.5.6	Universal Digital Channel	1	\$21.76	\$25.14	\$14.19	\$19.28

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
	2	\$29.38	\$35.33	\$19.37	\$27.40	
	3	\$56.76	\$67.42	\$32.80	\$48.62	
A.6	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP					
A.6.1wLMU	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP (Nonrecurring w/ LMU)					
	1	\$12.65	\$14.49	\$5.82	\$8.30	
	2	\$17.08	\$15.62	\$7.08	\$11.80	
	3	\$33.00	\$19.40	\$8.90	\$20.94	
A.6.1woLMU	2-WIRE ASYMMETRICAL DIGITAL SUBSCRIBER LINE (ADSL) COMPATIBLE LOOP (Nonrecurring w/o LMU)					
	1			\$5.82		
	2			\$7.08		
	3			\$8.90		
A.7	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP					
A.7.1wLMU	2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP (Nonrecurring w/ LMU)					
	1	\$9.97	\$12.80	\$5.18	\$7.22	
	2	\$13.46	\$13.55	\$6.28	\$10.26	
	3	\$26.00	\$16.23	\$7.82	\$18.21	
	A.7.5 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/LMU)					
	A.17.4 Unbundled Loop Modification - Additive					

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
A.7.1woLMU		2-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP (Nonrecurring w/o LMU)				
	1	A.7.1 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop		\$5.18		
	2			\$6.28		
	3			\$7.82		
		A.7.6 2-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop (Nonrecurring w/o LMU)				
		A.17.4 Unbundled Loop Modification - Additive				
A.8		4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP				
A.8.1woLMU		4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP (Nonrecurring w/ LMU)				
	1	A.8.1 4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop	\$15.69	\$20.81	\$8.77	\$10.86
	2		\$21.17	\$20.72	\$9.57	\$15.44
	3		\$40.90	\$20.36	\$10.80	\$27.39
A.8.1woLMU		4-WIRE HIGH BIT RATE DIGITAL SUBSCRIBER LINE (HDSL) COMPATIBLE LOOP (Nonrecurring w/o LMU)				
	1	A.8.1 4-Wire High Bit Rate Digital Subscriber Line (HDSL) Compatible Loop		\$8.77		
	2			\$9.57		
	3			\$10.80		
A.9		4-WIRE DS1 DIGITAL LOOP				
A.9.1	1	4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74
	2		\$99.13	\$140.36	\$74.91	\$100.54
	3		\$191.51	\$332.57	\$168.76	\$178.39

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION			ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
A.9.2	Sub-Loop Feeder Per 4-Wire DS1 Digital Loop		1	\$46.27	\$50.71	\$30.11	\$42.59
			2	\$62.45	\$89.66	\$49.96	\$60.53
			3	\$120.65	\$291.77	\$152.95	\$107.39
A.10	4-WIRE 19, 56 OR 64 KBPS DIGITAL GRADE LOOP						
A.10.1	4-Wire 19, 56 or 64 Kbps Digital Grade Loop		1	\$26.39	\$31.42	\$15.35	\$22.20
			2	\$35.62	\$49.21	\$25.14	\$31.56
			3	\$68.82	\$61.39	\$28.21	\$55.99
A.12	CONCENTRATION PER SYSTEM PER FEATURE ACTIVATED (OUTSIDE CENTRAL OFFICE)						
A.12.5	Unbundled Sub-loop Concentration - USLC Feeder Interface		1	\$45.17	\$71.04	\$38.86	\$47.81
			2	\$60.97	\$84.15	\$43.46	\$67.95
			3	\$117.79	\$241.84	\$100.61	\$120.57
A.13	2-WIRE COPPER LOOP						
A.13.1wLMU	2-Wire Copper Loop - short (Nonrecurring w/ LMU)						
	A.13.1 2-Wire Copper Loop - short		1	\$12.65	\$14.49	\$5.82	\$8.30
			2	\$17.08	\$15.62	\$7.08	\$11.80
			3	\$33.00	\$19.40	\$8.90	\$20.94
A.13.1woLMU	2-Wire Copper Loop - short (Nonrecurring w/o LMU)						
	A.13.1 2-Wire Copper Loop - short		1			\$5.82	
			2			\$7.08	
			3			\$8.90	
A.13.7wLMU	2-Wire Copper Loop - long (Nonrecurring w/ LMU)						
	A.13.7 2-Wire Copper Loop - long		1	\$37.07	\$24.66	\$9.94	\$17.42
			2	\$50.04	\$30.55	\$13.36	\$24.76

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
		3	\$96.67	\$71.39	\$26.47	\$43.94
A.13.7woLMU	2-Wire Copper Loop - long (Nonrecurring w/o LMU)					
	A.13.7 2-Wire Copper Loop - long	1			\$9.94	
		2			\$13.36	
		3			\$26.47	
A.13.12	2-Wire Unbundled Copper Loop - Non Design	1		\$13.70	\$5.00	\$7.69
		2		\$15.10	\$6.40	\$10.92
		3		\$20.32	\$8.58	\$19.38
<b>A.14</b>	<b>4-WIRE COPPER LOOP</b>					
A.14.1wLMU	4-Wire Copper Loop - short (Nonrecurring w/ LMU)					
	A.14.1 4-Wire Copper Loop - short	1	\$18.03	\$22.85	\$9.50	\$11.83
		2	\$24.34	\$25.92	\$11.62	\$16.81
		3	\$47.02	\$32.54	\$15.50	\$29.82
A.14.1woLMU	4-Wire Copper Loop - short (Nonrecurring w/o LMU)					
	A.14.1 4-Wire Copper Loop - short	1			\$9.50	
		2			\$11.62	
		3			\$15.50	
A.14.7wLMU	4-Wire Copper Loop - long (Nonrecurring w/ LMU)					
	A.14.7 4-Wire Copper Loop - long	1	\$64.52	\$46.11	\$18.81	\$31.10
		2	\$87.09	\$79.35	\$32.21	\$44.20
		3	\$168.25	\$110.46	\$42.29	\$78.42



APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
A.14.7woLMU	4-Wire Copper Loop - long (Nonrecurring w/o LMU)					
	A.14.7 4-Wire Copper Loop - long	1			\$18.81	
		2			\$32.21	
		3			\$42.29	
A.15	UNBUNDLED NETWORK TERMINATING WIRE (NTW)					
A.15.1	Unbundled Network Terminating Wire (NTW) per Pair		\$0.2286	\$0.4572	\$0.4572	\$0.4572
A.16	HIGH CAPACITY UNBUNDLED LOCAL LOOP					
A.16.1	High Capacity Unbundled Local Loop - DS3 - Facility Termination		\$386.88	\$386.88	\$287.97	\$386.88
A.16.2	High Capacity Unbundled Local Loop - DS3 - Per Mile		\$10.92	\$10.92	\$10.92	\$10.92
A.16.15	High Capacity Unbundled Local Loop - STS-1 - Facility Termination		\$426.60	\$426.60	\$324.29	\$426.60
A.16.16	High Capacity Unbundled Local Loop - STS-1 - Per Mile		\$10.92	\$10.92	\$10.92	\$10.92
A.18	MULTIPLEXERS					
A.18.1	Channelization - Channel System DS1 to DS0		\$146.77	\$146.77	\$72.09	\$146.77
A.18.2	Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$2.10	\$2.10	\$1.37	\$2.10
A.18.3	Interface Unit - Interface DS1 to DS0 - BRITE Card		\$3.66	\$3.66	\$2.70	\$3.66
A.18.4	Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$0.7634	\$1.38
A.18.5	Channelization - Channel System DS3 to DS1		\$211.19	\$211.19	\$162.55	\$211.19
A.18.6	Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
A.20	HYBRID COPPER/FIBER xDSL - CAPABLE LOOP					
A.20.1	System DSLAM with Administrative DS1					

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
A.20.1 Hybrid Copper/Fiber xDSL - Capable Loop			\$150.08		\$109.03	
A.20.3 16 - Port DSLAM, per DSLAM			\$374.90	\$294.08	\$374.90	
	1		\$524.97		\$483.93	
			\$174.92		\$154.95	
			\$374.90	\$294.08	\$374.90	
	2		\$549.82		\$529.85	
			\$420.75		\$274.93	
			\$374.90	\$294.08	\$374.90	
	3		\$795.65		\$649.83	
A.20.DS1		Copper/Fiber DS1 into DSLAM				
A.20.1 Hybrid Copper/Fiber xDSL - Capable Loop	1		\$150.08		\$109.03	
	2		\$174.92		\$154.95	
	3		\$420.75		\$274.93	
A.20.Active End User Activation						
A.2.2 Sub-Loop Distribution Per 2-Wire Analog Voice Grade Loop	1		\$10.57		\$6.46	
	2		\$13.38		\$9.18	
	3		\$33.37		\$16.29	
<b>B.0</b>	<b>UNBUNDLED LOCAL EXCHANGE PORTS AND FEATURES</b>					
<b>B.1</b>	<b>EXCHANGE PORTS</b>					
B.1.1	Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)		\$1.40	\$1.40	\$1.40	\$1.40
B.1.3	Exchange Ports - 2-Wire DID Port		\$8.73	\$8.73	\$4.93	\$8.73

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
B.1.4	Exchange Ports - DDITS Port		\$54.95	\$54.95	\$53.95	\$54.95
B.1.5	Exchange Ports - 2-Wire ISDN Port		\$8.83	\$8.83	\$8.80	\$8.83
B.1.6	Exchange Ports - 4-Wire ISDN DS1 Port		\$82.74	\$82.74	\$81.65	\$82.74
D.0	UNBUNDLED TRANSPORT AND LOCAL INTEROFFICE TRANSPORT					
D.2	INTEROFFICE TRANSPORT - DEDICATED - VOICE GRADE					
D.2.1	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0091	\$0.0091	\$0.0091	\$0.0091
D.2.2	Interoffice Transport - Dedicated - 2- Wire Voice Grade - Facility Termination		\$25.32	\$25.32	\$15.33	\$25.32
D.3	INTEROFFICE TRANSPORT - DEDICATED - DS0 - 56/64 KBPS					
D.3.1	Interoffice Transport - Dedicated - DS0 - Per Mile		\$0.0091	\$0.0091	\$0.0091	\$0.0091
D.3.2	Interoffice Transport - Dedicated - DS0 - Facility Termination		\$18.44	\$18.44	\$9.51	\$18.44
D.4	INTEROFFICE TRANSPORT - DEDICATED - DS1					
D.4.1	Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
D.4.2	Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44	\$88.44	\$61.47	\$88.44
D.5	LOCAL CHANNEL - DEDICATED					
D.5.1	Local Channel - Dedicated - 2-Wire Voice Grade	1	\$21.94	\$22.97	\$12.64	\$19.66
		2	\$29.62	\$46.76	\$31.06	\$27.94
		3	\$57.22			\$49.58
D.5.2	Local Channel - Dedicated - 4-Wire Voice Grade	1	\$22.81	\$24.08	\$13.58	\$20.45
		2	\$30.79	\$47.87	\$32.00	\$29.06
		3	\$59.48			\$51.56
D.5.24	Local Channel - Dedicated - DS1	1	\$35.28	\$52.90	\$28.25	\$36.49

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
	2	\$47.63	\$68.69	\$36.30	\$51.85	
	3	\$92.01	\$275.93	\$123.44	\$92.00	
<b>D.6 INTEROFFICE TRANSPORT - DEDICATED - DS3</b>						
D.6.1	Interoffice Transport - Dedicated - DS3 - Per Mile	\$3.87	\$3.87	\$3.87	\$3.87	
D.6.2	Interoffice Transport - Dedicated - DS3 - Facility Termination	\$1,071.00	\$1,071.31	\$673.56	\$1,071.00	
<b>D.10 INTEROFFICE TRANSPORT - DEDICATED - STS-1</b>						
D.10.1	Interoffice Transport - Dedicated - STS-1 - Per Mile	\$3.87	\$3.87	\$3.87	\$3.87	
D.10.2	Interoffice Transport - Dedicated - STS-1 - Facility Termination	\$1,056.00	\$1,056.07	\$645.04	\$1,056.00	
<b>D.12 INTEROFFICE TRANSPORT - DEDICATED - 4-WIRE VOICE GRADE</b>						
D.12.1	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile	\$0.0091	\$0.0091	\$0.0091	\$0.0091	
D.12.2	Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination	\$22.58	\$22.58	\$13.01	\$22.58	
<b>L.0 ACCESS DAILY USAGE FILE (ADUF)</b>						
<b>L.1 ACCESS DAILY USAGE FILE (ADUF)</b>						
L.1.1	ADUF, Message Processing, per message	\$0.014391	\$0.001858	\$0.00	\$0.001656	
L.1.3	ADUF, Data Transmission (CONNECT:DIRECT), per message	\$0.00012973	\$0.00012450	\$0.00	\$0.00012450	
<b>M.0 DAILY USAGE FILES</b>						
<b>M.1 ENHANCED OPTIONAL DAILY USAGE FILE</b>						
M.1.1	Enhanced Optional Daily usage File: Message Processing, Per Message	\$0.229109	\$0.235115	\$0.235115	\$0.080698	

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
M.2	OPTIONAL DAILY USAGE FILE						
M.2.1	Optional Daily Usage File: Recording, per Message		\$0.0000071	\$0.0000071	\$0.00	\$0.0000071	
M.2.2	Optional Daily Usage File: Message Processing, Per Message		\$0.006835	\$0.002505	\$0.00	\$0.002146	
M.2.3	Optional Daily Usage File: Message Processing, Per Magnetic Tape Provisioned		\$48.96	\$35.91	\$35.91	\$35.91	
M.2.4	Optional Daily Usage File: Data Transmission (CONNECT:DIRECT), Per Message		\$0.00010811	\$0.00010375	\$0.00	\$0.00010375	
P.0	UNBUNDLED LOOP COMBINATIONS						
P.1	2-WIRE VOICE GRADE LOOP WITH 2-WIRE LINE PORT (RES, BUS, COIN, CENTREX, PBX)						
P.1.RESBUS	2-Wire VG Loop/Port Combo (Res, Bus, Coin)						
	P.1.1 2-Wire Voice Grade Loop		\$11.77	\$13.75	\$5.37	\$9.77	
	P.1.2 Exchange Port - 2-Wire Line Port		\$1.17	\$1.17	\$1.17	\$1.17	
		1	\$12.94	\$14.92	\$6.53	\$10.94	
			\$15.89	\$18.23	\$8.02	\$13.88	
			\$1.17	\$1.17	\$1.17	\$1.17	
		2	\$17.06	\$19.40	\$9.19	\$15.05	
			\$30.70	\$48.99	\$18.54	\$24.63	
			\$1.17	\$1.17	\$1.17	\$1.17	
		3	\$31.87	\$50.16	\$19.70	\$25.80	
P.1.PBX	2-Wire VG Loop/Port Combo (PBX)						
	P.1.1 2-Wire Voice Grade Loop		\$11.77	\$13.75	\$5.37	\$9.77	
	P.1.2 Exchange Port - 2-Wire Line Port		\$1.17	\$1.17	\$1.17	\$1.17	
		1	\$12.94	\$14.92	\$6.53	\$10.94	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$15.89	\$18.23	\$8.02	\$13.88	
		\$1.17	\$1.17	\$1.17	\$1.17	
	2	\$17.06	\$19.40	\$9.19	\$15.05	
		\$30.70	\$48.99	\$18.54	\$24.63	
		\$1.17	\$1.17	\$1.17	\$1.17	
	3	\$31.87	\$50.16	\$19.70	\$25.80	
P.1.CENTREX	2-Wire VG Loop/Port Combo (Centrex)					
		P.1.1 2-Wire Voice Grade Loop	\$11.77	\$13.75	\$5.37	\$9.77
		P.1.2 Exchange Port - 2-Wire Line Port	\$1.17	\$1.17	\$1.17	\$1.17
	1		\$12.94	\$14.92	\$6.53	\$10.94
			\$15.89	\$18.23	\$8.02	\$13.88
			\$1.17	\$1.17	\$1.17	\$1.17
	2		\$17.06	\$19.40	\$9.19	\$15.05
			\$30.70	\$48.99	\$18.54	\$24.63
			\$1.17	\$1.17	\$1.17	\$1.17
	3		\$31.87	\$50.16	\$19.70	\$25.80
P.3	2-WIRE VOICE GRADE LOOP WITH 2-WIRE DID TRUNK PORT					
	P.3	2-Wire VG Loop/2-Wire DID Trunk Port				
		A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$14.50	\$16.79	\$7.36	\$12.24
		P.3.2 Exchange Ports - 2-Wire DID Port for Combinations	\$8.71	\$8.71	\$4.91	\$8.71
	1		\$23.21	\$25.50	\$12.27	\$20.95
			\$19.57	\$21.98	\$10.52	\$17.40
			\$8.71	\$8.71	\$4.91	\$8.71

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
	2	\$28.28	\$30.68	\$15.44	\$26.11	
		\$37.82	\$52.29	\$20.74	\$30.87	
		\$8.71	\$8.71	\$4.91	\$8.71	
	3	\$46.53	\$61.00	\$25.66	\$39.58	
P.4	2-WIRE ISDN DIGITAL GRADE LOOP WITH 2-WIRE ISDN DIGITAL LINE SIDE PORT					
P.4	2W ISDN Digital Grade Loop/2W ISDN Digital Line Side Port					
		P.4.1 2-Wire ISDN Digital Grade Loop	\$17.33	\$19.87	\$10.57	\$15.25
		P.4.2 Exchange Port - 2-Wire ISDN Line Side Port	\$7.38	\$7.38	\$7.35	\$7.38
	1		\$24.71	\$27.25	\$17.93	\$22.63
			\$23.39	\$29.25	\$15.14	\$21.67
			\$7.38	\$7.38	\$7.35	\$7.38
	2		\$30.77	\$36.63	\$22.49	\$29.05
			\$45.18	\$62.42	\$29.27	\$38.46
			\$7.38	\$7.38	\$7.35	\$7.38
	3		\$52.56	\$69.80	\$36.63	\$45.84
P.5	4-WIRE DS1 DIGITAL LOOP WITH 4-WIRE ISDN DS1 DIGITAL TRUNK PORT					
P.5	4W DS1 Digital Loop/4W ISDN DS1 Digital Trunk Port					
		A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74
		B.1.6 Exchange Ports - 4-Wire ISDN DS1 Port	\$82.74	\$82.74	\$81.65	\$82.74
	1		\$156.18	\$177.87	\$137.04	\$153.48
			\$99.13	\$140.36	\$74.91	\$100.54

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
			\$82.74	\$82.74	\$81.65	\$82.74
		2	\$181.87	\$223.09	\$156.56	\$183.28
			\$191.51	\$332.57	\$168.76	\$178.39
			\$82.74	\$82.74	\$81.65	\$82.74
		3	\$274.25	\$415.31	\$250.41	\$261.13
P.6	EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT					
	P.6-1	First 2W VG in DS1				
		A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$14.50	\$16.79	\$7.36	\$12.24
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77
		A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card	\$1.38	\$1.38	\$ .7634	\$1.38
			\$251.09	\$253.38	\$141.68	\$248.83
			\$19.57	\$21.96	\$10.52	\$17.40
			\$88.44	\$88.44	\$61.47	\$88.44
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$ .7634	\$1.38
		2	\$256.16	\$258.57	\$144.85	\$253.99
			\$37.82	\$52.29	\$20.74	\$30.87
			\$88.44	\$88.44	\$61.47	\$88.44
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$ .7634	\$1.38
		3	\$274.41	\$288.88	\$155.07	\$267.46



APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
P.6-2	Per Mile					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
P.6-3	Additional 2W VG in same DS1					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$14.50	\$16.79	\$7.36	\$12.24
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$ .7634	\$1.38
		1	\$15.88	\$18.17	\$8.12	\$13.62
			\$19.57	\$21.98	\$10.52	\$17.40
			\$1.38	\$1.38	\$ .7634	\$1.38
		2	\$20.95	\$23.36	\$11.29	\$18.78
			\$37.82	\$52.29	\$20.74	\$30.87
			\$1.38	\$1.38	\$ .7634	\$1.38
		3	\$39.20	\$53.67	\$21.51	\$32.25
P.7	EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT					
P.7-1	First 4W VG in DS1					
	A.4.1 4-Wire Analog Voice Grade Loop		\$23.02	\$29.39	\$14.44	\$18.89
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44	\$88.44	\$61.47	\$88.44
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77	\$146.77	\$72.09	\$146.77
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$ .7634	\$1.38
		1	\$259.61	\$265.99	\$148.76	\$255.48
			\$31.07	\$59.21	\$29.06	\$26.84
			\$88.44	\$88.44	\$61.47	\$88.44

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$.7634	\$1.38
		2	\$267.66	\$295.80	\$163.38	\$263.43
			\$60.02	\$97.25	\$45.25	\$47.62
			\$88.44	\$88.44	\$61.47	\$88.44
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$.7634	\$1.38
		3	\$296.61	\$333.85	\$179.57	\$284.21
P.7-2	Per Mile					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
P.7-3	Additional 4W VG in same DS1					
	A.4.1 4-Wire Analog Voice Grade Loop		\$23.02	\$29.39	\$14.44	\$18.89
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$.7634	\$1.38
		1	\$24.40	\$30.77	\$15.20	\$20.27
			\$31.07	\$59.21	\$29.06	\$26.84
			\$1.38	\$1.38	\$.7634	\$1.38
		2	\$32.45	\$60.59	\$29.82	\$28.22
			\$60.02	\$97.26	\$45.25	\$47.62
			\$1.38	\$1.38	\$.7634	\$1.38
		3	\$61.40	\$98.64	\$46.01	\$49.00
P.8	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT					
P.8-1	First 4W 56 / 64 in DS1					

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop		\$26.39	\$31.42	\$15.35	\$22.20	
D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44	\$88.44	\$61.47	\$88.44	
A.18.1 Channelization - Channel System DS1 to DS0		\$146.77	\$146.77	\$72.09	\$146.77	
A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card		\$2.10	\$2.10	\$1.37	\$2.10	
	1	\$263.70	\$268.73	\$150.28	\$259.51	
		\$35.62	\$49.21	\$25.14	\$31.56	
		\$88.44	\$88.44	\$61.47	\$88.44	
		\$146.77	\$146.77	\$72.09	\$146.77	
		\$2.10	\$2.10	\$1.37	\$2.10	
	2	\$272.93	\$286.52	\$160.07	\$268.87	
		\$68.82	\$61.38	\$28.21	\$55.99	
		\$88.44	\$88.44	\$61.47	\$88.44	
		\$146.77	\$146.77	\$72.09	\$146.77	
		\$2.10	\$2.10	\$1.37	\$2.10	
	3	\$306.13	\$298.71	\$163.14	\$293.30	
P.8-2	Per Mile					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$0.1856	\$0.1856	\$0.1856	\$0.1856	
P.8-3	Additional 4W 56 / 64 in same DS1					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	\$26.39	\$31.42	\$15.35	\$22.20	
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.10	\$2.10	\$1.37	\$2.10	
		\$28.49	\$33.62	\$16.72	\$24.30	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
			\$35.62	\$49.21	\$25.14	\$31.56
			\$2.10	\$2.10	\$1.37	\$2.10
		2	\$37.72	\$51.31	\$26.51	\$33.66
			\$68.82	\$61.39	\$28.21	\$55.99
			\$2.10	\$2.10	\$1.37	\$2.10
		3	\$70.92	\$63.49	\$29.58	\$58.09
P.11	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT					
	P.11-1	Fixed				
		A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.34	\$70.74
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
			\$161.88	\$183.57	\$116.86	\$159.18
			\$99.13	\$140.36	\$71.91	\$100.54
			\$88.44	\$88.44	\$61.47	\$88.44
		2	\$187.57	\$228.80	\$136.38	\$188.98
			\$191.51	\$332.57	\$168.76	\$178.39
			\$88.44	\$88.44	\$61.47	\$88.44
		3	\$279.95	\$421.01	\$230.23	\$266.83
	P.11-2	Per Mile				
		D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$0.1856	\$0.1856	\$0.1856	\$0.1856
P.13	EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT					
	P.13-1	First DS1 in DS3				
		A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
	D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination		\$1,071.00	\$1,071.31	\$673.56	\$1,071.00
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19	\$211.19	\$162.55	\$211.19
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
		1	\$1,369.39	\$1,391.39	\$902.98	\$1,366.69
			\$99.13	\$140.36	\$74.91	\$100.54
			\$1,071.00	\$1,071.31	\$673.56	\$1,071.00
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
		2	\$1,395.08	\$1,436.62	\$922.50	\$1,396.49
			\$191.51	\$332.57	\$168.76	\$178.39
			\$1,071.00	\$1,071.31	\$673.56	\$1,071.00
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
		3	\$1,487.46	\$1,628.83	\$1,016.35	\$1,474.34
P.13-2	Per Mile					
	D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile		\$3.87	\$3.87	\$3.87	\$3.87
P.13-3	Additional DS1 in same DS3					
	A.9.1 4-Wire DS1 Digital Loop		\$73.44	\$95.13	\$55.39	\$70.74
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
		1	\$87.20	\$108.89	\$66.87	\$84.50
			\$99.13	\$140.36	\$74.91	\$100.54
			\$13.76	\$13.76	\$11.47	\$13.76

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
		2	\$112.89	\$154.12	\$86.38	\$114.30
			\$191.51	\$332.57	\$168.76	\$178.39
			\$13.76	\$13.76	\$11.47	\$13.76
		3	\$205.27	\$346.33	\$180.23	\$192.15
<b>P.15</b>	<b>4-WIRE DS1 DIGITAL LOOP WITH DDITS PORT</b>					
P.15	4-Wire DS1 Digital Loop with DDITS Port					
	A.9.1	4-Wire DS1 Digital Loop				
			\$73.44	\$95.13	\$55.39	\$70.74
	B.1.4	Exchange Ports - DDITS Port				
			\$54.95	\$54.96	\$53.95	\$54.95
		1	\$128.39	\$150.07	\$109.34	\$125.69
			\$99.13	\$140.35	\$74.91	\$100.54
			\$54.95	\$54.95	\$53.95	\$54.95
		2	\$154.08	\$195.20	\$128.86	\$155.49
			\$191.51	\$332.57	\$168.76	\$178.39
			\$54.95	\$54.95	\$53.95	\$54.95
		3	\$246.46	\$387.52	\$222.71	\$233.34
<b>P.16</b>	<b>2-WIRE LOOP/ 2 WIRE VOICE GRADE IO TRANSPORT/ 2 WIRE PORT</b>					
P.16-1	Fixed					
	A.1.2	2-Wire Analog Voice Grade Loop - Service Level 2				
			\$14.50	\$16.79	\$7.36	\$12.24
	D.2.2	Interoffice Transport - Dedicated - 2-Wire Voice Grade - Facility Termination				
			\$25.32	\$25.32	\$15.33	\$25.32
	B.1.1	Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)				
			\$1.40	\$1.40	\$1.40	\$1.40
		1	\$41.22	\$43.52	\$24.09	\$38.96
			\$19.57	\$21.98	\$10.52	\$17.40
			\$25.32	\$25.32	\$15.33	\$25.32

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION			ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
				\$1.40	\$1.40	\$1.40	\$1.40
			2	\$46.29	\$48.70	\$27.26	\$44.12
				\$37.82	\$52.29	\$20.74	\$30.87
				\$25.32	\$25.32	\$15.33	\$25.32
				\$1.40	\$1.40	\$1.40	\$1.40
			3	\$64.54	\$79.02	\$37.48	\$57.59
	P.16-2	Per Mile					
		D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0091	\$0.0091	\$0.0091	\$0.0091
P.23	EXTENDED 2-WIRE VOICE GRADE LOOP/ 2 WIRE VOICE GRADE INTEROFFICE TRANSPORT						
	P.23-1	Fixed					
		A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$14.50	\$16.79	\$7.36	\$12.24
		D.2.2 Interoffice Transport - Dedicated - 2- Wire Voice Grade - Facility Termination		\$25.32	\$25.32	\$15.33	\$25.32
			1	\$39.82	\$42.12	\$22.69	\$37.56
				\$19.57	\$21.98	\$10.52	\$17.40
				\$25.32	\$25.32	\$15.33	\$25.32
			2	\$44.89	\$47.30	\$25.86	\$42.72
				\$37.82	\$52.29	\$20.74	\$30.87
				\$25.32	\$25.32	\$15.33	\$25.32
			3	\$63.14	\$77.61	\$36.08	\$56.19
	P.23-2	Per Mile					
		D.2.1 Interoffice Transport - Dedicated - 2-Wire Voice Grade - Per Mile		\$0.0091	\$0.0091	\$0.0091	\$0.0091

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
P.24		EXTENDED 4-WIRE VOICE GRADE LOOP/ 4 WIRE VOICE GRADE INTEROFFICE TRANSPORT				
	P.24-1	Fixed				
		A.4.1 4-Wire Analog Voice Grade Loop	\$23.02	\$29.39	\$14.44	\$18.89
		D.12.2 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Facility Termination	\$22.58	\$22.58	\$13.01	\$22.58
			1	\$45.60	\$51.97	\$27.44
				\$31.07	\$59.21	\$29.06
				\$22.58	\$22.58	\$13.01
			2	\$53.65	\$81.78	\$42.06
				\$60.02	\$97.26	\$45.25
				\$22.58	\$22.58	\$13.01
			3	\$82.60	\$119.84	\$58.26
	P.24-2	Per Mile				
		D.12.1 Interoffice Transport - Dedicated - 4-Wire Voice Grade - Per Mile	\$0.0091	\$0.0091	\$0.0091	\$0.0091
P.25		EXTENDED DS3 DIGITAL LOOP WITH DEDICATED DS3 INTEROFFICE TRANSPORT				
	P.25-1	Fixed				
		A.16.1 High Capacity Unbundled Local Loop - DS3 - Facility Termination	\$386.88	\$386.88	\$287.97	\$386.88
		D.6.2 Interoffice Transport - Dedicated - DS3 - Facility Termination	\$1,071.00	\$1,071.31	\$673.56	\$1,071.00
			\$1,457.88	\$1,458.19	\$961.54	\$1,457.88
	P.25-2	Per Mile - Interoffice				
		D.6.1 Interoffice Transport - Dedicated - DS3 - Per Mile	\$3.87	\$3.87	\$3.87	\$3.87



APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
P.25-3		Per Mile - DS3 Loop				
		A.16.2 High Capacity Unbundled Local Loop - DS3 - Per Mile	\$10.92	\$10.92	\$10.92	\$10.92
P.26		EXTENDED STS1 DIGITAL LOOP WITH DEDICATED STS1 INTEROFFICE TRANSPORT				
P.26-1		Fixed				
		A.16.15 High Capacity Unbundled Local Loop - STS-1 - Facility Termination	\$426.60	\$426.60	\$324.29	\$426.60
		D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination	\$1,056.00	\$1,056.07	\$645.05	\$1,056.00
			\$1,482.60	\$1,482.67	\$969.33	\$1,482.60
P.26-2		Per Mile - Interoffice				
		D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile	\$3.87	\$3.87	\$3.87	\$3.87
P.26-3		Per Mile - Loop				
		A.16.16 High Capacity Unbundled Local Loop - STS-1 - Per Mile	\$10.92	\$10.92	\$10.92	\$10.92
P.50		4-WIRE DS1 LOOP WITH CHANNELIZATION WITH PORT				
P.50.VG-1		First Voice Grade in DS1				
		A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$96.13	\$55.39	\$70.74
		B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)	\$1.40	\$1.40	\$1.40	\$1.40
		Q.1.1 D4 Channel Bank Inside CO - System	\$118.06	\$118.06	\$43.38	\$118.06
		Q.1.4 Unbundled Loop Concentration - POTS Card	\$0.6402	\$0.6402	\$0.5422	\$0.6402
	1		\$193.54	\$215.23	\$100.71	\$190.84
			\$99.13	\$140.36	\$74.91	\$100.54

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$1.40	\$1.40	\$1.40	\$1.40	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$0.6402	\$0.6402	\$0.5422	\$0.6402	
	2	\$219.23	\$260.46	\$120.23	\$220.64	
		\$191.51	\$332.57	\$168.76	\$178.39	
		\$1.40	\$1.40	\$1.40	\$1.40	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$0.6402	\$0.6402	\$0.5422	\$0.6402	
	3	\$311.61	\$452.37	\$214.08	\$298.49	
P.50.VG-2	Additional Voice Grade in same DS1					
	B.1.1 Exchange Ports - 2-Wire Analog Line Port (Res., Bus., Centrex, Coin)	\$1.40	\$1.40	\$1.40	\$1.40	
	Q.1.4 Unbundled Loop Concentration - POTS Card	\$0.6402	\$0.6402	\$0.5422	\$0.6402	
		\$2.04	\$2.04	\$1.94	\$2.04	
P.50.DID-1	First 2-Wire DID in DS1					
	A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$96.13	\$55.39	\$70.74	
	B.1.3 Exchange Ports - 2-Wire DID Port	\$8.73	\$8.73	\$4.93	\$8.73	
	Q.1.1 D4 Channel Bank Inside CO - System	\$118.06	\$118.06	\$43.38	\$118.06	
	Q.1.4 Unbundled Loop Concentration - POTS Card	\$0.6402	\$0.6402	\$0.5422	\$0.6402	
	1	\$200.87	\$222.55	\$104.25	\$198.17	
		\$99.13	\$140.36	\$74.91	\$100.54	
		\$8.73	\$8.73	\$4.93	\$8.73	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$0.6402	\$0.6402	\$0.5422	\$0.6402	
	2	\$226.56	\$267.78	\$123.77	\$227.97	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$191.57	\$332.57	\$168.76	\$178.39	
		\$8.73	\$8.73	\$4.93	\$8.73	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$0.6402	\$0.6402	\$0.5422	\$0.6402	
	3	\$318.84	\$460.00	\$217.62	\$305.82	
P.50.DID-2	Additional 2-Wire DID in same DS1					
	B.1.3 Exchange Ports - 2-Wire DID Port	\$8.73	\$8.73	\$4.93	\$8.73	
	Q.1.4 Unbundled Loop Concentration - POTS Card	\$0.6402	\$0.6402	\$0.5422	\$0.6402	
		\$9.37	\$9.37	\$5.48	\$9.37	
P.50.ISDN-1	First ISDN in DS1					
	A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74	
	B.1.5 Exchange Ports - 2-Wire ISDN Port	\$8.83	\$8.83	\$8.80	\$8.83	
	Q.1.1 D4 Channel Bank Inside CO - System	\$118.06	\$118.06	\$43.38	\$118.06	
	Q.1.3 Unbundled Loop Concentration - ISDN (BRITE Card)	\$2.92	\$2.92	\$2.47	\$2.92	
	1	\$203.25	\$224.94	\$110.05	\$200.55	
		\$99.13	\$140.36	\$74.91	\$100.54	
		\$8.83	\$8.83	\$8.80	\$8.83	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$2.92	\$2.92	\$2.47	\$2.92	
	2	\$228.94	\$270.17	\$129.57	\$230.35	
		\$191.51	\$332.57	\$168.76	\$178.39	
		\$8.83	\$8.83	\$8.80	\$8.83	
		\$118.06	\$118.06	\$43.38	\$118.06	
		\$2.92	\$2.92	\$2.47	\$2.92	
	3	\$321.32	\$462.38	\$223.42	\$308.20	

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
P.50	ISDN-2	Additional ISDN in same DS1					
		B.1.5 Exchange Ports - 2-Wire ISDN Port	\$8.83	\$8.83	\$8.80	\$8.83	
		Q.1.3 Unbundled Loop Concentration - ISDN (BRITE Card)	\$2.92	\$2.92	\$2.47	\$2.92	
			\$11.75	\$11.75	\$11.28	\$11.75	
P.51	EXTENDED 2-WIRE ISDN LOOP WITH DS1 INTEROFFICE TRANSPORT						
	P.51-1	First 2-Wire ISDN in DS1					
		A.5.1 2-Wire ISDN Digital Grade Loop	\$21.76	\$25.14	\$14.19	\$19.28	
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44	
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77	
		A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.66	\$3.66	\$2.70	\$3.66	
			1	\$260.63	\$264.01	\$150.45	\$258.15
				\$29.38	\$35.23	\$19.37	\$27.40
				\$88.44	\$88.44	\$61.47	\$88.44
				\$146.77	\$146.77	\$72.09	\$146.77
				\$3.66	\$3.66	\$2.70	\$3.66
			2	\$268.25	\$274.20	\$155.62	\$266.27
				\$56.76	\$67.42	\$32.80	\$48.62
				\$88.44	\$88.44	\$61.47	\$88.44
				\$146.77	\$146.77	\$72.09	\$146.77
				\$3.66	\$3.66	\$2.70	\$3.66
			3	\$295.63	\$306.29	\$169.05	\$287.49
	P.51-2	Per Mile					
		D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$0.1856	\$0.1856	\$0.1856	\$0.1856	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
P.51-3		Additional 2-wire ISDN in same DS1				
			\$21.76	\$25.14	\$14.19	\$19.28
		A.5.1 2-Wire ISDN Digital Grade Loop				
			\$3.66	\$3.66	\$2.70	\$3.66
		A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card				
	1		\$25.42	\$28.80	\$16.89	\$22.94
			\$29.38	\$35.33	\$19.37	\$27.40
			\$3.66	\$3.66	\$2.70	\$3.66
	2		\$32.04	\$38.99	\$22.06	\$31.06
			\$56.76	\$67.42	\$32.80	\$48.62
			\$3.66	\$3.66	\$2.70	\$3.66
	3		\$60.42	\$71.08	\$35.49	\$52.28
P.52		EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED STS-1 INTEROFFICE TRANSPORT				
P.52-1		First in DS1 in STS1				
			\$73.44	\$95.13	\$55.39	\$70.74
		A.9.1 4-Wire DS1 Digital Loop				
			\$1,056.00	\$1,056.07	\$645.04	\$1,056.00
		D.10.2 Interoffice Transport - Dedicated - STS-1 - Facility Termination				
			\$211.19	\$211.19	\$162.55	\$211.19
		A.18.5 Channelization - Channel System DS3 to DS1				
			\$13.76	\$13.76	\$11.47	\$13.76
	1		\$1,354.39	\$1,376.16	\$874.46	\$1,351.69
			\$99.13	\$140.36	\$74.91	\$100.54
			\$1,056.00	\$1,056.07	\$645.05	\$1,056.00
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
	2		\$1,380.08	\$1,421.38	\$893.98	\$1,381.49

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$191.51	\$332.57	\$168.76	\$178.39	
		\$1,056.00	\$1,056.07	\$645.05	\$1,056.00	
		\$211.19	\$211.19	\$162.55	\$211.19	
		\$13.76	\$13.76	\$11.47	\$13.76	
	3	\$1,472.46	\$1,613.60	\$987.83	\$1,459.34	
P.52-2	Per Mile					
	D.10.1 Interoffice Transport - Dedicated - STS-1 - Per Mile	\$3.87	\$3.87	\$3.87	\$3.87	
P.52-3	Additional DS1 in same STS1					
	A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74	
	A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76	
		1	\$87.20	\$108.89	\$66.87	\$84.50
			\$99.13	\$140.36	\$74.91	\$100.54
			\$13.76	\$13.76	\$11.47	\$13.76
		2	\$112.89	\$164.12	\$86.38	\$114.30
			\$191.51	\$332.57	\$168.76	\$178.39
			\$13.76	\$13.76	\$11.47	\$13.76
		3	\$205.27	\$346.33	\$180.23	\$192.15
P.53	EXTENDED 2-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX					
P.53-1	First 2-Wire VG in First DS1 in DS3					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2	\$14.50	\$16.79	\$7.36	\$12.24	
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
	A.18.5 Channelization - Channel System DS3 to DS1		\$211.19	\$211.19	\$162.55	\$211.19
	A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
	A.18.1 Channelization - Channel System DS1 to DS0		\$146.77	\$146.77	\$72.09	\$146.77
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$.7634	\$1.38
		1	\$476.04	\$478.34	\$315.70	\$473.78
			\$19.57	\$21.98	\$10.52	\$17.40
			\$88.44	\$88.44	\$61.47	\$88.44
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$.7634	\$1.38
		2	\$481.11	\$483.52	\$318.87	\$478.94
			\$37.82	\$52.29	\$20.74	\$30.87
			\$88.44	\$88.44	\$61.47	\$88.44
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$.7634	\$1.38
		3	\$499.36	\$513.84	\$329.09	\$492.41
P.53-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
P.53-3	Additional 2-Wire VG in same DS1					
	A.1.2 2-Wire Analog Voice Grade Loop - Service Level 2		\$14.50	\$16.79	\$7.36	\$12.24

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$1.38
	1		\$15.88	\$18.17	\$8.12	\$13.62
			\$19.57	\$21.98	\$10.52	\$17.40
			\$1.38	\$1.38	\$1.38	\$1.38
	2		\$20.95	\$23.36	\$11.29	\$18.78
			\$37.82	\$52.29	\$21.51	\$30.87
			\$1.38	\$1.38	\$1.38	\$1.38
	3		\$39.20	\$53.67	\$21.51	\$32.25
P.53-4		Additional DS1 in same DS3				
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77
		A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76
			\$248.97	\$248.97	\$145.03	\$248.97
P.54		EXTENDED 4-WIRE VOICE GRADE LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX				
P.54-1		First 4-Wire VG in First DS1 in DS3				
		A.4.1 4-Wire Analog Voice Grade Loop	\$23.02	\$29.39	\$14.44	\$18.89
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
		A.18.5 Channelization - Channel System DS3 to DS1	\$211.19	\$211.19	\$162.55	\$211.19
		A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77



APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$ .7634	\$1.38
		1	\$484.56	\$490.94	\$322.78	\$480.43
			\$31.07	\$59.21	\$29.06	\$26.84
			\$88.44	\$88.44	\$61.47	\$88.44
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$ .7634	\$1.38
		2	\$492.61	\$520.78	\$337.40	\$488.38
			\$60.02	\$97.26	\$45.25	\$47.62
			\$88.44	\$88.44	\$61.47	\$88.44
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
			\$146.77	\$146.77	\$72.09	\$146.77
			\$1.38	\$1.38	\$ .7634	\$1.38
		3	\$521.56	\$558.81	\$353.60	\$509.16
P.54-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
P.54-3	Additional 4-Wire VG in same DS1					
	A.4.1 4-Wire Analog Voice Grade Loop		\$23.02	\$29.39	\$14.44	\$18.89
	A.18.4 Interface Unit - Interface DS1 to DS0 - Voice Grade Card		\$1.38	\$1.38	\$ .7634	\$1.38
		1	\$24.40	\$30.77	\$15.20	\$20.27
			\$31.07	\$58.21	\$29.06	\$26.84
			\$1.38	\$1.38	\$ .7634	\$1.38

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
	2	\$32.45	\$60.59	\$29.82	\$28.22	
		\$60.02	\$97.26	\$45.25	\$47.62	
		\$1.38	\$1.38	\$ .7634	\$1.38	
	3	\$61.40	\$98.64	\$46.01	\$49.00	
P.54-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44	
	A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77	
	A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76	
		\$248.97	\$248.97	\$145.03	\$248.97	
P.55	EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX					
P.55-1	First 4-Wire in First DS1 in DS3					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	\$26.39	\$31.42	\$15.35	\$22.20	
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44	
	A.18.5 Channelization - Channel System DS3 to DS1	\$211.19	\$211.19	\$162.55	\$211.19	
	A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76	
	A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77	
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.10	\$2.10	\$1.37	\$2.10	
		\$488.65	\$493.69	\$324.30	\$484.46	
		\$35.62	\$49.21	\$25.14	\$31.56	
		\$88.44	\$88.44	\$61.47	\$88.44	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$211.19	\$211.19	\$162.55	\$211.19	
		\$13.76	\$13.76	\$11.47	\$13.76	
		\$146.77	\$146.77	\$72.09	\$146.77	
		\$2.10	\$2.10	\$1.37	\$2.10	
	2	\$497.88	\$511.48	\$334.09	\$493.82	
		\$68.82	\$61.39	\$28.21	\$55.99	
		\$88.44	\$88.44	\$61.47	\$88.44	
		\$211.19	\$211.19	\$162.55	\$211.19	
		\$13.76	\$13.76	\$11.47	\$13.76	
		\$146.77	\$146.77	\$72.09	\$146.77	
		\$2.10	\$2.10	\$1.37	\$2.10	
	3	\$531.08	\$523.66	\$337.17	\$518.25	
P.55-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$0.1856	\$0.1856	\$0.1856	\$0.1856	
P.55-3	Additional 4-Wire in same DS1					
	A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	\$26.39	\$31.42	\$15.35	\$22.20	
	A.18.2 Interface Unit - Interface DS1 to DS0 - OCU-DP Card	\$2.10	\$2.10	\$1.37	\$2.10	
		\$28.49	\$33.52	\$16.72	\$24.30	
		\$35.62	\$49.21	\$25.14	\$31.56	
		\$2.10	\$2.10	\$1.37	\$2.10	
	2	\$37.72	\$51.31	\$16.72	\$33.66	
		\$68.82	\$61.39	\$28.21	\$55.99	
		\$2.10	\$2.10	\$1.37	\$2.10	
	3	\$70.92	\$63.81	\$29.58	\$58.09	

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
P.55-4		Additional DS1 in same DS3				
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77
		A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76
			\$248.97	\$248.97	\$145.03	\$248.97
P.56		EXTENDED LOOP 2-WIRE ISDN WITH DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX				
P.56-1		First 2-Wire in First DS1 in DS3				
		A.5.1 2-Wire ISDN Digital Grade Loop	\$21.76	\$25.14	\$14.19	\$19.28
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
		A.18.5 Channelization - Channel System DS3 to DS1	\$211.19	\$211.19	\$162.55	\$211.19
		A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76
		A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77
		A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.66	\$3.66	\$2.70	\$3.66
	1		\$485.58	\$488.97	\$324.47	\$483.10
			\$29.38	\$35.33	\$19.37	\$27.40
			\$88.44	\$88.44	\$61.47	\$88.44
			\$211.19	\$211.19	\$162.55	\$211.19
			\$13.76	\$13.76	\$11.47	\$13.76
			\$146.77	\$146.77	\$72.09	\$146.77
			\$3.66	\$3.66	\$2.70	\$3.66
	2		\$493.20	\$499.16	\$329.65	\$491.22

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		\$56.76	\$67.25	\$32.80	\$48.62	
		\$88.44	\$88.44	\$61.47	\$88.44	
		\$211.19	\$211.19	\$162.55	\$211.19	
		\$13.76	\$13.76	\$11.47	\$13.76	
		\$146.77	\$146.77	\$72.09	\$146.77	
		\$3.66	\$3.66	\$2.70	\$3.66	
	3	\$520.58	\$531.25	\$343.07	\$512.44	
P.56-2	Per Mile per DS1					
	D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile	\$0.1856	\$0.1856	\$0.1856	\$0.1856	
P.56-3	Additional 2-Wire in same DS1					
	A.5.1 2-Wire ISDN Digital Grade Loop	\$21.76	\$25.14	\$14.19	\$19.28	
	A.18.3 Interface Unit - Interface DS1 to DS0 - BRITE Card	\$3.66	\$3.66	\$2.70	\$3.66	
		\$25.42	\$28.80	\$16.89	\$22.94	
		\$29.38	\$35.33	\$19.37	\$27.40	
		\$3.66	\$3.66	\$2.70	\$3.66	
	2	\$33.04	\$38.99	\$22.06	\$31.06	
		\$56.76	\$67.42	\$32.80	\$48.62	
		\$3.66	\$3.66	\$2.70	\$3.66	
	3	\$60.42	\$71.08	\$35.49	\$52.28	
P.56-4	Additional DS1 in same DS3					
	D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44	
	A.18.1 Channelization - Channel System DS1 to DS0	\$146.77	\$146.77	\$72.09	\$146.77	

APPENDIX A							
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY							
ELEMENT NUMBER & DESCRIPTION			ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
		A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
				\$248.97	\$248.97	\$145.03	\$248.97
P.57		EXTENDED 4-WIRE DS1 DIGITAL LOOP WITH DEDICATED DS1 INTEROFFICE TRANSPORT W/ 3/1 MUX					
	P.57-1	First 4-Wire DS1 in DS3					
		A.9.1 4-Wire DS1 Digital Loop		\$73.44	\$95.13	\$55.39	\$70.74
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination		\$88.44	\$88.44	\$61.47	\$88.44
		A.18.5 Channelization - Channel System DS3 to DS1		\$211.19	\$211.19	\$162.55	\$211.19
		A.18.6 Interface Unit - Interface DS3 to DS1		\$13.76	\$13.76	\$11.47	\$13.76
			1	\$386.83	\$408.62	\$290.88	\$384.13
				\$99.13	\$140.36	\$74.91	\$100.54
				\$88.44	\$88.44	\$61.47	\$88.44
				\$211.19	\$211.19	\$162.55	\$211.19
				\$13.76	\$13.76	\$11.47	\$13.76
			2	\$412.52	\$453.75	\$310.40	\$413.93
				\$191.51	\$332.57	\$168.76	\$178.39
				\$88.44	\$88.44	\$61.47	\$88.44
				\$211.19	\$211.19	\$162.55	\$211.19
				\$13.76	\$13.76	\$11.47	\$13.76
			3	\$504.90	\$645.96	\$404.25	\$491.78
	P.57-2	Per Mile per DS1					
		D.4.1 Interoffice Transport - Dedicated - DS1 - Per Mile		\$0.1856	\$0.1856	\$0.1856	\$0.1856
	P.57-3	Additional 4-Wire DS1 in same DS3					

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION	ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED	
		A.9.1 4-Wire DS1 Digital Loop	\$73.44	\$95.13	\$55.39	\$70.74
		A.18.6 Interface Unit - Interface DS3 to DS1	\$13.76	\$13.76	\$11.47	\$13.76
		D.4.2 Interoffice Transport - Dedicated - DS1 - Facility Termination	\$88.44	\$88.44	\$61.47	\$88.44
	1		\$175.64	\$197.33	\$128.33	\$172.94
			\$99.13	\$140.36	\$74.91	\$100.54
			\$13.76	\$13.76	\$11.47	\$13.76
			\$88.44	\$88.44	\$61.47	\$88.44
	2		\$201.33	\$242.58	\$147.85	\$202.74
			\$191.51	\$332.57	\$168.76	\$178.39
			\$13.76	\$13.76	\$11.47	\$13.76
			\$88.44	\$88.44	\$61.47	\$88.44
	3		\$293.71	\$434.77	\$241.70	\$280.59
P.58		EXTENDED 4-WIRE 56 OR 64 KBPS DIGITAL LOOP WITH DS0 INTEROFFICE TRANSPORT				
	P.58-1	Fixed				
		A.10.1 4-Wire 19, 56 or 64 Kbps Digital Grade Loop	\$26.39	\$31.42	\$15.35	\$22.20
		D.3.2 Interoffice Transport - Dedicated - DS0 - Facility Termination	\$18.44	\$18.44	\$9.51	\$18.44
	1		\$44.83	\$49.87	\$24.85	\$40.64
			\$35.62	\$48.21	\$25.14	\$31.56
			\$18.44	\$18.44	\$9.51	\$18.44
	2		\$54.06	\$66.65	\$34.64	\$50.00
			\$68.82	\$61.39	\$28.21	\$55.99
			\$18.44	\$18.44	\$9.51	\$18.44

APPENDIX A						
UNBUNDLED NETWORK ELEMENTS RECURRING COST SUMMARY						
ELEMENT NUMBER & DESCRIPTION		ZONE	BELLSOUTH APPROVED RATES	BELLSOUTH FILING	AT&T/MCI PROPOSED	COMMISSION APPROVED
		3	\$87.26	\$79.84	\$37.72	\$74.43
	P.58-2	Per Mile				
		D.3.1 Interoffice Transport - Dedicated - DS0 - Per Mile	\$0.0091	\$0.0091	\$0.0091	\$0.0091



## APPENDIX B - WIRE CENTERS PER ZONE

## Zone 1

BCRTFLBT	FTLDFLSU	KYWSFLMA	MIAMFLGR	MIAMFLWM
BCRTFLMA	HLWDFLHA	MIAMFLAE	MIAMFLIC	NDADFLAC
DYBHFLFN	HLWDFLMA	MIAMFLAP	MIAMFLKE	NDADFLOL
FTLDFLCR	JCBHFLSP	MIAMFLBA	MIAMFLME	ORLDFLMA
FTLDFLCY	JCVLFLCL	MIAMFLBC	MIAMFLNM	PMBHFLTA
FTLDFLMR	JCVLFLFC	MIAMFLBR	MIAMFLPB	WPBHFLAN
FTLDFLQA	JCVLFLJT	MIAMFLDB	MIAMFLPL	
FTLDFLSG	JCVLFLSM	MIAMFLFL	MIAMFLWD	

## Zone 2

BCRTFLSA	FTLDFLAP	JCVLFLWC	NKLRFLMA	PNSCFLWA
BLGLFLMA	FTLDFLJA	JPTRFLMA	NSBHFLMA	PNVDFLMA
BYBHFLMA	FTLDFLPL	KYLRFLLS	ORLDFLAP	PRRNFLMA
CCBHFLMA	FTLDFLWN	KYLRFLMA	ORLDFLCL	PTSLFLSO
COCOFLMA	GLBRFLMC	LKMRFLMA	ORLDFLPC	SNFRFLMA
COCOFLME	GSVLFLMA	MIAMFLAL	ORLDFLPH	STAGFLBS
DBRYFLDL	GSVLFLNW	MIAMFLCA	ORLDFLSA	STAGFLSH
DBRYFLMA	HBSDFLMA	MIAMFLHL	ORPKFLMA	STRTFMLA
DELDFLMA	HLWDFLPE	MIAMFLNS	ORPKFLRW	TTVLFLMA
DLBHFLKP	HLWDFLWH	MIAMFLLO	OVIDFLCA	VRBHFLBE
DLBHFLMA	HTISFLMA	MIAMFLRR	PAHKFLMA	VRBHFLMA
DRBHFLMA	ISLMFLMA	MIAMFLSH	PCBHFLNT	WPBHFLGA
DYBHFLMA	JCBHFLAB	MIAMFLSO	PMBHFLCS	WPBHFLGR
DYBHFLQB	JCBHFLMA	MICCFLBB	PMBHFLFE	WPBHFLHH
DYBHFLQS	JCVLFLAR	MLBRFLMA	PMBHFLMA	WPBHFLLE
DYBHFLPO	JCVLFLBW	MNDRFLAV	PNCYFLMA	WPBHFLRB
EGLLFLBG	JCVLFLIA	MNDRFLLO	PNSCFLBL	WWSFLSH
EGLLFLIH	JCVLFLNO	MRTHFLVE	PNSCFLFP	
FLBHFLMA	JCVLFLRV	NDADFLBR	PNSCFLHC	
FRBHFLFP	JCVLFLSJ	NDADFLGG	PNSCFLPB	

## Zone 3

ARCHFLMA	EORNFLMA	JCVLFLLF	OLTWFLLN	SYHSFLCC
BGPIFLMA	FTGRFLMA	JCVLFLOW	PACEFLPV	TRENFLMA
BKVLFLJF	FTPRFLMA	KYHGFLMA	PLCSFLMA	VERNFLMA
BLDWFLMA	GCSPLCN	LKCYFLMA	PLTKFLMA	WELKFLMA
BNNLFLMA	GCVLFLMA	LYNHFLQH	PMPKFLMA	WPBHFLRP
BRSNFLMA	GENVFLMA	MCNPFLMA	PNCYFLCA	WWSFLHI
CDKYFLMA	HAVNFLMA	MDBGFLPM	PRSNFLFD	YNFNFLMA
CFLDFLMA	HLNVFLMA	MLTNFLRA	PTSLFLMA	YNTWFLMA
CHPLFLJA	HMSTFLAF	MNDRFLW	SBSTFLFE	YULEFLMA
CNTMFLLE	HMSTFLFA	MNSNFLMA	SBSTFLMA	
CSCYFLBA	HMSTFLHM	MXVLFLMA	SGKYFLMA	
DLSPFLMA	HWTHFLMA	NWBYFLMA	STAGFLWG	
DNLNFLWM	JAY-FLMA	OKHLFLMA	STAGFLMA	