State of Florida

Public Service Commission

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-M-E-M-O-R-A-N-D-U-M-

DATE: June 3, 2002

TO: DIRECTOR, DIVISION OF THE COMMISSION CLERK & ADMINISTRATIVE SERVICES (BAYÓ)

FROM: DIVISION OF COMPETITIVE MARKETS & ENFORCEMENT (MARSH, BLOOM, P. DAVIS, DOWDS, KING)
DIVISION OF ECONOMIC REGULATION (LEE)
OFFICE OF THE GENERAL COUNSEL (KNIGHT, B. KEATING)

RE: DOCKET NO. 990649A-TP - INVESTIGATION INTO PRICING OF UNBUNDLED NETWORK ELEMENTS (BELLSOUTH TRACK)

AGENDA: 06/13/02 - REGULAR AGENDA - POST HEARING DECISION - PARTICIPATION IS LIMITED TO COMMISSIONERS AND STAFF

CRITICAL DATES: NONE

SPECIAL INSTRUCTIONS: NONE

FILE NAME AND LOCATION: S:\PSC\CMP\WP\990649A.RCM

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ACRONYMS

LIST OF ACRONYMS AND ABBREVIATIONS USED IN THE RECOMMENDATION

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-Nondesigned
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.

CASE BACKGROUND

The federal Telecommunications Act of 1996 (Act) made sweeping changes to the regulation of telecommunications common carriers in this country. Of particular importance, it provided for the abolition nationwide of the incumbent local exchange carriers' monopolies over the provision of local exchange service. The Act envisioned three entry strategies by firms into the local exchange services market: (1) through resale of the incumbent's services; (2) via pure facilities-based offerings, thus only requiring a competitor to interconnect with the incumbent's network; and (3) through 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.

Although the Act generally spelled out the broad policy terms, the implementation details were left to the Federal Communications Commission (FCC). Specifically, the Act required that the FCC promulgate rules to implement the resale, interconnection, and UNE requirements within six months after passage of the Act. The rules subsequently established by the FCC provided detailed implementation requirements for pricing and provision of services. Of importance to this docket, the FCC's Local Competition Order, 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. (EXH 1, 47 CFR §51.507(f))

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. The legal challenges continue to this day. Staff outlines the various legal proceedings addressing the pricing rules below.

COURT PROCEEDINGS

In response to various appeals, including that of this Commission, the U.S. Court of Appeals for the Eighth Circuit

(Eighth Circuit) stayed the FCC's pricing rules on September 27, 1996. On July 18, 1997, the Eighth Circuit vacated the pricing rules on the grounds that the FCC lacked jurisdiction. However, on January 25, 1999, the U.S. Supreme Court reversed the Eighth Circuit's decision with regard to the FCC's jurisdiction over the pricing rules.

In FCC Order 99-86, released May 7, 1999, in CC Docket No. 96-98, the FCC stayed its deaveraging rule, stating:

> In this Order we issue a *sua sponte* stay of the effectiveness of section 51.507(f) of the [FCC's] rules. Section 51.507(f) requires each state commission to establish at least three geographic rate zones for unbundled network elements and interconnection that reflect cost differences. The stay shall remain in effect until six months after the [FCC] issues its order in CC Docket No. 96-45 finalizing and ordering implementation of high-cost universal service support for non-rural local exchange carriers (LECs) under section 254 of the Communication Act of 1934, as amended. (FCC 99-86, ¶1)
>
> . . .
>
> Because of the Eighth Circuit's decisions, the section 251 pricing rules were not in effect for approximately two-and-a-half years. During that time, not all states established at least three deaveraged rate zones for unbundled network elements and interconnection. Some have taken no action yet regarding deaveraging; others have affirmatively decided to adopt less than three zones. A temporary stay will ameliorate the disruption that would otherwise occur, and will afford the states an opportunity to bring their rules into compliance with section 51.507(f). (FCC Order 99-86, ¶4)

On November 2, 1999, the FCC released Order FCC 99-306 in CC Docket No. 96-45, which lifted the stay of the deaveraging rule effective May 1, 2000, stating that:

> [B]y that date, states are required to establish different rates for interconnection and UNEs in at least

three geographic areas pursuant to section 51.507(f) of the Commission's rules. (FCC 99-306, ¶120)

Additionally, on November 5, 1999, the FCC released Order FCC 99-238 addressing the U.S. Supreme Court's remand of FCC Rule 47 CFR §51.319 back to the FCC for proceedings to determine which unbundled network elements should be made unconditionally available consistent with the Court's interpretation of Sections 251(c)(3) and 251(d)(2) of the Act. See AT&T Corp. v. Iowa Utils. Bd., 525 U.S. 366 (1999).

On July 18, 2000, the Eighth Circuit rendered a decision in which it vacated many of the FCC's UNE pricing rules, including Rule 51.505(b)(1). That rule provides in part that "[t]he total element long-run incremental cost of an element should be measured based on the use of the most efficient telecommunications technology currently available and the lowest cost network configuration, given the existing location of the incumbent LEC's wire centers." The Court held the FCC's TELRIC standard to be impermissibly hypothetical, in violation of "the plain meaning of the Act." (Eighth Circuit Order at 7). The Order explained that Congress intended UNE rates to be based on "the cost of providing the actual facilities and equipment that will be used by the competitor (and not some state of the art presently available technology ideally configured but neither deployed by the ILEC [Incumbent Local Exchange Company] nor to be used by the competitor). . . ." (Eighth Circuit Order at 8) See Iowa Utilities Bd. v. F.C.C., No. 96-3321, Order (8th Cir. July 18, 2000).

The Eighth Circuit stayed its order on FCC Rule 51.505(b)(1) on September 22, 2000, pending review by the Supreme Court.(See Iowa Utilities Bd. v. FCC, No. 96-3321, Order (8th Cir. September 22, 2000). Petitions for certiorari were filed by a number of parties, including the FCC. The Supreme Court granted certiorari on the case.

On May 13, 2002, the Supreme Court upheld the FCC's TELRIC pricing standard, stating that "[t]he FCC can require state commissions to set the rates charged by incumbents for leased elements on a forward-looking basis untied to the incumbent's investment." The Court rejected the incumbents' arguments that rates must be tied to past costs. The Court also held that the FCC can require incumbents to combine elements of their networks for competitors in certain circumstances. (Verizon Communications Inc. v. FCC, Supreme Court, May 13, 2002.)

PETITION OF THE COMPETITIVE CARRIERS

On December 10, 1998, 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 this Commission set deaveraged unbundled network element (UNE) rates. The petition was addressed in Docket No. 981834-TP.

On May 26, 1999, this Commission issued Order No. PSC-99-1078-PCO-TP, granting in part and denying in part the Competitive Carriers' petition. Specifically, the Commission 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.

Subsequently, by Order No. PSC-01-2132-PCO-TP this docket was divided into sub-dockets in an effort to alleviate confusion as to whether filings are intended for the BellSouth track of this Docket or the Sprint/Verizon track of this Docket. Filings directed towards the BellSouth track would be placed into 990649A-TP, and filings directed towards the Sprint/Verizon track would be placed into 990649B-TP.

FINAL ORDER ON RATES

On May 25, 2001, the Commission issued its Final Order on Rates for Unbundled Network Elements Provided by BellSouth, Order No. PSC-01-1181-FOF-TP. The Order addressed the appropriate methodology, assumptions, and inputs for establishing rates for unbundled network elements for BellSouth Telecommunications Inc. (BellSouth). The Commission ordered that the identified elements and subloop elements be unbundled for the purpose of setting prices, and that access to those subloop elements should be provided. The Commission 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, it defined xDSL-capable loops, and found that a cost study addressing such loops may make distinctions based upon loop length. The Commission then set forth the UNE rates, and held that they would become effective when existing interconnection agreements are amended to incorporate the approved rates, and those agreements become effective.

Of significance to this recommendation, the Commission ordered BellSouth to file, within 120 days of the issuance of the Order, a cost study for hybrid copper/fiber xDSL-capable loops and revisions to its cost studies for network interface devices (NIDs). BellSouth was also ordered to file a "bottoms-up" loop cost study, explicitly modeling engineering, structures and cable installation. Finally, BellSouth was directed to submit a study of an SL1 loop that excluded a design layout record and a test point, but would be guaranteed not to be converted to alternate facilities. The Company has provided a cost study for a new loop type, the Unbundled Copper Loop-Nondesigned (UCL-ND) to satisfy these requirements.

Subsequent to Order No. PSC-01-1181-FOF-TP, 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.

CHRONOLOGY OF EVENTS

On September 24, 2001, BellSouth filed the revisions to its cost studies in response to Order No. PSC-01-1181-FOF-TP. On October 8, 2001, BellSouth filed revisions to the cost study to reflect these necessary changes as a result of the Commission's decision on reconsideration, reflected in Order No. PSC-01-2051-FOF-TP.

On November 2, 2001, BellSouth again filed revised cost studies, to update Daily Usage File (DUF) information.

Parties filed a number of requests for extensions to file testimony and discovery responses. Additionally, on January 28, 2002, two days before the scheduled hearing, BellSouth refiled its cost study. As a result, the hearing was postponed to March 11 and 12, 2002.

BellSouth witnesses included Daonne Caldwell, W. Keith Milner, John A. Ruscilli, James Stegeman, and Tommy Williams. AT&T and MCI jointly sponsored the testimony of Greg Darnell, John C. Donovan, Joseph Gillan, and Brian F. Pitkin. Z-Tel's witness was Dr. George S. Ford. FDN sponsored the testimony of Michael P. Gallagher.

BellSouth, Florida Digital (FDN), Sprint, and Z-Tel filed briefs on April 12, 2002. AT&T and MCI WorldCom (MCI) filed a joint brief on April 15, 2002. FCTA did not file a brief, but expressed a desire to remain a party. Not all parties addressed all of the issues.

DISCUSSION OF ISSUES

ISSUE 1(a): Are the loop cost studies submitted in BellSouth's 120-day filing compliant with Order No. PSC-01-1181-FOF-TP?

RECOMMENDATION: Yes. However, staff believes a number of adjustments are necessary before the study meets both the letter and the spirit of the Commission's previous order in this docket. These adjustments are listed in the text of the recommendation. **(Bloom)**

POSITIONS OF THE PARTIES

BELLSOUTH: Yes. BellSouth's loop cost study complies in all respects with the Commission's final UNE order.

AT&T/MCI: No. BellSouth's model fails to comply in many ways, including BellSouth's: 1) use of a linear Engineering factor; 2) inappropriate treatment of "Miscellaneous Contractor Charges" and other errors causing inappropriate Structure Inputs; and 3) use of non-compliant Copper Cable and Fiber Cable Cost.[sic]

FDN: BellSouth's loop rates should be reduced to permit meaningful competition in business and residential markets throughout Florida. Further, a new rate structure should be devised where lower UNE rates are available in more than just a minimal number of BellSouth Zone 1 wire centers. Also agree with AT&T, MCI and Z-Tel.

SPRINT: The Commission should require BellSouth to use the "bottoms-up" approach to cost-specific UNEs. Otherwise, BellSouth's cost study is not compliant with the requirements of the 1996 Act or the FCC's implementation rules.

Z-TEL: BellSouth's statewide average loop rate fails the "sanity test" - a test of whether UNE rates between states are consistent with relative cost differences between states as measured by the HCPM model. The "test" indicates that BellSouth's UNE rates are overstated. The testimony of the ALEC witnesses proves this assertion.

STAFF ANALYSIS: The issue at hand is whether BellSouth's 120-day filing comports with the directives of this Commission, expressed in Order No. PSC-01-1181-FOF-TP. Before delving into the issue of BellSouth's compliance or non-compliance with the aforementioned order, staff believes a recapitulation of the relevant language germane to this issue may be helpful in laying the foundation for the ensuing recommendation. In its May 25, 2001 order in Docket No. 990649A-TP, this Commission found:

> . . . 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, p. 306-307)

Staff notes that the Commission 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. AT&T/MCI witness Pitkin submitted in excess of 300 proposed alternate input values for the BSTLM. (EXH 59, BFP-18, pp. 1-6) Witness Pitkin identified the source for these inputs as AT&T/MCI witness Donovan (EXH 33, pp.18-19). Witness Donovan testifies he does not address each input (EXH 36, p.11, l.13-14), but instead offers work papers and documentation in support of 22 of these inputs. (EXH 4, 17(a)-17(v) This recommendation addresses those inputs that relate to the direction given to BellSouth by Commission Order No. PSC-01-1181-FOF-TP.

ENGINEERING FACTOR:

In its previous filings in this docket (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. (TR 247) To make its calculations for the "bottoms-up" 120-day filing, witness Caldwell testifies, BellSouth relied on two sources for inputs: outside plant contractor costs and 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. (TR 238-239)

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, witness Caldwell testifies. (TR 366-367)

During a deposition conducted by staff on January 15, 2002, 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. (EXH 27, pp. 106-107) This request precipitated a revision to the 120-day filing, that included changes to BellSouth's engineering factors and included an explanation of why the factors changed from the initial 120-day filing:

> 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. (EXH 24, Revision 3, Appendix B, Attachment 7, p.1)

BellSouth also acknowledged in response to a staff interrogatory that no documentation existed to substantiate the engineering factors in the OSPCM that had formed the basis for BellSouth's original engineering factors. (EXH 22, Item 87(a), Attachment No. 1, page 1 of 4)

Witness Caldwell explains 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." BellSouth took the RTAP data and created a spreadsheet that calculated BellSouth's final engineering factors. (TR 366) The RTAP referred to by witness Caldwell is BellSouth's Resource Tracking Analysis and Planning database. (EXH 22, Item 88, page 1 of 6)

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. (EXH 22, Item 87(a), Attachment No. 1, page 1 of 4)

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

> 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. (TR 820, emphasis by the witness)

The remedy, witness Donovan testifies, 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. (TR 821)

Ideally, witness Donovan testifies, engineering costs should be broken down into three components, one based on sheath feet of cable or structure engineered, calculated on a "per feet per day engineered" cost; one for cable splicing on a "minutes of engineering time per splice" basis; and 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." (TR 769-770)

Witness Donovan also advocates establishing a ratio of engineering to technician labor, which he refers to as a "span of control." (TR 821) Witness Donovan testifies 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. (TR 821) "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." (TR 821)

Witness Donovan recommends BellSouth be directed 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. (TR 821) 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. (EXH 67, JCD-9, p.1)

Witness Donovan notes this his recommendation 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. (TR 772)

BellSouth witness Caldwell testifies 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." (TR 297)

AT&T/MCI witness Donovan acknowledges using personal experience as a partial basis for his "span of control" argument:

> ...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. (TR 848-849)

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 testifies. "Therefore it is unrealistic to assume that one year should be selected to determine an appropriate ratio." (TR 822) Instead, witness Donovan recommends using data from 1997 through 2000 to establish an average that would, "levelize those obvious year-to-year timing differences." (TR 822)

STRUCTURE COSTS:

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 and should be excluded from every cable placement category. (TR 776) BellSouth witness Milner counters the miscellaneous category includes legitimate costs that are appropriate in a cost study designed to reflect the forward-looking costs associated with placing cable. (TR 91)

During cross-examination, witness Milner acknowledges some of the costs included in the miscellaneous category - use of a bulldozer when plowing cable, as one example - would occur infrequently. (TR 128) The witness 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? (TR 130)

In that context, witness Milner testifies, BellSouth has elected to spread the cost of all miscellaneous items evenly across all cable placement categories. (TR 128) Witness Milner asserts 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. (TR 129) Witness Milner believes that the result of the specific application of miscellaneous charges by placement category will result in "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." (TR 129)

AT&T/MCI witness Donovan does 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.

<u>Aerial Structure</u>

AT&T/MCI witness Donovan alleges 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." (TR 794) In his deposition (EXH 36 at p.37), witness Donovan describes the "red-fact 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 argues that a simple observation can be performed by driving along a stretch of road where telecommunication cable is attached to poles. Witness Donovan recommends setting the automobile odometer at zero, driving for one mile and 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. (TR 795)

Witness Donovan supplements his recommended observational method by citing the FCC's Final Inputs Order, which he testifies used the BellSouth Cost Proxy Model (BCPM), the Hatfield Model (HAI), and the FCC's own calculations to arrive at recommendations in §214 that distances between poles range from 150 feet to 250 feet. (TR 794) 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 as a recommendation to the Commission. (TR 795)

BellSouth witness Caldwell contends witness Donovan's method of computing average distances between poles is not better than making calculations utilizing actual data and should not be accepted. (TR 288-289) 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. (TR 289)

Regarding the FCC's Final Inputs Order, witness Caldwell testifies, "the facts clearly reveal that those other model default values are understated." (TR 289)

Witness Donovan is also critical of BellSouth's proposed linear-foot intervals for downguys and anchors, which are used to stabilize pole lines. (TR 796) Witness Donovan testifies, "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 cites 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. (TR 796)

Witness Donovan asserts BellSouth's proposal to place anchors and downguys every 500 feet is contrary to "common industry knowledge." (TR 796)

BellSouth witness Caldwell counters that witness Donovan's claim of a 1,200-foot default in the BSTLM is a misperception. (TR 289) She testifies:

> 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 this Commission's order for a bottoms-up study. (TR 289)

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." (TR 211)

<u>Aerial Structure Contract Labor</u>

AT&T/MCI witness Donovan contends BellSouth's calculations for aerial structure contract labor are flawed for two reasons. (TR 777) 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." (TR 777) 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." (TR 777)

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. (EXH 66, JCD-8, p.2)

BellSouth witness Kephart, whose testimony was adopted by BellSouth witness Milner, testifies witness Donovan misinterprets the contract data associated with pole placements. (TR 91) Witness Milner testifies the cost categories referenced by witness Donovan are additional contract labor costs over and above standard pole-placing costs. (TR 91) For example, witness Milner testifies, 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. (TR 91)

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." (TR 92)

AT&T/MCI witness Pitkin submits an exhibit showing a proposed reduction in the price for aerial poles from $300.16 to $239.31. (EXH 57, BFP-7, p.12) Witness Pitkin provides no testimony in support of his proposed reduction. AT&T/MCI witness Donovan presents no issues or recommendations in support of witness Pitkin's proposed reduction. (TR 778)

BellSouth witness Caldwell contends witness Pitkin's proposal to change the cost of poles is an "unsupported modification" the Commission should ignore. (TR 290)

<u>Buried Excavation Contract Labor</u>

BellSouth witness Caldwell testifies 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 testifies, "all excavation cost values are the same regardless of terrain type." (TR 240)

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. (TR 240)

AT&T/MCI witness Donovan 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. (TR 778) 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 testifies, "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." (TR 778) Witness Donovan testifies BellSouth purportedly allows contractors to determine which of the seven types of excavation will be used without direction from BellSouth engineers. (TR 779)

Witness Donovan testifies:

> 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. (TR 779)

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. (TR 112)

During cross-examination, witness Donovan reframes his argument, contending not that BellSouth witness Caldwell's statements are "misleading," but that, "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." (TR 852) 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." (TR 780) What is unreasonable, witness Donovan testifies, 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. (TR 779) 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 testifies generated a $0.77 per-foot cost in rural density zones. (TR 780)

<u>Buried Splice Pits</u>

AT&T/MCI witness Donovan testifies that BellSouth spreads its contractor costs for buried splice pits across bore buried cable and buried cable operations, which increases BellSouth's costs. (TR 783) 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." (TR 783) 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. (TR 783)

BellSouth witness Caldwell rejects witness Donovan's premise that the cost of buried splice pits should not be included. "First," witness Caldwell testifies, "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 the Commission were to accept Mr. Donovan's recommendation that all buried splices should occur above ground in pedestals, he has not accounted for all of the costs in his proposed inputs." (TR 280) Costs associated with pedestals would include labor associated with the placing of the pedestals, witness Caldwell believes. (TR 281)

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. 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. (TR 783-784)

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. (TR 783) Witness Donovan believes, "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. (TR 783-784)

BellSouth witness Caldwell disagrees with witness Donovan's Bore Buried Cable assessment, 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 testifies, they are loaded into the BSTLM. (TR 281) 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." (TR 281)

Witness Caldwell also disagrees with witness Donovan's recommendation that all pipe investment be included in the Push Pipe/Pull Cable category. She testifies, "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." (TR 281)

Buried Cable

Witness Donovan 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. (TR 785) In proprietary Exhibit 66 (JCD-2, p.8) witness Donovan arrives at a per foot cost $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. (TR 785)

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." (TR 93)

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. (TR 240) The witness notes, however, that contracts between BellSouth and its outside contractors do not differentiate by terrain type, similar to buried excavation contract labor. (TR 240-241)

To arrive at the figures in the BSTLM, witness Caldwell testifies, "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." (TR 241)

Witness Donovan points out that BellSouth assumes eight types of underground excavation labor: Rocky Trench; Trench and Backfill; Backhoe Trench; Hand Dig Trench; Cut & Restore Asphalt; Cut & Restore Concrete; Cut & Restore Sod; and Bore Underground Cable. (TR 785-786) For Florida, the BSTLM assumes zero percentage occurrence for rocky trench excavation. (TR 786)

Witness Donovan is 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. (TR 786) 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. (TR 786)

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. (TR 787) 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." (TR 787)

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. (TR 787)

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." (TR 280)

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. (TR 788) 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. (TR 283)

Witness Caldwell believes the loading on conduit material is appropriate because it properly captures miscellaneous material costs incurred for the material. (TR 282) 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). (EXH 48, DDC-5_120 Day, p.1)

Witness Caldwell testifies:

> 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. (TR 296)

Witness Donovan disputes the validity of the 40 percent loading factor, advocating a reduction of BellSouth's engineering factor and the elimination of the exempt material input. (TR 830-831) Witness Donovan testifies that based on industry experience, the appropriate engineering factor for conduit material should be 12 percent, not BellSouth's proposed 28 percent. (TR 830) As far as exempt material, witness Donovan testifies, "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." (TR 831) 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. (TR 831)

Buried Restoration

BellSouth labels the activities necessary to restore the ground surface in the wake of underground cable placement, "Buried Restoration." Based on BellSouth's filings, these activities may include the replacement of asphalt, concrete, gravel or dirt, reseeding or other necessary restoration operations. (EXH 24, Appendix B, Attachment 3, pp. 7-8)

First, AT&T/MCI witness Donovan believes 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. (TR 781) Witness Donovan finds this approach problematic because, he testifies, "Worthy of note is that 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." (TR 781)

Second, witness Donovan contends, BellSouth distributes the cost of splice pits over bore cable and buried cable placement accounts. This is inappropriate, witness Donovan testifies, because splices for buried cable are normally contained in above ground pedestal enclosures; material costs for the enclosures are included in the Exempt Material Loading Factor; and because the labor is included in the category of splicing labor. (EXH 67 p.4)

Finally, witness Donovan contends, 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." (TR 781)

BellSouth witness Caldwell notes 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." (TR 279) Witness Caldwell testifies 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. (TR 280)

Witness Caldwell cautions that if witness Donovan's approach is approved by the Commission 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. (TR 280)

The possibility of increased costs in certain categories as a result of his recommendations apparently has not eluded witness Donovan, who testifies in deposition:

> And I should note, and I say in my testimony that this actually results in a higher cost in the urban and suburban density zones, something that if we were, you know, objectively setting for CLECs, would certainly not want to see higher costs in urban zones. 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. (EXH 36, p.25)

<u>Manholes</u>

BellSouth witness Caldwell testifies in direct testimony that costs for manholes - underground structures (sometimes referred to in testimony as vaults) in which telecommunications cables may be spliced and transmission equipment located - are based on actual outside contractor contract costs. (TR 246-247) 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. (TR 247) 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. (TR 247)

Subsequent to the filing of direct testimony, BellSouth revised its 120-day filing, which 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. (EXH 24, letter dated January 24, 2002, p.2) 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 rebuttal testimony, witness Donovan calls into question BellSouth's methods of arriving at a per-cubic-foot cost for manholes. First, witness Donovan asserts, 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." (TR 789-790) Witness Donovan advocates the exclusion of the Type-A manhole for calculating the cubic-foot cost.

Second, witness Donovan believes, 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. (TR 790) This mismatch between numerator and denominator results in the allocation of 30 manhole covers for each manhole in the sample, according to witness Donovan. (TR 790) BellSouth's methodology of calculating manhole cover and collar costs is flawed, witness Donovan testifies, 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. (TR 790)

Third, 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. (TR 824) "BellSouth claims that its smallest manhole is 4 feet wide by 3 feet deep by 6 feet long (72 cubic-feet)." Referring to 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. (TR 826)

Witness Donovan seeks to bolster his argument on the issue of manhole sizes by attaching drawings from two vendors (EXH 68, JCD-10.1-10.4) 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. (TR 854)

Fourth, witness Donovan testifies, BellSouth's final cubic foot costs are unsupported by cost data and "fails the test of logic" by postulating that the installed price of a 503 cubic-foot manhole is $15,330.54, while the installed price of a 224 cubic-foot manhole is $19,337.15. (TR 826)

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." (TR 826-827)

Finally, witness Donovan alleges that BellSouth's 40 percent loading factor includes exempt material costs that include manhole covers and collars. (TR 827) 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." (TR 827)

Witness Donovan's proposal for recalculating the costs of manholes, collars and covers is a fivefold recommendation, consisting of the following:

- 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.
- Replace all 224-cubic-foot manholes housing four cables with 72-cubic-foot manholes with 4-cable capacity.
- Replace all 703-cubic-foot manholes housing five cables with 5-cable capacity 224-cubic-foot manholes.
- Compute the cost of one manhole cover and collar for each manhole based on contractor data.
- Eliminate manhole cover and collar costs that are based on the cubic footage of the manhole. (EXH 66, JCD-8, pp. 6-7)

Adopting witness Donovan's recommendation would result in a per-cubic-foot cost of $16.90 regardless of size and a flat rate of $246.48 for manhole covers. (TR 828)

During cross-examination, BellSouth witness Caldwell appears to confirm witness Donovan's observation that the size of manhole covers does not change based on the size of the subsurface vault:

> Q. All right. I would like to address the issue of manhole covers and manhole collars. Does the size of a manhole collar and the manhole cover depend upon the size of the manhole itself?
>
> A. 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. (TR 370)

In rebuttal testimony, witness Caldwell also appears to acknowledge flaws in the cost development methodology for manholes and manhole cover costs:

> Q. Mr. Donovan claims on pages 30-32 [TR 788-790] that the manhole cost development is flawed. From a cost development perspective, can you respond?
>
> A. Yes. Mr. Donovan states on pages 31 and 32, that BellSouth distributed the costs of 207 manhole covers and collars over 7 installed manholes. While this is mathematically correct, 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. (TR 286)

Despite acknowledging doubts about the efficacy of BellSouth's approach, witness Caldwell rejects witness Donovan's recommendations. "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 the Commission attempts 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." (TR 286)

Witness Caldwell's concluding recommendation is that the Commission 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. (TR 288) These rates, quoted by witness Caldwell in amended surrebuttal testimony filed January 28, 2002, include the application of the loadings filed in the third revision of BellSouth's 120-day filing. (TR 287-288)

<u>Structure Sharing</u>

AT&T/MCI witness Donovan is 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." (TR 791) Witness Donovan testifies, "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." (TR 791)

Witness Donovan's solution is to recommend the Commission change the input for structure sharing to 50 percent in rural density zones and to 33 percent in suburban and rural density zones.

BellSouth witness Milner observes that witness Donovan's recommended inputs are, "not realistic" and should not be adopted by the Commission. (TR 94) Witness Milner contends that witness Donovan's recommendation has no basis in the record other than witness Donovan's personal experience outside the state of Florida. (TR 95)

Witness Milner testifies:

> 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. (TR 95)

Witness Donovan is 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." (TR 792) Witness Donovan recommends the same inputs be applied to buried structure accounts as he recommends for sharing conduit; 50 percent in rural zones and 33 percent in urban and suburban zones. (TR 792)

During cross-examination witness Donovan acknowledges his recommended inputs are not based on any documentation in the record and offers nothing to refute the inputs recommended by BellSouth. (TR 858-859) 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 responds, "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." (TR 861)

Witness Milner testifies that sharing the costs of buried structures is rare because of timing problems: "Even in a scorched node scenario, CATV and power lines are already in place, so the opportunities for sharing are no better than BellSouth has seen in the past."(TR 95) Witness Milner also testifies that in the concluding order (Order No. PSC-99-0068-FOF-TP, p. 126) in its Universal Service docket (Docket No. 980696-TP) this Commission 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." (TR 96)

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. (TR 793) Witness Donovan testifies, "Good planning engineers have been taught that structures are a high cost limited resource, and all efforts should be made to share that investment not only with other service providers, but to use that resource for both feeder and distribution cables." (TR 793)

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. (TR 793) Witness Donovan testifies, "In a forward-looking environment, such as TELRIC, I would expect facility sharing to occur frequently, and recommend changing this input to reflect the fact that feeder facilities ride on or in structures already built by distribution plant 75% of the time." (TR 793)

During cross-examination, witness Donovan testifies, "I would just like to clarify what the percentage means. 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." (TR 863)

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. (TR 864) On 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 acknowledges, "there is no data available on this percentage. However there 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 on which to base a percentage, witness Milner contends, "BellSouth's estimate is based on BellSouth Network's experience and forward looking projections regarding the infrequency of such occurrences." (TR 96)

CABLE PLACEMENT COSTS:

Copper Cable Placement Costs

AT&T/MCI witness Donovan offers four specific criticisms of BellSouth copper cable placement costs. Witness Donovan's criticisms include failure to correctly populate the BSTLM with travel and set-up times that would lead to reasonable productivity; assuming low cable splicing rates; the inclusion of copper cable stubs in underground construction; and disagreements with BellSouth's use of a material loading factor, plant labor, and interest during construction. (TR 800-808)

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. (TR 800) Witness Donovan argues 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. (TR 801) 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 the direction of this Commission in Order No. PSC-01-2051-FOF-TP. (TR 800)

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. (TR 800-801)

On this issue, witness Donovan recommends the Commission order BellSouth to file bottoms-up cable placement inputs "with reasonable productivity numbers." (TR 801) Based on his experiences, witness Donovan testifies, he 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. (TR 800)

In deposition, BellSouth witness Kephart testifies, "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." (EXH 25, p.49) 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.

Copper Cable Splicing Costs:

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. (TR 802) Witness Donovan articulates his concern with BellSouth's approach:

> 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. (TR 802)

Witness Donovan advocates discarding BellSouth's approach and the implementation of a "conservative" splicing rate of 300 pairs per hour, which is more than three times the per-hour proprietary rate proposed by BellSouth. (TR 803)

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 (EXH 65, JCD-6, p.1) 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. (TR 805)

During cross-examination, BellSouth witness Caldwell appears to suggest the discussion over how many cable pairs per hour can be spliced is a subaltern debate because BellSouth rarely experiences large-scale splicing operations: "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 [EXH 43], 25 [pair] and 100 [pair], come into play in the modeling." (TR 329)

Copper Cable Stub Investment:

AT&T/MCI witness Donovan contends BellSouth doubles the cost of copper cable splicing at each splice point to account for copper stub cables. (TR 805) The stub cable is a cable that brings the splice point up to the surface so that maintenance can be done on the surface instead of in a subsurface structure. (EXH 26, p.18, lines 1-4)

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." (TR 805) 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." (TR 806)

Quoting from the BSTLM Methodologies Manual, witness Donovan seeks to demonstrate 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. [BSTLM Methodologies Manual, pages 61-62] (TR 806)

From this excerpt, witness Donovan concludes, "Because no more than 3 cables exist at any splice point in the BSTLM, therefore copper cable stubs are unnecessary, and the Commission should order BellSouth to remove any cable stub costs." (TR 806)

BellSouth witness Stegeman testifies the inclusion of stub cable investment in the BSTLM at each splice point is not an error. "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." (TR 203)

Miscellaneous Material Loading Factor

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. (AT&T BR at 23; BellSouth BR at 9)

The parties 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. (TR 308) A 71-page list of items comprising exempt materials was filed as Exhibit 7, Item No. 5. Witness Caldwell testifies the list of materials contained in Exhibit 7 is not used in the BSTLM, which instead uses an overall exempt material dollar figure. (TR 341)

The parties dispute the appropriate method of applying the miscellaneous material rate: AT&T/MCI witness Donovan testifies exempt materials are normally computed as a portion of a technician's fully loaded labor rate, based on actual material usage audits (TR 809); BellSouth witness Caldwell testifies 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. (TR 270)

Witness Donovan testifies the labor component usually ranges from $6 to $10 per hour for cable splicing technicians and cable placing technicians. (TR 810) 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." (TR 811) Witness Donovan suggests that if BellSouth can prove exempt material has been excluded from the fully loaded labor rate, the Commission should limit the exempt material loading rate on labor to 20 percent. (TR 811)

BellSouth witness Caldwell rejects witness Donovan's advocacy of the inclusion of exempt material costs in labor rates. In addition, witness Caldwell testifies, the recommended 20 percent cap on the exempt material, "Besides being arbitrary, Mr. Donovan's method is inappropriate." (TR 270)

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. (TR 270-271)

During cross-examination, an extended hypothetical exchange between counsel for AT&T and witness Caldwell utilizing Exhibits 49 and 50 about the potential double counting of network interface devices (NIDs) and cable drop investments concludes as follows:

> Q. Just for clarification, you can't tell us that there is not a double count, and you also cannot tell us that there is a potential - you can't tell us what the potential extent of the overstatement is for NID and drop?
>
> A. That is correct. The same way I can't tell you the understatement of aerial terminals, et cetera, that gets excluded because they get assigned to Accounts 248 and 548. [EXH 49; EXH 50] (TR 325)

AT&T/MCI witness Donovan attempts to solidify the assertion of double counting of the NID and drop investment by quoting 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) (TR 579)

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." (TR 579)

BellSouth witness Caldwell contends that witness Pitkin quotes selectively from her Reply Affidavit and that a complete reading neutralizes witness Pitkin's assertion. The complete text reads as follows, according to witness Caldwell:

> 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). (TR 271)

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." (TR 271-272)

In its brief, AT&T/MCI specifically cites five items or categories of items that it believes should be excluded from the list of exempt materials (EXH 7): bracket tap video; card 56 Kbps CO SM8806-1318-1 through CARD T1 CO EXT. 8806-1325-1; CASE COIL 1 MOD 1PR through CASE MODULAR 6SGL COILS, COIL LOAD LID TP 880040-1; DROP COMP 2FB2TWP 37581590-250 through 37581590-750; and FRAME&COVER MNHL B30 through SH30. (AT&T/MCI BR at 24)

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. (TR 808)

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 recommends excluding the category Other-Plant Labor-Indirect Salaries, Benefits, and Other from the Material Loading Factor. (TR 812)

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. (TR 274) "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." (TR 274)

Finally, AT&T/MCI witness Donovan contends BellSouth has improperly used the Interest During Construction input, but offers no evidence to buttress his argument. (TR 812) BellSouth witness Caldwell counters 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. Noting that witness Donovan offers "no support" for his belief that BellSouth misapplied the interest during construction, witness Caldwell rejects the assertion. (TR 274-275) BellSouth witness Caldwell also notes that 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." (TR 275)

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: BellSouth does not have appropriate cable placing set-up and cable placing productivity parameters; there are not separate splicing set-up and fiber splicing productivity parameters; the Miscellaneous Material loading on Non-Exempt Material is inappropriate; Other-Plant Labor-Indirect Salary, Benefits and Other Loading on Non-Exempt Material is inappropriate; Interest During Construction is inappropriate; and BellSouth's engineering loading factor of 35.72 percent is too high. (TR 813)

Witness Donovan recommends reducing the engineering factor to 10 percent; slashing the Miscellaneous Material loading on Non-Exempt Material to no more than 20 percent on labor costs; disallowing costs listed under Other-Plant Labor-Indirect Salary, Benefits, and Other; use inputs of 45 minutes for travel and set-up for fiber cable placement, 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; a travel and set-up input of two hours for fiber cable splicing and a productivity rate of five minutes per fiber strand spliced. (TR 814-815)

BellSouth witness Caldwell's responses to witness Donovan's criticisms on copper and fiber placing inputs are reflected under the copper cable placing subheading.

<u>**ANALYSIS:**</u>

ENGINEERING FACTORS:

What constitutes an appropriate engineering factor in this proceeding and how an appropriate engineering factor should be determined are among the more tendentious issues contested by the parties.

BellSouth witness Caldwell advocates an engineering factor based on the relationship between engineering costs and total non-engineering investments for each plant account. BellSouth witness Caldwell acknowledges the inputs used in the BSTLM changed during the course of this phase of the proceeding. Initially, BellSouth proffered two engineering factors, 27 percent for copper cable accounts and 35.7 percent for fiber cable accounts. (TR 366-367) These factors resulted from BellSouth's use of two data sources to make its calculations, outside plant contractor costs from the year

2000 and the OSPCM, the company's internal mechanism for estimating job costs. (TR 238-239)

BellSouth witness Caldwell subsequently acknowledged discovering a disparity in how the OSPCM calculated engineering factors and the BSTLM applied engineering factors, and BellSouth revised the method it used to arrive at engineering factors. (EXH 24, Revision 3, Appendix B, Attachment 7, p.1) The change in method yielded separate engineering factors ranging from 7.9 percent to 52.7 percent, depending on the respective cable account.

AT&T/MCI witness Donovan recommends the adoption of a "span of control" scenario, predicated on the assumption that one BellSouth engineer should be responsible for directing the work of six technicians as a TELRIC ratio of engineering to labor. (TR 821) If this ratio - which translates to 16.7 percent - is applied, witness Donovan contends, BellSouth's engineering factors would range between seven and 11 percent depending on the cable account. (EXH 67)

Staff views BellSouth witness Caldwell's proposal on engineering factors with trepidation. The record reflects that 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. When BellSouth 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. (EXH 22, Item 87(a), Attachment No. 1, p.1) In addition, staff shares witness Donovan's concern that reliance on a single year's data could potentially skew results. (TR 822)

Witness Donovan interprets BellSouth witness Caldwell's subsequent method of arriving at engineering factors to mean that in some circumstances, one engineer supervises the work of up to five technicians or as few as one technician, the latter situation witness Donovan labels "absurd." (TR 821)

Conversely, 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 his experience and is unsubstantiated by record evidence. Staff notes that witness Donovan does base his recommendation on four years of BellSouth engineering cost data (1997-2000), as opposed to BellSouth witness Caldwell's aforementioned single year of data.

CONCLUSION:

The shifting variables presented by BellSouth in this proceeding are troubling to staff because they suggest the possibility of instability at the base of BellSouth's assumptions. Staff cannot rule out the possibility that an unstable premise may lead to an unstable conclusion.

Staff also has difficulty reconciling witness Caldwell's admission that BellSouth's engineering factors are linear loadings (TR 307), particularly considering the Commission found that such factors generate questionable results when deaveraged rates are the intended outcome because they preclude economies of scale. (Order No. PSC-01-1181-FOF-TP, p. 282)

Witness Donovan's recommendation also appears somewhat flawed, in staff's view. By calculating labor dollars in relationship to engineering dollars without accounting for labor rates, witness Donovan's calculations may yield engineer-to-technician ratios divorced from reality.

Staff believes a number of options present themselves to resolve this issue. The first would be to accept BellSouth's engineering factors from its third revision (EXH 24, Revision 3, Attachment_6.xls). Another option would be to accept the percentages proposed by witness Donovan (EXH 66, JCD-9, p.1). A third choice 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 fourth choice 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. Staff cannot recommend this option, however, because of the delays such modifications would cause in the resolution of this docket.

Staff recommends the third choice, which would neither accept nor reject either party's methodology in its entirety and avoid potentially extensive delays while BellSouth reworks the BSTLM. This compromise solution would yield the following engineering factors for fiber and cable accounts:

Poles	26.2%
Underground Metallic	8.2%
Aerial Cable Metallic-Bldg. Entrance Cable	30.9%
Aerial Cable Metallic	10.0%
Buried Metallic Cable	15.8%
Intrabuilding Network Cable Metallic	22.9%
Underground Non-Metallic Cable	7.0%
Aerial Cable Fiber-Bldg Entrance Cable	18.1%
Aerial Non-Metallic Cable	8.0%
Buried Non-Metallic Cable	18.2%
Intrabuilding Network Cable Fiber	9.9%

STRUCTURE COSTS:

Miscellaneous Contractor Charge

BellSouth proposes a miscellaneous contractor charge of 25.43 percent applied to all activities under the category of structure costs. AT&T/MCI witness Donovan believes the application of the miscellaneous contractor charge is an attempt to recoup non-TELRIC expenditures and should be disallowed(TR 776), while BellSouth witness Milner testifies the expenses are legitimate costs properly appearing in a forward-looking cost study. (TR 91)

Underlying the dispute over the propriety of applying a miscellaneous contractor charge is the issue of how it should be applied, if at all.

During cross-examination, witness Milner acknowledged that certain costs in the miscellaneous contractor charge category - the use of a bulldozer, for example - may not be necessary for all structure activities. BellSouth's approach, he testifies, is to take all miscellaneous costs, combine them and distribute the costs equally over each structure category activity. (TR 130)

Witness Milner acknowledges it is possible to develop UNE rates based on the specific relationship between miscellaneous costs and structure activities, with resulting cost increases in some categories and decreases in others. (TR 129) Staff notes BellSouth did not provide this data as part of the record.

Witness Milner also acknowledges it would be possible for ALECs to hire their own contractors to perform functions booked under the miscellaneous contractor charge category, and coordinate the work of the contractors with BellSouth crews. That coordination, however, would generate costs not recognized in the current model. (TR 131)

ANALYSIS:

Staff believes the record offers a number of options to resolve this dispute. The Commission can accept BellSouth's method of distributing and recovering miscellaneous costs equally over all structure activities as proposed; accept AT&T/MCI witness Donovan's suggestion to disallow all miscellaneous contractor charges; order BellSouth to segregate miscellaneous contractor costs and apportion the costs on an activity-specific basis; direct BellSouth to refile this aspect of its cost study, making provision to allow ALECs to book contractors to perform certain functions and include all costs that may arise from coordination activities; or adopt a miscellaneous contractor charge separate from that recommended by BellSouth.

Supporting the first alternative - accepting BellSouth's miscellaneous contractor charge - is problematic because it appears to staff to contradict the purpose of the 120-day filing. As noted in the case background, the Commission 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 across-the-board to 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 to the application of a linear loading.

Staff has concerns that the outright disallowance of all miscellaneous contractor charges would result in non-recovery of legitimately incurred costs. Aside from AT&T/MCI witness Donovan's overarching assertion that these miscellaneous contractor charges are non-TELRIC, BellSouth's claim that the costs are legitimate is uncontested by evidence or testimony of any ALEC witness. While cross-examination of BellSouth witness Milner elicited an admission that some costs booked to the miscellaneous contractor charge category may be incurred infrequently, no ALEC witness demonstrated these costs are not incurred. (TR 128)

Staff believes 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. BellSouth witness Milner testifies that adopting this approach will increase per-foot costs within some structure categories, and decrease costs within others. (TR 129)

The fourth option, to allow ALECs to contract independently for some of the services BellSouth performs, carries with it an implicit recognition of the possible delay in the docket if adopted. BellSouth witness Milner testifies that for this approach to be TELRIC-compliant, the costs of coordinating activities between BellSouth and ALEC, which are not currently part of this proceeding, will have to be developed. (TR 131)

The last two choices would involve the introduction of new cost model inputs into the record, and staff is concerned additional evidence would generate an additional round of discovery and additional delays in the ultimate conclusion of this proceeding.

Finally, the possibility of a compromise exists between BellSouth witness Caldwell's proposed 25.43 percent and AT&T/MCI witness Donovan's recommended exclusion of miscellaneous contractor charges.

CONCLUSION:

For the reasons outlined above, staff recommends a compromise be adopted, setting the miscellaneous contractor charge at 12.71 percent, which is midway between BellSouth witness Caldwell's proposed 25.43 percent and AT&T/MCI witness Donovan's recommended disallowance of all miscellaneous contractor costs.

Aerial Structure

The parties dispute two issues in the aerial structure category: the appropriate distance between poles supporting telecommunications cables, and the correct distance between downguys and anchors. In addition, AT&T/MCI witness Pitkin recommends a reduction in the cost of aerial poles.

On the issue of distances between poles, the dispute is between the BSTLM's 120-foot recommendation and AT&T/MCI witness Donovan's 184-foot recommendation, which he derives by using simple division based on distances obtained from the FCC's Universal Service Fund Final Inputs Order. Witness Donovan also advocates a method of driving down a road for one mile, counting the number of poles observed, and dividing the number of poles into the number of linear feet in one mile to arrive at a pole-spacing interval.

Staff finds witness Donovan's observation method potentially fraught with more variables than consistencies, and has extreme difficulty rendering it compatible with any definition of TELRIC compliance. However, staff believes witness Donovan's effort to root his decision in substantive data previously relied on by the FCC to establish pole placement distances for Universal Service purposes more rational. As noted previously, witness Donovan takes the nine distances between poles used in each of the FCC's respective density zones, adds the distances to arrive at a total and divides the result by nine. (TR 794) Using this method, witness Donovan arrives at a figure of 184 feet between poles as a recommendation to the Commission. (TR 795) Witness Caldwell recommends the Commission rely on data provided by BellSouth subject matter experts, eschewing the values approved by the FCC. (TR 289)

The parties also dispute the appropriate distances between downguys and anchors. Witness Donovan contends the BSTLM assumes a default of 1,200 feet between downguys and anchors, which is contrary to the 500-foot distance BellSouth proposes in this proceeding. (TR 796) BellSouth contends the 1,200-foot distance in the BSTLM referred to by witness Donovan is a "filler," not a default. (TR 211)

Based on documentation filed by BellSouth in this proceeding it appears BellSouth arrived at its telecommunications pole costs by starting with a material cost of $239.31 per pole and applied its 25.43 percent miscellaneous contractor charge to arrive at its figure of $300.16. (EXH 24, Revision 3, Appendix B, Attachment 3) As noted previously, staff has recommended a reduction of the miscellaneous contractor charge to 12.71 percent.

CONCLUSION:

Staff recommends the Commission 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 recommendation outside the mainstream. Witness Caldwell's dismissal of the value of all other cost models without supporting evidence or testimony is difficult to validate. Equally difficult to validate is witness Donovan's observational method of setting pole distances by driving and counting. However, witness Donovan's reliance on independently verifiable inputs used in FCC proceedings lends credibility to his recommendation.

Conversely, witness Donovan's recommendation to 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. (TR 211) Witness Donovan offers nothing to dispute witness Caldwell and witness Stegeman's assertion. Therefore, staff recommends the Commission adopt BellSouth's 500-foot value for downguys and anchors.

Staff also recommends a reduction in the cost of poles from BellSouth's 300.16 to 269.73. The recommendation is not based on witness Pitkin's testimony, but on staff's previous recommendation to reduce the miscellaneous contractor charge from BellSouth's proposed 25.43 percent, to 12.71 percent.

Aerial Structure Contract Labor

Witness Donovan offers a twofold criticism of BellSouth's aerial structure contractor labor calculations. First, witness Donovan argues, BellSouth amasses all labor costs of pole placements but fails to divide the total contract labor costs of placement by the correct number of poles placed. Second, he contends, BellSouth includes the costs of "Carry-In poles" without taking credit for the number of poles placed. (TR 777) Witness Donovan alleges this results in a mismatch between the numerator and the denominator, pushing placement costs higher.

BellSouth witness Milner contends witness Donovan misinterprets the cost data and that BellSouth is including legitimate, forward-looking costs in its aerial structure contract labor category.

Staff notes that witness Donovan failed to demonstrate the illegitimacy of the labor costs included by BellSouth in the "Place Pole/Power" and "Place Carry-In Pole" categories. The lack of corroborative evidence to buttress his contention that the costs should be excluded, renders staff unable to objectively evaluate his claim.

CONCLUSION:

Given the absence of any evidence to the contrary, staff recommends the labor costs be included for the aerial structure categories in dispute. Staff notes, however, that BellSouth's data proposes a per pole labor input of $185.92, to which BellSouth applies its 25.43 percent miscellaneous contractor charge. This results in a per pole labor cost of $233.19. (EXH 24, Revision 3, Appendix B, Attachment 3, p.11) If the Commission accepts staff's recommendation to reduce the miscellaneous contractor charge to 12.71 percent, the per pole labor cost would be reduced to $209.55. Therefore, staff recommends BellSouth's per pole labor cost be set at $209.55.

Buried Excavation Contract Labor

The parties differ over BellSouth's method of managing its buried excavation contract labor costs and the resulting impact on excavation costs. (TR 240) BellSouth witness Caldwell testifies BellSouth negotiates a single price for all buried excavation contract labor regardless of terrain type. (TR 112)

AT&T/MCI witness Donovan argues BellSouth's procurement method results in higher costs in the BSTLM because the cost of more expensive methods of buried excavation - such as trenching - are factored into a bid price that includes lower cost forms of excavation, such as plowing cable. (TR 779) An exhibit filed by AT&T/MCI witness Pitkin lists inputs for each type of excavation by terrain type and density zone. (EXH 59, BFP-18, pp. 1-6) Witness Donovan provides support for only one type of excavation, however, which is for plowing cable in rural density zones. Relying on values obtained from the FCC's Universal Service Fund Synthesis

Model, witness Donovan cites a $0.77 per foot cost for plowing cable in rural density zones, which he rounds off to $0.80 per foot and recommends be adopted in this proceeding for all zones. (TR 780) BellSouth's proprietary per-foot cost for all buried excavation is significantly greater than AT&T/MCI witness Donovan's recommendation.

Neither BellSouth witnesses Caldwell nor Milner dispute the $0.80 per-foot figure proposed by AT&T/MCI witness Donovan for plowing cable.

CONCLUSION:

The evidence and testimony appear to yield three possible options on this issue. First, the Commission can accept BellSouth's proprietary single per-foot cost for all types of buried excavation contract labor; second, the Commission can accept the discrete values recommended by AT&T/MCI witness Pitkin in Exhibit 59; or third, the Commission can adopt the BellSouth values with the exception of plowing cable, for which witness Donovan offers supporting documentation. Staff recommends the third option.

While staff may concur 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 (EXH 57, BFP-7, pp.1-6) which were subsequently modified (EXH 59, BFP-18, pp.1-6) but supplied no documentation to support his exhibits. Asked during a deposition for the source for the inputs, witness Pitkin cited AT&T/MCI witness Donovan. (EXH 33, p.19) AT&T/MCI witness Donovan was asked during deposition 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." (EXH 36, p.11)

Given the interval between the depositions (January 18, 2002) and the hearing in this phase of the proceeding (March 11, 2002), coupled with staff's clear indication of interest in the source of inputs contrary to those proposed by BellSouth, staff believes witnesses Donovan and Pitkin had sufficient time to marshal documentation in support of their input values. The witnesses' failure to corroborate their position leaves staff little choice but to recommend adoption of BellSouth's inputs 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, staff observes that there is no record evidence to calculate such an adjustment.

Buried Splice Pits

AT&T/MCI witness Donovan contends BellSouth inappropriately spreads the costs of buried splice pits across all buried structure categories, creating inequitably inflated costs. The inequity results, witness Donovan testifies, because splice pits are not normally used in buried splicing operations. Instead of buried splice pits, witness Donovan testifies, BellSouth should utilize above-ground pedestals for its splicing. In addition, witness Donovan believes the costs for buried splice pits are also included in BellSouth's exempt material loading factor. (TR 783)

BellSouth witness Caldwell counters that BellSouth filings in this proceeding (EXH 24, Revision 3, Appendix B, Attachment 3) document the existence of contractor activity and incurred costs involving buried splice pits in Florida, including digging and shoring of the structures. (TR 280) Witness Caldwell testifies that if BellSouth were to reconfigure its cost study to exclude buried splice pits and use above ground pedestals, additional labor costs associated with the placing of pedestals would have to be included. (TR 281)

Staff has difficulty reconciling AT&T/MCI witness Donovan's position on this issue with the filings produced by BellSouth. In its supporting documentation, BellSouth identifies labor costs associated with buried splice pits, which witness Caldwell testifies were incurred in the year 2000. Absent a showing to the contrary by witness Donovan, staff believes BellSouth's representation of incurred labor costs must be accepted as accurate. In a confidential exhibit (EXH 66, JCD-8, p.4), witness Donovan contends these labor costs are already included under

BellSouth's splicing labor category, but does not identify where these labor costs are duplicated or how he was able to identify them.

In that same exhibit, witness Donovan suggests buried splice pits are "normally used for maintenance activities, not for new construction." (EXH 66, JCD-8, p.4) While staff respects witness Donovan's telecommunications engineering experience, staff sees no reason why a forward-looking network model should exclude provisions for future maintenance facilities, and finds witness Donovan's assertion opaque.

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 Exhibit 66, JCD-8, p.4, appear to be labor costs, not material costs.

CONCLUSION:

Staff believes AT&T/MCI witness Donovan's testimony on this issue cannot sustain the conclusion he advocates; therefore, no adjustment is recommended.

Bore Buried Cable and Push Pipe/Pull Cable

AT&T/MCI witness Donovan's criticism of BellSouth's per-foot values for bore buried cable stem from the inclusion of various forms of conduit in this category. When included as investment, the cost of conduit yields a higher cost for this activity than simply creating an underground pathway through which cable can be threaded to avoid surface disruptions. Witness Donovan advocates a reallocation of pipe costs, recommending they be included in the push pipe/pull cable activity category. (TR 783-784) He acknowledges this will result in higher costs for the push pipe/pull cable category and a reduction in the per-foot cost for bore buried cable. (EXH 66, JCD-8, p.4)

BellSouth witness Caldwell contends BellSouth contracts actually list various forms of pipe for inclusion in bids for this activity, and acknowledges this results in each foot of bore buried cable being assessed a percentage of the pipe costs. To accept witness Donovan's reallocation method would "ignore contractual facts" and "result in inaccuracies," according to witness Caldwell, although she does not elaborate on what inaccuracies would result. (TR 281)

CONCLUSION:

Staff believes 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 recommendation will more than quadruple the per-foot cost for push pipe/pull cable activity. (EXH 66, JCD-8, p.4)

Staff believes 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, staff does not believe competitive interests are best served by attributing costs to activities where costs are not warranted. Therefore, staff recommends excluding conduit costs from the bore buried cable category and include them in the push-pipe/pull-cable category.

Buried Cable

AT&T/MCI witness Donovan alleges BellSouth inflates the per-foot cost of placing buried cable by including investments that are not properly associated with cable placement. Among the investments witness Donovan believes should be excluded are several categories of conduit, placement of additional cables in the same trench and other "inappropriate costs." (TR 785) The dollar value of investment witness Donovan seeks to exclude is proprietary, however the elimination of the amount advocated by witness Donovan would result in a reduction of the per-foot cost of placing buried cable of $0.71.

BellSouth witness Milner contends the costs to which witness Donovan alludes are "legitimate costs" associated with burying cable. (TR 93)

CONCLUSION:

Testimony on this issue is not extensive and BellSouth witness Milner does not provide a detailed response to witness Donovan's specific recommendations as to which investments should be excluded for the buried cable placement category. Staff believes 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, staff recommends the Commission accept witness Donovan's recommendation and reduce the per-foot rate of placing buried cable by $0.71.

Underground Excavation Contract Labor

Witness Donovan is critical of BellSouth's methodology in arriving at a per-foot cost for seven of the eight categories of underground excavation (the eighth category, rocky trench excavation, has a zero percentage occurrence for Florida). BellSouth's per-foot costs are high, witness Donovan contends, because of the inclusion of the cost to bore underground cable, which he alleges is a rarely used, high-cost activity. (TR 786) 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. (TR 786)

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 of underground excavation in rural zones, 5.75 percent in suburban zones, and 12.5 percent in urban zones. (TR 787) Witness

Donovan recommends adjusting the BSTLM input percentages for bore buried cable based on underground route feet produced by the BSTLM, resulting in an overall average of 0.47%, but varying by density zone based on sheath feet differences. (TR 787)

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. (TR 787) 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." (TR 280) In its brief, BellSouth argues, "BellSouth's method of recovering these costs is straightforward and eliminates the need for quibbling about how often restoration costs are incurred in each excavation method." (BellSouth BR, at 15)

CONCLUSION:

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. Staff, therefore, recommends adopting witness Donovan's recommendation on this point, which is reflected in confidential Exhibit 66, JCD-2, p.11, and the appropriate inputs for Bore Cable in witness Pitkin's confidential Exhibit 59, BFP-18, p.3.

Conversely, staff cannot endorse witness Donovan's recommendation to reapportion restoration costs in the model. While staff agrees in principle that there is merit in witness Donovan's proposal, staff is hesitant to recommend its adoption because of outstanding questions regarding implementation. 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 staff in a position of accepting BellSouth's inputs or AT&T/MCI witness Donovan's incomplete analysis. Given the choice, staff recommends accepting BellSouth's inputs for all other categories.

Conduit Material

AT&T/MCI witness Donovan disputes BellSouth's proprietary per-foot cost for conduit material, arguing that the cost is inflated by BellSouth's application of a 40 percent loading factor and by the inclusion of contractor placing costs. Witness Donovan proposes a loading of 16 percent, broken down as 12 percent engineering and four percent other costs. (TR 788)

BellSouth witness Caldwell argues the 40 percent loading factor is justified based on cost data that supports a 28 percent loading for engineering, an eight percent loading for exempt material, and a four percent loading for other costs. (TR 296)

Engineering factors have been addressed elsewhere in this recommendation and staff sees no reason to reiterate them here. The parties do not dispute the appropriateness of a four percent loading for other costs; therefore, staff recommends the Commission leave the loading intact. This leaves a dispute over whether to include an eight percent loading for exempt material.

Witness Donovan recommends the exclusion of the exempt material loading, arguing "A pipe is a pipe, and such things as nuts and bolts do not apply." (TR 831) Witness Caldwell contends BellSouth has demonstrated that exempt material costs are incurred in the acquisition of conduit material, and BellSouth should be allowed to recover its costs.

In reviewing BellSouth's documentation in support of its application of an exempt material loading factor for conduit acquisition, staff notes these costs average 11 percent for the years 1998, 1999, and 2000. In that context, BellSouth's proposal to recover these costs at a rate of eight percent would seem reasonable. Staff is troubled, however, that BellSouth does not identify the exempt materials included in this category in the face of witness Donovan's assertion that no exempt materials are added to "plain white pipe."

CONCLUSION:

Staff believes three options present themselves to the Commission to resolve the dispute over appropriate loading for conduit. BellSouth witness Caldwell proposes a 40 percent loading while witness Donovan proposes 16 percent.

A third option, which staff recommends, would be to craft an alternative loading. Should the Commission chooses an alternative, staff would recommend an engineering factor of 7.64 percent, which is an average of the 8.21 percent engineering factor for copper cable and the 7.05 percent engineering factor suggested previously in this recommendation. Staff recommends an average of the two 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, therefore staff recommends its retention, bringing the alternative loading up to 11.64 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 staff 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. Staff believes that given the ambivalence surrounding the inclusion of an exempt material factor in this loading, a compromise is appropriate. Staff recommends, therefore, that BellSouth 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 11.64 percent results in a loading of 17.14 percent, which staff recommends as a third option.

Buried Restoration

Buried restoration costs in the BSTLM are aggregated and distributed to buried cable and boring cable accounts. This results in anomalies, according to AT&T/MCI witness Donovan, who believes this method allows BellSouth to allocate restoration costs to placement activities that require little or no restoration. (TR 781) Witness Donovan proposes BellSouth be allowed to recover restoration costs only from those placement activities that require restoration work.

BellSouth witness Caldwell notes witness Donovan does not dispute the validity of restoration activities, only the method by which BellSouth seeks to recover its costs. (TR 279) Witness Caldwell cautions that if the Commission adopts witness Donovan's proposal, costs will increase in some placement categories. (TR 280)

CONCLUSION:

As noted in staff's conclusion on the issue of underground excavation contract labor, staff believes the concept advocated by witness Donovan has validity, but that 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, staff believes the parties have provided limited opportunities for resolution on this issue. Staff recommends, therefore, that no changes be made on this issue.

Manholes

BellSouth's multiple revisions of its 120-day filing presented the parties with a moving target on the issue of manhole cost development. AT&T/MCI witness Donovan recommends greater efficiencies by using smaller structures than BellSouth deploys in the BSTLM as one means of reducing costs. He also advocates a single flat rate for manhole covers and the elimination of the 25.43 percent miscellaneous loading and the 40 percent material loading.

BellSouth's posture is that the Commission should approve its proposed per-cubic-foot rates and include all applicable loadings.

Staff has difficulty accepting BellSouth's proposal on this issue. First, AT&T/MCI witness Donovan presents uncontroverted testimony that underground vaults of less than 100 cubic feet are capable of handling the same number of cables as a proposed BellSouth vault of 504 cubic feet. Second, BellSouth's per-cubic-foot approach would result in a 224-cubic-foot vault costing $19,337, engineered, furnished and installed, while a 504-cubic-foot vault would cost $15,330.54. While BellSouth witness Caldwell explains this is a result of lower per-cubic-foot costs for larger structures, staff believes this explanation ignores the possibility of economies of scale, based on BellSouth's own filings indicating the smaller size vaults experience greater utilization.

Third, testimony indicates BellSouth's use of contractor data in this Commission's Universal Service docket (Docket No. 980696-TP) yielded a cost of $9,509.95 for a 504-cubic-foot manhole while contractor data in this proceeding produced a cost for the same structure of $15,330.54. (TR 369) Staff recognizes a rate-setting proceeding and a Universal Service proceeding may employ separate methodologies to arrive at different objectives; nonetheless, a 60 percent increase using the same contractor data would appear to warrant an explanation, which BellSouth witness Caldwell does not provide.

Fourth, BellSouth's use of a miscellaneous loading is troublesome for this activity. Simply put, staff cannot identify a logical nexus between many of the activities recovered in the miscellaneous factor and the placing of underground vaults. Because BellSouth has chosen not to identify the specific activities for which it seeks recovery, staff has difficulty recommending BellSouth's position.

Finally, staff has recommended adjustments in the 40 percent material loading under the issue of conduit investment, and believes the same principles apply here.

CONCLUSION:

Staff recommends the Commission adopt witness Donovan's proposal on manhole sizes and manhole collars and covers accordingly:

1. Use 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.

5. Eliminate manhole cover and collar costs that are based on the cubic footage of the manhole.

Staff further recommends adoption of BellSouth's per-cubic-foot manhole contract unit costs 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 conclusion of the conduit material issue, staff believes a number of options present themselves to the Commission to resolve the dispute over 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, which staff recommends, is to adopt the engineering factor of 7.64 percent (representing the average 8.21 percent for copper and 7.05 percent for fiber) from staff's earlier recommendation, 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 17.14 percent.

Structure Sharing

AT&T/MCI witness Donovan criticizes BellSouth's structure sharing input of 0.07 percent as "highly suspect," (TR 791) although he offers no evidence or substantive testimony to refute BellSouth's figure. Witness Donovan recommends the Commission order BellSouth to use forward-looking structure sharing values of 50 percent in rural density zones and 33 percent in urban and suburban density zones. (TR 792)

BellSouth witness Milner responds that witness Donovan's recommendations are "not realistic" (TR 94) and notes that even in a TELRIC "scorched node" scenario, cable television and power lines already exist so opportunities for structure sharing are not enhanced. (TR 95)

Staff believes this issue has been addressed by the Commission in previous proceedings, including Docket No. 980696-TP, Order No. PSC-99-0068-FOF-TP, in which the Commission found in its order at page 126:

> Upon review, we find that BellSouth, GTEFL's, and Sprint's sharing percentages represent the forward-

> looking sharing percentages available to any efficient provider in each LEC's respective territory.

Staff finds nothing in the record of this proceeding to overcome the Commission's aforementioned belief that structure sharing percentages reflect forward-looking values. Therefore, staff recommends no change to BellSouth's input.

Feeder/Distribution Facility Sharing

Neither party offers independently verifiable data to support their respective positions on what the appropriate percentage should be in the BSTLM for feeder/distribution facility sharing.

BellSouth witness Milner recommends 25 percent, but concedes, "there is no data available on this percentage." Witness Milner does contend BellSouth's recommended percentage is forward-looking and is based on network experience. (TR 96)

AT&T/MCI witness Donovan testifies the BSTLM should be populated with a value of 75 percent. (TR 863) Witness Donovan relies in part on an order from the Kansas commission (Order No. 99-GIMT-326-GIT, ¶50) which set a value of 40 percent for feeder/distribution facility sharing, based on an evaluation of 14 wire centers. (TR 864)

CONCLUSION:

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

Staff recommends the latter, and believes a figure of 50 percent would "split the difference" between the parties. Given the dearth of evidence in the record on this issue, it would appear that any figure the Commission chooses would be a valid exercise of discretion.

Copper and Fiber Cable Placement Costs

AT&T/MCI witness Donovan argues a reasonable time for a crew to travel to a worksite is 15 minutes and that two hours is a reasonable time for a crew to establish a cable placing operation. (TR 800)

BellSouth does not use discrete values for travel and set-up times for copper cable placements, electing instead to combine these chronological values into a single input per 100 feet of cable placed.

Witness Donovan testifies that BellSouth's method of incorporating travel and set-up times into a length of cable placed effectively means a crew must travel to a work site, set up, place 100 feet of cable, stop, travel to another site, set up, place 100 feet of cable and stop work. This denies efficiencies that could be achieved in the model by assuming continuous placement of hundreds of feet of cable, according to witness Donovan. (TR 800) Based on his industry experience, witness Donovan testifies he believes an underground placing crew should be able to place 3,000 feet of cable per day, a buried cable crew to place 8,000 feet per day, and an aerial crew to place 5,000 feet per day. These distances are appropriate whether copper or fiber cable is involved, according to witness Donovan.(TR 800)

BellSouth witness Milner maintains that BellSouth's inputs for cable placement are based on actual experience in Florida. (EXH 25, p.49) BellSouth's proprietary figures for sheath feet of cable placed do not vary based on type of placement (underground, buried or aerial).

Staff notes that witness Donovan's estimated travel and set-up times are based on the witness' experience, not on any verifiable data or industry standards that would provide independent confirmation. At the same time, BellSouth witness Milner offers only an assertion that BellSouth's method of calculation is based on experience.

While BellSouth's numbers are proprietary, a hypothetical example using the figures supplied in the BSTLM projects a two-person crew would place less than 800 feet of cable per day (EXH 66, JCD-5, p.1), compared with witness Donovan's minimum of 3,000 feet per day.

Witness Donovan raises the same argument for copper splicing rates as for cable placement with regard to travel and set-up times, with the only difference being BellSouth's rates are for splicing 100 copper pairs as opposed to laying 100 feet of cable. (TR 802)

Witness Donovan also proposes a copper cable splicing rate of 300 pairs per hour, for which he offers two sources for corroboration. The first is a letter from AMP Incorporated, a manufacturer of wire connectors (EXH 65, JCD-6, p.1) 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 Final Universal Service Fund 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. (TR 805) Witness Donovan proposes a fiber splicing rate of six minutes per fiber spliced. (EXH 66, JCD-8, p.10)

BellSouth witness Caldwell suggests the discussion of how many pairs can be spliced means little given that BellSouth technicians are rarely required to splice more than 100 cable pairs at a location, but offers no evidence to dispute witness Donovan's productivity recommendation. (TR 329)

The parties disagree over the inclusion of copper stub cable stub investment at each splice point, which BellSouth witness Stegeman testifies is present in the BSTLM. Witness Stegeman states this investment is included based on his understanding of modular splicing rules. (TR 203)

Witness Donovan contends the presence of copper stub cable investment in the BSTLM is a contradiction because a stub cable should only be needed when a splice must involve more than four directions, while the BSTLM Methodologies Manual states splices typically occur when a cable splits in two directions. (TR 806)

CONCLUSION:

Staff believes 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, staff believes 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 recommends 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 recommends 15 minutes of travel time and two hours of set-up time for cable placement and splicing operations. In a previous order in the proceeding, the Commission established travel times of 20 minutes. (Order No. PSC-01-1181-FOF-TP, p.358) Staff finds nothing in the record of this proceeding that would prompt the Commission to reconsider this interval, therefore staff recommends 20 minutes be adopted. Witness Donovan also recommends a set-up and closure time of two hours, which is unchallenged by BellSouth. Staff recommends, therefore, that the two-hour set-up and closure time advocated by witness Donovan be adopted for this proceeding.

The same issues that affect cable placement affect cable splicing; however, staff believes 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 (TR 327); therefore, staff recommends the Commission adopt a splicing rate of 300 pairs per hour. The parties appear to agree that a splicing rate of one fiber stand every six minutes is appropriate(EXH 66, JCD-8, p.10); thus, staff recommends the adoption of this value.

Staff also believes it is appropriate to adopt AT&T/MCI witness Donovan's inputs for daily placement of aerial cable (5,000 feet), underground cable (3,000 feet), and buried cable (8,000 feet) Staff notes one exception to the placement inputs advocated by witness Donovan: staff believes witness Donovan contradicts himself on the issue of how many technicians are needed to place aerial cable. Witness Donovan recommends a crew size of one for placing aerial cable (TR 800); however, he acknowledges in deposition, "Typically, in a [sic] RBOC, two technicians place aerial cable." (EXH 36, p.52) Staff believes, therefore, that an assumption of two technicians for placing aerial cable should be adopted

Staff finds witness Donovan persuasive in his arguments to eliminate copper cable stub investment and 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 recommendation. Staff, therefore, cannot recommend changes to the stub investment.

Miscellaneous Material Loading Factor

At issue is how the miscellaneous material loading factor should be applied - as a loading on material costs or as a dollar figure on the fully loaded labor rate - whether double-counting occurred in the BellSouth's accounting of the factor, the inclusion of certain labor costs, and the role of interest during construction.

Witness Donovan's advocacy in favor of including miscellaneous materials as a portion of the fully loaded labor rate suffers at a number of levels. First, he acknowledges the standard industry practice for this approach is to conduct tracking audits of technicians' use of materials. Such audits are not in the record of this proceeding and were not ordered by the Commission. Second, as indicated by witness Caldwell, exempt material varies by field reporting code, meaning different technicians who are paid the same wage use different materials. (TR 270-271) To apply a single dollar figure to each technician's labor rate would potentially distort the relationship between material used and the rate charged. Third, witness Donovan admits he did not conduct an analysis of the exempt material loading (TR 811), leading staff to conclude that his testimony on this issue is speculative.

Extensive cross-examination on the possibility of double counting of exempt material in the miscellaneous material loading during hearings was inconclusive, in staff's view. It also appears that AT&T/MCI witness Pitkin utilized a partial quotation from an affidavit filed by BellSouth witness Caldwell in a Georgia proceeding as a basis for his position on double-counting of NID and drop wire investment. (TR 579) Based on his selective quoting, witness Pitkin concludes this double-count occurred. However, the full text of the paragraph in question states that the investment in question was not double counted. (TR 271) Witness Pitkin's flawed premise is not redeemed by any other evidence in the record.

Witness Donovan's concerns regarding indirect salaries and benefits appear not to be based on evidence in the record and are effectively countered by BellSouth witness Caldwell. Similarly, witness Donovan's issues regarding interest during construction are unsubstantiated.

CONCLUSION:

Staff finds insufficient evidence in the record to support a position other than BellSouth's application of a miscellaneous material factor as a loading on material.

ISSUE 1(b): Should BellSouth's loop rates or rate structure previously approved in Order No. PSC-01-2051-FOF-TP be modified? If so, to what extent, if any, should the rates or rate structure be modified?

RECOMMENDATION: No. The loop rates and rate structure previously approved in Order No. PSC-01-2051-FOF-TP should remain in place. BellSouth's 120-day filing, if left unaltered, results in increased rates for some unbundled network elements. The discrete input changes recommended by ALEC witnesses that staff believes are supported by credible evidence and testimony, when implemented, result in both increases and decreases in rates that cannot be completely explained based on the record of this proceeding. **(Bloom)**

POSITION OF THE PARTIES

BELLSOUTH: No. UNE rates must be cost-based. Factors other than BellSouth's costs, such as whether ALECs can make a profit using UNEs are irrelevant. A bottoms-up study does not more accurately reflect BellSouth costs.

AT&T/MCI: Yes. The Commission should require BellSouth to correct the BSTLM, and reject BellSouth's loading factors, inputs, and installation & engineering factors for DLCs, and to use those proposed by AT&T/WorldCom. BellSouth should be required to set rates as proposed AT&T/WorldCom [sic] in Exhibit 58, BFP-19, and use the single most efficient network design.

FDN: BellSouth's loop rates should be reduced to permit meaningful competition in business and residential markets throughout Florida. Further, a new rate structure should be devised where lower UNE rates are available in more than just a minimal number of BellSouth Zone 1 wire centers. Also agree with AT&T, MCI and Z-Tel.

SPRINT: The Commission should require BellSouth to use the "bottoms-up" approach to cost-specific UNEs. Otherwise, BellSouth's cost study is not compliant with the requirements of the 1996 Act or the FCC's implementation rules.

Z-TEL: BellSouth's statewide average loop rate fails the "sanity test" - a test of whether UNE rates between states are consistent with relative cost differences between states as measured by the HCPM model. The "test" indicates that BellSouth's UNE rates are overstated. The testimony of the ALEC witnesses proves this assertion.

STAFF ANALYSIS:

PARTIES' ARGUMENTS:

On the question posed for this issue, Z-Tel witness Ford, AT&T/MCI witness Darnell and AT&T/MCI witness Gillan apply separate methods to assert that the UNE rates set by the Commission 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. (TR 385) 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. (TR 386)

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. (TR 392) Witness Ford concludes that UNE rates in Florida are 23 percent too high, thus failing his sanity test. (TR 393)

During cross-examination, 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 and he acknowledged that the FCC has indicated that a rate could fail the benchmark test and remain TELRIC-compliant. (TR 412)

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. Neither condition exists, BellSouth argues in its brief. (BellSouth, BR at 22)

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." (TR 533)

Despite Florida's lower costs, witness Darnell testifies, 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 testifies, "Population density is the primary driver of loop cost." (TR 534)

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. (TR 535) 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." (TR 535)

During cross-examination, witness Darnell acknowledges having raised the multiple-scenario argument in the two previous phases of this proceeding and that on both occasions the Commission did not accept witness Darnell's argument. (TR 556) Witness Darnell also acknowledges during cross-examination that a state with the lowest embedded costs does not necessarily mean that state will have the lowest UNE rates. (TR 562) Witness Darnell admits no regulatory body uses embedded costs as a basis for setting or lowering rates. (TR 563)

AT&T/MCI witness Gillan testifies he conducted two analyses to demonstrate that BellSouth's proposed UNE rates are not TELRIC compliant. In the first analysis, witness Gillan testifies, he applied BellSouth's TELRIC costs for switched lines and compared those costs to BellSouth's embedded expenses. (TR 904) 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. (TR 905) 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." (TR 906) This indicates the costs submitted in this proceeding are unreliable, according to witness Gillan. (TR 905)

In his second analysis, witness Gillan testifies, 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. (TR 906) 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. (TR 907)

Witness Gillan concludes, "the UNE rates that BellSouth has proposed at this high end of the range are simply not plausible." (TR 907)

In its brief, BellSouth argues, "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." (BellSouth BR at 23)

ANALYSIS: 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 various means of their own device 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; witness Darnell's advocacy of a single network design was addressed by the Commission 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. (EXH 2, Item 10(a), p.13) In addition, witness Darnell acknowledges TELRIC-based costs differ substantially from the ARMIS data. (TR 533)

Witness Ford's recommendation that this Commission 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 No. 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 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 purchased UNEs as are other ALECs, and that BellSouth's UNE costs would allow the company to support only two-thirds of its existing network. (TR 900-902) None of the arguments, however, truly address BellSouth's TELRIC costs, which are the subject of this proceeding.

<u>CONCLUSION:</u>

Witness Ford's recommended 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 does not demonstrate errors in the application of TELRIC methodology by the Commission; therefore, staff believes 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 previous ruled on by the Commission.

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. (BellSouth BR at 18-19)

Staff concurs with the arguments BellSouth raises in its brief and finds 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 the Commission for this proceeding. Staff notes the Commission 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. Staff observes that while account-specific engineering factors bring the Commission closer to the goal of a bottoms-up analysis, neither party differentiated engineering factors by density zones. Staff is thus concerned that the account-specific engineering factors still retain sufficient linear qualities to distort costs between rural and urban areas. Staff has similar concerns 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.

CONCLUSION: Staff has reservations concerning the "bottoms-up" inputs provided by the parties in this proceeding, which, combined with the decision by witnesses Darnell, Ford and Gillan not to address specific TELRIC matters in Issue 1(b), leaves staff unpersuaded that adjustments to the loop rates or loop rate structure in Order No. PSC-01-2051-FOF-TP should be modified; therefore, staff recommends no modifications be made.

ISSUE 2(a): Are the ADUF and ODUF cost studies submitted in BellSouth's 120-day compliance filing appropriate?

ISSUE 2(b): Should BellSouth's ADUF and ODUF rates or rate structure previously approved in Order No. PSC-01-2051-FOF-TP be modified? If so, to what extent, if any, should the rates or rate structure be modified?

RECOMMENDATION: 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. Staff recommends 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. The existing DUF rates should be modified to reflect these adjustments. The resulting rates are shown in Table 2-4. **(Marsh)**

POSITION OF THE PARTIES

BELLSOUTH: The Commission should adopt the cost-based rates for Daily Usage Files ("DUFs) [sic] set forth in BellSouth's revised DUF study. These costs are incremental to providing ALECs with call measurement detail needed to bill their end-users, and they are not reflected in BellSouth's shared and common cost factors.

AT&T/MCI:

Issue 2(a): No. BellSouth is adequately compensated for its cost to maintain daily usage file systems by the common cost factor. The creation of a separate DUF charge allows BellSouth to double recover costs and creates an additional barrier to entry.

Issue 2(b): Yes. Because ADUF and ODUF costs are already being recovered through the common cost factor, the ADUF and ODUF rates previously approved by the Commission should be modified and set at zero.

FDN: Agree with AT&T and MCI.

SPRINT: No position.

Z-TEL: No separate ADUF or ODUF rate is justified. Even if there is a basis for deriving a rate, BellSouth has overstated the rate by understating the projection of ALEC messages. BellSouth has not met its burden of supporting its proposed ADUF and UDUF [sic] rates.

STAFF ANALYSIS: 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. (TR 251) 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. (Caldwell TR 251)

As noted in the Case Background, this issue did not arise from Commission 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. (TR 250)

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. (TR 252) 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. (TR 252) Only EODUF demand decreased. (TR 252)

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." (TR 251)

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.

Zero Rate

AT&T/MCI witness Darnell asserts that BellSouth should not have a separate charge for DUF information. (TR 541-542) 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." (TR 541) 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. (TR 542) 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." (Darnell TR 542)

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. (EXH 2, p. 21)

BellSouth asserts that it does not have bill and keep arrangements with any carriers for DUF services. (EXH 1, p. 90) Further, BellSouth states that it does not provide DUF services to ITCs. (EXH 1, p. 90)

Witness Ruscilli testifies that BellSouth provides usage records for Meet-Point Billing (MPB) to carriers that have their own switch for the provision of intercarrier billing. (TR 43) 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. (TR 43-44)

Witness Ruscilli continues that BellSouth provides DUF information to ALECs that do not have their own switches. (TR 44) 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." (TR 44) He points out that ALECs have no information that BellSouth needs. (TR 45)

Analysis:

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.

Staff believes 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 unrebutted in the record. Staff believes it is reasonable for BellSouth to maintain a separate charge for provision of DUF services.

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." (TR 540) 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. (TR 541)

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. (TR 541)

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. (TR 542)

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, the Commission should reject DUF charges because [of] the potential for costing mischief that they create." (TR 541)

BellSouth witness Caldwell argues that the DUF charges in the cost study are not the same as those used in the development of the common cost factor. (TR 265) She contends that the computer resources, programming effort and support labor reflected in BellSouth's DUF costs are directly attributable to the DUF services. (TR 265) She explains that BellSouth developed unique programs to provide the ALECs with billing data in a format that meets the ALECs' needs. (TR 265-266)

She contends that BellSouth removed costs that are directly assigned to various services from the costs used to develop shared and common cost factors. (TR 266) She explains that file EXPPRJ00.XLS outlines those adjustments. (TR 266)

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. (TR 266) She states that his suggestion of costing mischief on the part of BellSouth is "wholly unfounded." (TR 267)

Analysis:

Witness Darnell explained that he "identified the investment amounts that are being directly assigned to [DUF] rate elements." (EXH 30, p. 9) He then subtracted those amounts from the general purpose computers account. (EXH 30, pp. 9-10) However, upon further questioning by staff, 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.

Staff has great difficulty in discerning 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 red in discovery responses detailing his procedures, it became apparent that much of it was irrelevant. (EXH 30, AT&T/MCI response to Staff's First Request for Production of Documents No. 1, Cost Study Documentation) 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." (EXH 30, cost study, p. 15) His response was similar for Account 2220, operator systems and a number of other accounts. (EXH 30, cost study, pp. 15-18) 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." (EXH 30, cost study, p. 18) Again, this has nothing to do with the issue of double-counting. Regarding account 2124, General Purpose Computers, which staff believed 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." (EXH 30, cost study, p. 21) In the end, staff was unable to elicit any response that showed the double-counting of costs perceived by witness Darnell.

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'." (EXH 27, DDC-2, Caldwell Late-Filed Exhibit 10, p. 9) 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. (EXH 27, DDC-2, Caldwell Late-filed exhibit 10, p. 9) Staff has verified that the amount in the stated column exceeds by a substantial sum the amount that witness Darnell claims to be double-counted. Accordingly, staff believes that no such double-counting exists.

Staff believes that 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. As explained below, while those costs do not appear to be double-counted, the same numbers noted by witness Darnell exhibit other discrepancies.

Staff notes dramatic increases 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. (EXH 1, p. 8) The 1999 Financial Accounting Standards Board (FASB) Statement of Position (SOP) 98-1 requires that such software development costs be capitalized. (EXH 1, p. 8) Additionally, BellSouth claims that the contractor labor rate reflects the 2002-2004 period, in which the labor rate is higher than that previously used. (EXH 1, p. 8) Staff interprets this to mean that the changes in accounting period and methods resulted in higher costs in the model.

Staff observes 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. (EXH 27, p. 63) She explains that "as we've learned more about it and worked more with it going forward, we felt it would take more time." (EXH 27, p. 63) She also agreed that the contractor hourly labor rate increased by approximately 50 percent. (EXH 27, p. 66) Staff notes that BellSouth never mentioned these increases when it filed its DUF model revisions in November 2001, citing only increases in usage, which reduce rates. (TR 252)

Not only does staff have concerns about the large increases in costs in the model values that took place in the November 2001 model revision, but staff wonders why such amounts are included in the model at all. The costs staff has 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. (EXH 27, p. 72)

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. (EXH 24, Confidential Cost Study documentation filed August 11, 2000, exhibit D, p. 139) Further, staff believes that the rate comparison in table 2-4 at the end of the issue shows that BellSouth has been over-recovering its DUF costs. Staff believes 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. Staff does not believe BellSouth has justified the inclusion of software development costs in its model for DUF services. Accordingly, staff has adjusted the model to remove this portion of the costs. While the amount is confidential, its impact is reflected in the rate comparison.

Projected Demand

Z-Tel raised an issue in its brief regarding the DUF usage projections BellSouth used to calculate the DUF rates. (Z-Tel BR at 7) 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." (BR at 7)

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. (TR 356-57)." (BR at 7)

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. (TR 351-52)." (BR at 7) 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. (TR 358-359; BR at 7-8) Lacking such evidence, Z-Tel asks the Commission to take notice of ARMIS data that is not in the record. (BR at 8) Z-Tel argues that the data would show that BellSouth has seriously understated its projected DUF usage. (BR at 8)

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. (TR 367) However, she states that she disagrees with Z-Tel that a high DUF rate would make the overall demand for DUF decline. (TR 358) She argues that the numbers in question are very small, and are part of an overall offering. (TR 358) Witness Caldwell opines that the overall offering is the driver, not the DUF rate alone. (TR 358)

In discussing ALEC penetration rates with Z-Tel's attorney, witness Caldwell engaged in the following exchange.

> Q 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?

A 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. (TR 351-352)

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

Analysis:

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. Staff's 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. (TR 367) She emphatically states that she disagrees with Z-Tel that a high DUF rate would necessarily make the overall demand go down. (TR 358) 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. (TR 358) Staff notes that there is no evidence to the contrary in the record.

Staff believes 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. Staff agrees 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, staff notes 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. (TR 355) Beyond a few pages of cross-examination, staff has been unable to find 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, staff questions what Z-Tel would gain. In staff's 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. Staff believes that 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." (EXH 1, p. 10; EXH 3, p. 24) There is no record evidence as to how many ALECs choose to avail themselves of this service.

Nevertheless, staff notes 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." (EXH 1, p. 13) 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. Staff sees no reason why the monthly increase in usage should drop to one-fourth of that experienced for January through April 2001. Accordingly, staff has adjusted 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

Source: EXH 24, ODUF.XLS, WP1, lines 26 through 37.

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. (EXH 24) 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 by staff.

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.

Staff notes that 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, staff is concerned that use of the higher figure could over-project the usage. Accordingly, staff believes 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. Staff also notes that the use of a dollar amount produces a declining percentage in the increase in projected usage. Staff believes this is also 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. Staff has not adjusted those figures. (EXH 24, EODUF.XLS, WP1, line 38)

Conclusion:

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. 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. Staff recommends that the existing DUF rates should be modified to reflect these adjustments. The resulting rates are shown in Table 2-4 on the following page.

Table 2-4

Rate Comparison

		BellSouth Approved Rates	BST DDC-3 01/28/02	BFP-19 2/11/02	Staff proposed
L.0	**ADUF**				
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
M.1	**Enhanced Optional Daily Usage File**				
M.1.1	EODUF message processing - per message	$0.229109	$0.235115	$0.235150	$0.080698
M.2	**Optional Daily Usage File**				
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

ISSUE 3(a): Is the UCL-ND loop cost study submitted in BellSouth's 120-day filing compliant with Order No. PSC-01-1181-FOF-TP?

ISSUE 3(b): What modifications, if any, are appropriate and what should the rates be?

RECOMMENDATION: The UCL-ND cost study submitted by BellSouth appears to comply with the Commission's directives in Order No. PSC-01-1181-FOF-TP. If the Commission concludes in Issue 1 (b) that BellSouth's loop rates and rate structure should not be modified, the rates for the various UCL-ND elements should be those found in Table 3-1, which use loading factors. If the Commission concludes in Issue 1(b) that changes in BellSouth's loop rates and rate structure should be made based on the bottoms-up study, the rates for the various UCL-ND elements are those shown in Appendix A. **(King)**

POSITION OF THE PARTIES

BELLSOUTH:

Issue 3(a): Yes. The UCL-ND fulfills the Commission's directive that BellSouth determine xDSL loop nonrecurring costs that exclude Design Layout Record, test point, and order coordination. The UCL-ND also satisfies the Commission's requirement that BellSouth provision a nondesigned xDSL-capable loop and guarantee not to convert it to another technology.

Issue 3(b): For the reasons set forth above in response to Issue 1(b), the Commission should not use the bottoms-up cost study filed in this docket to set rates for the UCL-ND. The Commission should establish rates for the UCL-ND pursuant to the cost study for this element filed in Docket No. 960786-TL, which used in-plant loading factors to calculate outside plant EF&I costs.

AT&T/MCI:

Issue 3(a): No position.
Issue 3(b): See position for Issue 1(b).

FDN:

Issue 3(a): Agree with AT&T and MCI.
Issue 3(b): Agree with AT&T and MCI.

SPRINT:
Issue 3(a): No position.
Issue 3(b): No position.

Z-TEL:

Issue 3(a): No position.
Issue 3(b): See position for Issue 1(b).

STAFF ANALYSIS: One of the requirements of Florida Public Service Commission (FPSC) 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, the Commission's 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. (PSC-01-1181-FOF-TP, p. 73)

There are two issues which the Commission must address regarding BellSouth's 120-day Unbundled Cooper Loop - Non-Designed (UCL-ND) filing: First, does the UCL-ND filing comply with the directives noted in the Commission's order, and second, what modifications to BellSouth's filing, if any, are appropriate and what should the rates be?

COMPLIANCE WITH ORDER 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 the Commission's requirement that BellSouth provision SL-1 loops and guarantee they will not be rolled to another facility or converted to another technology. (TR 253)

Witness Caldwell notes that the UCL-ND differs from other unbundled cooper 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. (TR 254) 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.[1] (Caldwell TR 254; EXH 27, p. 119) The costs for the UCL-ND were developed assuming loops only out to 24,000 feet from the central office. (EXH 27, p. 119)

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. (EXH 27, pp. 127-128)

As stated in Order No. PSC-01-1181-FOF-TP, one purpose of the modified cost studies is to provide the Commission with sufficient information to set rates for a menu of separate provisioning options. These options are described below.

<u>Test Points</u>

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. (EXH 27, p. 121) There is

[1]Witness Caldwell notes that in some cases, the length may be longer based on gauge. (Caldwell TR 254) However, the average loop length for the UCL-ND generated by the BSTLM is 13,528 feet. (TR 255)

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." (EXH 27, p. 123) 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. (Caldwell TR 256) 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). (TR 256)

Engineering Information

A design layout record (DLR) is not provided with the UCL-ND.[2] 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. (EXH 1, p. 6)

Order Coordination

Order coordination is precisely what the name indicates. (EXH 27, p. 121) Staff notes that there was limited testimony addressing this issue. No party other than BellSouth took a position on Issue 3(a). In its interrogatories, staff requested that AT&T/MCI identify all testimony it filed which specifically addresses issues 3(a) and 3(b). The response provided stated "The input revisions recommended by John Donovan in his rebuttal testimony of December 10, 2001 apply equally to BellSouth's UCL-ND BSTLM." (EXH 2, p. 7)

Staff believes that BellSouth has complied with the Commission's directives that it develop xDSL loop nonrecurring

[2] A DLR provides the information about the physical make-up of a loop beginning at the central office to the customer's premises. (EXH 27, p. 122)

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 the Commission's order, BellSouth has implemented a unique identifier for its UCL-ND loops which will guarantee they will not be converted to an alternative technology.

MODIFICATIONS AND RATES

As was argued by BellSouth in Issue 1, it believes that its studies comply with the Commission's order. (Caldwell TR 233-238) However, witness Caldwell does not believe that the "bottoms-up" approach develops a more representative result than does the use of factors. (Caldwell TR 256) 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 the Commission-ordered adjustments except for the reinstatement of inflation. The BellSouth witness believes that the Commission should establish rates for the UCL-ND related elements in Docket No. 960786-TP once inflation is considered. (Caldwell TR 256-257)

Staff notes that 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.[3] 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 CLECs regionwide. (EXH 27, pp. 125-126) 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). (EXH 3, pp. 3-4 and 20) The study included inflation factors as called for in the UNE Reconsideration Order. (PSC-01-2051-FOF-TP, p. 7) The resulting rates from that study are shown in Table 3-1.

With regard to modifications to establish UCL-ND rates, AT&T/MCI state in their response to a staff interrogatory that the input revisions recommended by witness Donovan in issue 1 apply

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[3]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.

equally to BellSouth's UCL-ND BSTLM scenario.[4] (EXH 2, p. 7) 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." (EXH 2, p.7)

As discussed in Issue 1, staff believes that the "bottoms-up" approach, as presented in this case, does not develop a more reliable, representative result than does the use of loading factors. As such, staff recommends that the rates for the UCL-ND loop elements be those provided by BellSouth in Exhibit 3, page 4. The rates in this exhibit were developed using the non-SC version of the BSTLM (i.e., using loading factors), include inflation factors as called for in the UNE Reconsideration Order, and all adjustments ordered in the prior phase of this docket. 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. Staff notes 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 the Commission in Order No. PSC-01-2015-FOF-TP. Table 3-1 provides a summary of staff's recommended rates for all the UCL-ND elements using loading factors.

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[4]AT&T/MCI did not propose any non-recurring rates in this proceeding. (EXH 33, p. 20)

Table 3-1
Staff's Proposed UCL-ND Element Rates
Based on the Use of Loading Factors

Element Number & Description	Recurring	Non-Recurring		Disconnect	
		First	Add'l	First	Add'l
A.1.8 - Engineering Information		$13.49			
A.13.12 - UCL-ND					
Zone 1	$15.14	$44.98	$20.90	$24.88	$6.45
Zone 2	$18.49	$44.98	$20.90	$24.88	$6.45
Zone 3	$20.80	$44.98	$20.90	$24.88	$6.45
A.19.1-Loop Test Beyond Voice Grade-Basic per 1/2 hour		$48.65	$23.95		
A.19.2-Loop Test Beyond Voice Grade-Overtime per 1/2 hour		$63.48	$31.35		
A.19.3-Loop Test Beyond Voice Grade-Premium per 1/2 hour		$78.30	$38.74		
N.1.5-Order Coordination		$9.00			
N.1.6-Order Coordination for Specific Conversion Time		$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.

CONCLUSION

Staff believes that BellSouth has complied with the Commission's directives in Order No. PSC-01-1181-FOF-TP. 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 ordered by this Commission, BellSouth has developed a method to guarantee that UCL-ND loops will not be converted to an alternative technology.

Staff recommends that the rates for the UCL-ND loop elements be those recurring, non-recurring, and disconnect rates proposed by BellSouth in Exhibit 3, page 4. The recurring rates in this exhibit were developed using the non-SC version of the BSTLM (i.e., using loading factors), include inflation factors as called for in the UNE Reconsideration Order, and all adjustments ordered in the prior phase of this docket. The rates for Engineering Information and Test Points should be those proposed by BellSouth in its cost study filing in this docket. The rates for Order Coordination should be those rates approved by the Commission in Order No. PSC-01-2015-FOF-TP. However, if the Commission concludes in Issue 1(b) that changes in BellSouth's loop rates and rate structure should be made based on the bottoms-up study, the rates for the various UCL-ND elements are those shown in Appendix A.

ISSUE 4(a): What revisions, if any, should be made to NIDs in both the BSTLM and the stand-alone NID cost study?

ISSUE 4(b): To what extent, if any, should the rates or rate structure be modified?

RECOMMENDATION: Staff recommends that the stand-alone NID rates be adjusted to include exempt materials. The appropriate rates for the stand-alone NID are those found in Table 4-1. No adjustment should be made to the cost considered in the BSTLM for the NID provisioned with the loop. The appropriate rates for the NID provisioned with the loop are those rates ordered by the Commission in Order No. PSC-01-2051-FOF-TP. **(King)**

POSITION OF THE PARTIES

BELLSOUTH: No adjustments are necessary for the NID costs considered in the BSTLM. The stand-alone NID cost study, however, should be revised to include exempt material, and the Commission should adopt the revised rates for stand-alone NIDs set forth in BellSouth's revised NID study.

AT&T/MCI: Because the BSTLM explicitly models the costs of NIDs and drops, BellSouth should be required to exclude those items from the exempt material loading factor. Otherwise, BellSouth double counts these investments.

FDN: Agree with AT&T and MCI

SPRINT: No position.

Z-TEL: For its statement of position on this issue, Z-Tel hereby adopts the respective positions taken by AT&T and WorldCom.

STAFF ANALYSIS: Because of inconsistencies in BellSouth's application of exempt material costs for its NIDs, the FPSC 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.[5] Specifically, the Commission stated:

[5] A NID is the device at a residential or business customer's premises, within which the drop wire terminates. (PSC-01-1181-FOF-TP, p. 235)

> 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 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. (PSC-01-1181-FOF-TP, pp. 237-238)

Given these inconsistencies the Commission 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, the FPSC 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. (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. (TR 257)

In her testimony witness Caldwell explains how the NID provisioned with the loop and the stand-alone NID differ. (TR 257-258) 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. (TR 257) 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. (Caldwell TR 257-258)

Unlike the NID provisioned with the loop, the stand-alone NID is a distinct UNE offering. (TR 258) 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. (Caldwell TR 258)

As part of its arguments as to why the BellSouth cost models fail to meet the Commission's 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." (Pitkin TR 577) 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. (TR 579) 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. (Pitkin TR 579)

BellSouth witness Caldwell argues that witness Pitkin's assertions regarding exempt material loading factors are incorrect. (TR 271) 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." (TR 271) 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) (TR 271)

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. (TR 271-272)

Whether or not the cost models filed by BellSouth in this phase of the proceeding comply with the Commission's order is addressed in Issue 1 of this recommendation, as well as the use of certain loading factors. Staff believes that Issue 4 is 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, staff believes that Issues 4(a) and 4(b) can be resolved independently of any other issues in this recommendation.

Conclusion

As specifically addressed in Order No. PSC-01-1181-FOF-TP, the FPSC 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. Staff believes BellSouth has satisfactorily explained why there were inconsistencies and how these inconsistencies have been corrected. Therefore, staff recommends that the stand-alone NID rates be adjusted to include exempt materials; the appropriate rates for the stand-alone NID are those found in Table 4-1. No adjustment should 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 ordered by the Commission in Order No. PSC-01-2051-FOF-TP.

Table 4-1
Staff's Proposed 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)

ISSUE 5(a): What is a "hybrid copper/fiber xDSL-capable loop" offering, and is it technically feasible for BellSouth to provide it?

ISSUE 5(b): Is BellSouth's cost study contained in the 120-day compliance filing for the "hybrid copper/fiber xDSL-capable loop" offering appropriate?

ISSUE 5(c): What should the rate structure and rates be?

RECOMMENDATION:

Issue 5(a): 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 Digital Subscriber Line Access Multiplexer (DSLAM) located at the RT, and feeder facilities between the RT and the central office. **(Lee, Dowds)**

Issue 5(b): Yes. However, staff recommends that BellSouth not be required to unbundle either DSLAMs located in remote terminals, or packet switches located in its central offices. **(Lee)**

Issue 5(c): If staff's recommendation in Issue 5(b) is approved, this issue becomes moot, as rates need not be established for a hybrid copper/fiber xDSL-capable loop. If staff's recommendation in Issue 5(b) is denied in part and the Commission orders BellSouth to unbundle its DSLAMs located in remote terminals, and BellSouth's "bottoms-up" loop studies are used to set rates, then BellSouth's "bottoms up" cost study should be the basis for the rates and rate design, subject to any adjustments to the loop studies approved in Issue 1(a). If staff's recommendation in Issue 5(b) is denied and the Commission orders BellSouth to unbundle its DSLAMs located in remote terminals and packet switches located in central offices, and BellSouth's "bottoms-up" loop studies are used to set rates, then BellSouth should be required to refile its "bottoms-up" cost studies with the following modifications: (1) determine the cost of sharing subloop feeder from the RT to the central office, instead of requiring an ALEC to obtain a dedicated DS1 subloop feeder; (2) determine the cost of providing access to a DSLAM at a port-at-a-time; and (3) determine the cost of using a BellSouth packet switch at the central office to break out an ALEC's packets and deliver them to the ALEC's collocation facility.

If staff's recommendation in Issue 5(b) is denied in part and the Commission orders BellSouth to unbundled its DSLAMs located in remote terminals, and BellSouth's "bottoms-up" loop studies are not used to set rates, then: (1) the subloop distribution rate should be that rate contained in Order No. PSC-01-1181-FOF-TP; and (2) BellSouth should refile its DSLAM cost study and its cost study for a fiber-only DS1 subloop feeder to comport with the "tops down" approach accepted in Order No. PSC-01-1181-FOF-TP. If staff's recommendation in Issue 5(b) is denied, and the Commission orders BellSouth to unbundle its DSLAMs located in remote terminals and packet switches located in central offices, and BellSouth's "bottoms-up" loop studies are not used to set rates, then BellSouth should be required to refile its cost studies based on the "tops down" approach accepted in Order No. PSC-01-1181-FOF-TP with the following modifications: (1) determine the cost of sharing subloop feeder from the RT to the central office, instead of requiring an ALEC to obtain a dedicated DS1 subloop feeder; (2) determine the cost of providing access to a DSLAM a port-at-a-time; and (3) determine the cost of using a BellSouth packet switch at the central office to break out an ALEC's packets and deliver them to the ALEC's collocation facility. **(Lee, Dowds)**

POSITION OF THE PARTIES

BELLSOUTH:

Issue 5(a): BellSouth designed a technically feasible hybrid copper/fiber loop that would allow an ALEC to provide DSL services to customers served via a BellSouth remote terminal ("RT"). This loop incorporates the Digital Subscriber Line Access Multiplexer ("DSLAM") functionality at the RT. This loop is not a UNE.

Issue 5(b): BellSouth calculated the cost of the "hybrid copper/fiber xDSL capable loop" consistent with the Commission's Final UNE Order.

Issue 5(c): The Commission should not order BellSouth to provide the hybrid loop as a UNE. If it does, however, the Commission should adopt rates equal to the results of BellSouth's cost study.

AT&T/MCI:

Issue 5(a): BellSouth admits that it is technically feasible for BellSouth to provide its "hybrid copper/fiber xDSL-capable loop" offering.

Issue 5(b): BellSouth's offering is inappropriate and should be rejected. This Commission should establish a generic proceeding to investigate proper rates and rate structure for UNE facilities needed by ALECs to provide voice and advanced services to customers served by BellSouth's remote terminals.

Issue 5(c): BellSouth's hybrid copper/fiber xDSL-capable loop offering is not structured or cost appropriately. The Commission should not rule at this time; instead, the Commission should consider this issue in a generic proceeding.

FDN:

Issue 5(a): The loop offering BellSouth should be required to provide is an unbundled xDSL capable loop, whether copper or fiber fed, that includes packet switching. It is technically feasible for BellSouth to offer such loops.

Issue 5(b): BellSouth's filing must be rejected. It is improper and impractical to require ALECs to purchase their own dedicated DSLAMs and DS1 feeders at BellSouth remotes, as BellSouth's filing proposes.

Issue 5(c): BellSouth should be required to resubmit its cost study consistent with a shared-facilities, TELRIC-based methodology, rather than a dedicated facilities/network segment basis.

SPRINT: No position.

Z-TEL: No position.

STAFF ANALYSIS: By Order No. PSC-01-1181-FOF-TP (Order 1181), issued May 25, 2001, the Commission recognized 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 the Commission's 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, the Commission recognized that the reference to "hybrid copper/fiber xDSL-capable loops" in Order 1181 could be considered somewhat ambiguous. For this reason, the Commission clarified in the Reconsideration Order ". . . that hybrid copper/fiber xDSL-capable loops are those deployed over fiber/DLC loops." (Reconsideration Order at p. 11)

There are four issues which the Commission must address regarding BellSouth's 120-day hybrid copper/fiber xDSL-capable loop filing: first, the specific components of a hybrid copper/fiber xDSL-capable loop; second, the technical feasibility for BellSouth to provide such a loop; third, the appropriateness of BellSouth's hybrid copper/fiber xDSL-capable loop cost study; and fourth, the rate structure and rates of such a loop offering.

Hybrid copper/fiber xDSL-capable loop components

BellSouth Telecommunications, Inc. (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 testifies 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. (TR 99) 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. (Caldwell TR 259; Milner TR 81; EXH 1, p. 38) 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). (Caldwell TR 259; Milner TR 77-78; EXH 47, DDC-2) 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. (Milner TR 81; EXH 25, pp. 18-19) 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. (Milner TR 81; EXH 1, pp. 38, 60)

Witness Milner testifies 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. (Milner TR 80-81) BellSouth witnesses Milner and Williams assert that the Commission only asked BellSouth to submit a cost study for a hybrid copper/fiber xDSL-capable loop. (Milner TR 80; Williams TR 444) 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. (Williams TR 444) 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. (TR 78)

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. (Milner TR 141) If the facility were not dedicated, a packet switch would be required to disaggregate the packet stream to various service providers. (Milner TR 141) 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. (Milner TR 142; EXH 1, p. 38) When questioned regarding the costs of a dedicated circuit and a shared circuit, BellSouth witness Milner testifies that the underlying costs would be the same, but the difference would be in the allocation of those costs. (TR 142-143) 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. (Milner TR 142, 146-147)

BellSouth witnesses Milner and Williams agree that both ALECs and BellSouth would benefit from the shared placement of DSLAMs at RTs. (Milner TR 149; Williams TR 474) 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. (TR 150; EXH 1, p. 45; EXH 25, pp. 55-57) 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. (Milner TR 151) "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." (Milner TR 151) 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. (TR 151) Finally, witness

Williams asserts, in response to Commissioners' questions regarding the sharing of DSLAMs, that BellSouth would be interested in an arrangement where it could provide RT DSLAMs at market rates. (TR 477; EXH 1, p. 43) BellSouth is not willing, however, to provision RT DSLAMs at TELRIC rates. (Williams TR 470-472)

Contrary to BellSouth, AT&T Communications of the Southern States, LLC. and MCI WorldCom, Inc. (AT&T/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. (Darnell TR 543-544; Gallagher TR 621-622) 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. (TR 622) Whether the DLC is copper-fed or fiber-fed, witness Gallagher argues that the DSL traffic still must be multiplexed at the RT. (TR 621-622)

FDN witness Gallagher 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. (TR 616-617; EXH 38, p. 13) 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. (TR 447) 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. (TR 622-623; EXH 30, pp. 34-35) Witness Gallagher testifies 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. (TR 621)

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. (Darnell TR 545; Gallagher TR 621-622) 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 the direction of the Commission 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. (Williams TR 463; EXH 1, p. 61; EXH 1, p. 58)

<u>Technical Feasibility</u>

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. (Milner TR 150; Darnell TR 546; Gallagher TR 640-641) However, BellSouth and FDN both 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. (Milner TR 85, 147, 153-154; Gallagher TR 715-716) 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. (Milner TR 84-85; Gallagher TR 716)

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. (Milner TR 78, Williams TR 487; EXH 25, p. 32) The witnesses reference the FCC's 1999 UNE Remand Order[6], in which the FCC states that "[t]he packet switching network element includes the necessary electronics (e.g., routers and DSLAMs)." (UNE Remand Order at ¶304) (Williams TR 488-489) 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,

[6] 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.

> 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. (Williams TR 487) 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. (Williams TR 488-489) However, BellSouth witness Ruscilli notes that the FCC concluded that the existence of competition alone precludes a finding of impairment. (TR 41)

As part of Docket No. 010098-TP, the FDN and BellSouth arbitration, BellSouth and FDN agreed that the Commission "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." (EXH 39, pp. 62, 216-221) 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. (EXH 39, pp. 62, 216; EXH 25, p. 28) 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. (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. (FCC Rule 51.317(b)(3))

BellSouth witness Ruscilli testifies 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. (TR 37; EXH 1, p. 61) 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. (Ruscilli TR 37; EXH 1, p. 57)

BellSouth witness Ruscilli 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. (EXH 1, p. 71) 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. (Ruscilli TR 50) BellSouth witness Williams indicates that no ALEC has collocated a DSLAM at a RT in Florida. (Williams TR 465)

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. (TR 620, 645-646) Witness Gallagher asserts that FDN is therefore impaired with regards to the scope and scale of collocation. (TR 646) Additionally, witness Gallagher admits that FDN's impairment is one of financial constraints. (TR 721)

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) (Ruscilli TR 40)

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 the Commission to find that lack of access to such switching materially impairs an ALEC's ability to provide the services it seeks to offer. (TR Ruscilli TR 50; Milner TR 101; Williams TR 488-489) 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." (Gallagher TR 622) 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. (TR 718-720; EXH 8, p. 13)

BellSouth witness Williams asserts that BellSouth does not currently deploy DLC equipment capable of using the integrated voice and data line cards. (TR 444) 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. (Williams TR 444) 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. (TR 445) "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." (TR 445) 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. (TR 445)

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." (TR 445) 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. (TR 446)

FDN witness Gallagher 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. (TR 632-633) "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." (TR 632) 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. (TR 633-634) 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. (TR 634-635) Finally, witness Gallagher claims that in a shared facilities architecture, it will be easier and less costly for customers to switch DSL providers. (TR 635-636)

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. (Milner TR 86; Williams TR 447) Moreover, witness Williams asserts that FDN's proposal would necessitate very extensive and expensive BellSouth support system re-writes. (TR 447-448) However, witness Williams admits that there is no evidence or documentation detailing what the cost would be and the details of the changes required. (TR 470) 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. (Milner TR 86; Williams TR 449) 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. (TR 86) 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. (Williams TR 450; EXH 25, pp. 16-17) Notwithstanding this, witness Williams admits that a customer is precluded from obtaining BellSouth DSL service and FDN voice service over the same line. (TR 507) Additionally, a customer currently receiving BellSouth FastAccess service is precluded from obtaining voice service from another provider without losing the BellSouth service. (Williams TR 497)

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. (TR 451) The witness argues that such a result contradicts wide scale deployment of competitive broadband networks. Instead, 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. (Williams TR 451) 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. (TR 457-458)

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. (Williams TR 463-464) 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. (TR 465) 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. (TR 566)

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. (TR 471) 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. . ." (TR 472) Of course, witness Williams asserts that this same argument applies to all of the components that BellSouth is now required to unbundle. (TR 472)

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. (TR 475) In fact, BellSouth plans to begin deployment of integrated DLC line cards into more rural communities. (Williams TR

475; Milner TR 171, 173-179) The integrated line cards will allow BellSouth to retrofit its older DLCs to potentially serve one or two customers. (Williams TR 476) As witness Williams explains, the integrated line card, or combo card, is basically a DSLAM on a card. (TR 511) BellSouth is currently conducting a study to determine the market rate for sharing these new integrated DLC line cards. (TR 491-492) However, witness Williams asserts that the deployment of integrated line cards is on hold pending the outcome of this proceeding. (TR 510) 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. (TR 510)

AT&T/MCI witness Darnell disagrees with BellSouth witness Milner's assertion that the FCC has exempted the DSLAM from being a UNE. (TR 543) 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. (Darnell TR 543)

Further, witness Darnell testifies that BellSouth's refusal to provide a DSLAM as an UNE will impair an ALEC's ability to compete with BellSouth. (TR 544) 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." (Darnell TR 544) However, witness Darnell is unsure whether the Commission must determine that ALECs are impaired by lack of access to the DSLAM before the Commission can require that it be unbundled as a UNE. (TR 563)

<u>Appropriateness of BellSouth's cost study</u>

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. (Milner TR 83; EXH 25, pp. 12-14) 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." (Milner TR 83-84)

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." (TR 85) 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. (TR 85)

Nonetheless, BellSouth witness Williams asserts that FDN's witness Gallagher is asking the Commission to require BellSouth to unbundle its packet switched network and accommodate FDN's request for a port-at-a-time, while this Commission 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. (Williams TR 429-430; Milner TR 82) 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. (TR 429-430, 432)

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) (TR 431) Witness Williams argues that there have been no significant changes in the telecommunications environment that would warrant any reconsideration of this issue, and accordingly, this Commission should not rule inconsistently with the FCC. (TR 431)

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. (Milner TR 84-85; Williams TR 432-433) 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-looking 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. (TR 433-434)

Regarding underutilization risks, witness Williams testifies 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. (TR 434) In this case, the DSLAM may become stranded investment for BellSouth. (TR 434) 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. (TR 472) The concern is eliminated if unbundling is required only in areas where BellSouth presently has a DSLAM. (TR 473) Additionally, witness Williams agrees that his argument regarding obsolescence, underutilization, and under-recovery goes directly to the matter of TELRIC pricing. (TR 471-472)

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. (TR 435) 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. (TR 435)

Witness Williams argues that FDN's proposal stifles any potential investment an ILEC might be considering in new technologies, like DLC combo cards. (TR 435) In such a case, BellSouth would simply abort further deployment. (TR 436) 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. (TR 675)

An ALEC can currently provide xDSL service to an end user served by a DLC RT. (Williams TR 437) 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. (TR 437; EXH 1, p. 58) 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. (Williams TR 437; EXH 1, p. 58)

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. (TR 438-439) 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 this Commission for that DLC RT site. (TR 438-439) 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. (Williams TR 438-439; EXH 1, p. 57) 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. (Williams TR 438-439; EXH 1, p. 57)

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. (TR 439) 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. (TR 440)

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. (Williams TR 440-441)

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. (TR 441) 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. (Williams TR 441-442)

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. (Williams TR 443, 514) 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. (Williams TR 443) 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. (TR 443)

However, if the ALEC wants to provide UNE or UNE-P voice service, BellSouth's wholesale ADSL service would not be available. (Williams TR 499) Furthermore, BellSouth will not allow ISPs using BellSouth ADSL wholesale service to work with ALEC voice service. (TR 500) Moreover, it would be unusual for BellSouth to have an available home-run loop that meets DSL tolerances and qualifications. (Williams TR 501)

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. (TR 545)

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. (TR 545) 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. (TR 545) 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. (TR 545-546)

FDN witness Gallagher asserts that BellSouth's hybrid copper/fiber xDSL-capable loop configuration is not a viable option. (TR 621-622) The witness asserts that the DSLAM functionality at the RT must be unbundled. (TR 622-624, 640) Because BellSouth's cost study is deficient in this regard, FDN recommends that BellSouth be ordered to file a new cost study based on a hybrid loop offering that unbundles packet switching at the RT. (TR 644)

Rates and rate structure

BellSouth filed recurring and nonrecurring costs associated with providing its modeled hybrid copper/fiber xDSL-capable loop. (Caldwell TR 259) 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 testifies 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 recommends the surcharge would be added to the applicable rate for a UNE loop. (TR 643) 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. (TR 627-628)

BellSouth witness Caldwell testifies 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). (TR 260)

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). (Darnell TR 546-547) 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. (TR 268-269)

Witness Caldwell testifies that the material prices for the 16-port DSLAM were obtained from vendor contracts. (TR 260) 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. (TR 260)

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. (TR 261)

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. (Caldwell TR 261)

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). (TR 261)

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 testifies on 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. (TR 546) Witness Darnell claims that "the nonrecurring charges for element A.2.2 subloop already recover those costs." (TR 546) 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." (TR 547) 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. (TR 550; EXH 30, pp. 31-37) Witness Darnell argues that the most fundamental error is BellSouth's "failure to assume total demand in the development of [the DSLAM] rate." (TR 550)

> 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. (TR 550)

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. (TR 551) The witness also recommends 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. (Darnell TR 547)

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. (TR 547) 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." (TR 269) 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. (EXH 27, pp. 18-41; TR 348)

In short, witness Darnell argues that BellSouth's modeled and costed hybrid copper/fiber xDSL-capable loop will be of no use to ALECs. (TR 546; EXH 31)

> 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. (TR 546)

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. (TR 267)

Additionally, witness Caldwell asserts that in a long-run study, such as TELRIC, "all costs are considered variable, i.e., that they will exhaust." (TR 269) 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. (TR 269)

The model assumes that a certain percentage of the time there will be insufficient space in an RT to accommodate a new DSLAM. (Caldwell TR 346) 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. (Ruscilli TR 56-57; Williams TR 498-499) 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. (TR 83)

FDN witness Gallagher asserts that it would be impossible to profitably sell DSL service using the rates from BellSouth's cost study. (TR 630-631) 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. (TR 734-739; EXH 38, pp. 23-24) BellSouth witness Ruscilli argues that the pricing standard is not whether UNE-based entry is profitable, but whether the UNE rates are cost-based. (TR 38)

CONCLUSION

As mentioned earlier, Order 1181 and the Reconsideration Order noted the Commission's 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, staff believes the Commission should 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, staff believes that, 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. (TR 720) Accordingly, staff believes 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, staff believes 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 staff believes their recommended "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. (TR 85, 147, 153-154, 715-716) Without a dedicated DS1 transport, the data packets of BellSouth and the ALECs will be commingled. (TR 715-716) 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. (TR 84-84, 716) 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, staff believes the Commission would be required to show that the ALEC community is impaired from providing services they seek to offer. To this end, staff believes 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." (Gallagher TR 622) However, no impairment evidence was presented in this proceeding that addresses packet switching at the CO. For this reason, staff believes the ALECs' proposal for access to DSLAMs at RTs on a line-at-a-time basis should be rejected.

Regarding the unbundling of the DSLAM, staff believes 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. (Williams TR 456,471) The key reason FDN proffered it was impaired from deploying DSLAMs in RTs was one of financial constraints.

Staff notes 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 the Commission's decision in that proceeding, staff does 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. Staff finds 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, staff believes 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 staff recommends that the Commission not require BellSouth to unbundle its DSLAMs located in remote terminals, or packet switches located elsewhere in its network (Issue 5(b)). Thus, if this recommendation is adopted, the remaining subparts of this issue are largely moot. Notwithstanding this, staff's specific recommendation regarding subissue 5(a) is 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. If staff's recommendation in subissue 5(b) is denied in total or denied in part, Table 5-1 summarizes the options available to the Commission in deciding subissue 5(c).

Table 5-1: Summary of Issue 5 Recommendation and Alternatives

	Recommendation	Alternative	Alternative
	Issue 5(b):		
	No unbundling of packet switching either in the RT or at the CO.***	Unbundle DSLAMs in RTs.	Unbundle DSLAMs in RTs, and packet switches located elsewhere.
	Issue 5(c):		
"Bottoms-up" cost study*	Moot.	Loop rates and rate structure as adjusted by Issue 1(a) and Issue 6.	Require BellSouth to refile cost studies with modifications: 1)determine cost of sharing subloop feeder from RT to CO; 2) determine cost of providing access to DSLAM at port-at-a-time; and 3) determine cost of using BellSouth packet switch at CO to disaggregate ALEC's packets and deliver to ALEC's collocation.
"Tops-down" cost study**	Moot.	Require BellSouth to refile DSLAM and fiber-only DS1 subloop feeder cost study to comport with Order 1181.	

* If BellSouth's "bottoms-up" loop studies are used to modify loop rates and rate structure (Issue 1).
** If BellSouth's "bottoms-up" loop studies are not used to modify loop rates and rate structure (Issue 1).
*** Denotes staff's recommendation. If approved, subissue 5(c) is moot, regardless of the decision made in Issue 1.

ISSUE 6: In the 120-day filing, has BellSouth accounted for the impact of inflation consistent with Order No. PSC-01-2051-FOF-TP?

RECOMMENDATION: If the Commission concludes in Issue 1(b) that BellSouth's loop rates and rate structure should not be modified, the inflation rates used by BellSouth in its original filing remain appropriate. Therefore, any issue regarding inflation in this proceeding becomes moot. However, if the Commission concludes in Issue 1(b) that changes to BellSouth's loop rates and rate structure should be made based on the "bottoms-up" study, a material-only inflation based on BellSouth's 1998 inflation forecast should be applied to the material investments (Table 6-1). The engineering factors also should be adjusted to reflect projected inflationary impacts. **(Lee)**

POSITION OF THE PARTIES

BELLSOUTH: Yes. There is no dispute that BellSouth accounted for the impact of inflation in its 120-day cost study in the same manner that it accounted for inflation in the cost study originally filed in this docket, and as approved by the Commission in Order No. PSC-01-2051-FOF-TP, the Reconsideration Order.

AT&T/MCI: No. BellSouth uses inflation rates that are too high and unreliable. Moreover, BellSouth's proposed inflation rates use unsupported historical data from 1997, rather than using more recent supportable data, to estimate future inflation.

FDN: Agree with AT&T and MCI.

SPRINT: No position.

Z-TEL: For its statement of position on this issue, Z-Tel hereby adopts the respective positions taken by AT&T and WorldCom.

STAFF ANALYSIS: As a result of the Commission's concern with linear loading factors and the resulting distortion of costs between rural and urban areas, Order No. PSC-01-1181-FOF-TP (Order 1181) required BellSouth Telecommunications, Inc. (BellSouth) to file a "bottoms-up" (120-day) 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, the Commission found BellSouth's inflation factors to be appropriate in Order No. PSC-01-2051-FOF-TP (the Reconsideration Order).

BellSouth witness Caldwell and AT&T Communications of the Southern States, LLC. and MCI WorldCom, Inc. (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 the Commission's directive on inflation. (TR 261) Witness Caldwell notes that the Commission found in its 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. (Caldwell TR 261-262)

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 the Commission should not consider the new inflation arguments of AT&T/MCI witness Pitkin that were not timely and properly raised. (BellSouth BR at 46)

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 applied in a manner not approved by the Commission. (EXH 33, p. 14) 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. (TR 599) 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. (TR 599, EXH 33, pp. 15-17)

<u>Inflation data</u>

According to BellSouth witnesses Caldwell and Stegeman, the inflation factors are applied against the material investments in the BellSouth Telecommunications Loop Model (BSTLM). (Caldwell TR 300; Stegeman TR 214) Also, any nonrecurring costs included in the "bottoms-up" study reflect inflated labor rates in the BellSouth Cost Calculator (BSCC). (Caldwell TR 300) The same inflation rates used in BellSouth's "tops-down" (Phase 1) approach were used in the "bottoms-up," 120-day approach. (Caldwell TR 372)

BellSouth witness Caldwell testifies 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. (TR 374; EXH 27, p. 45) 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. (TR 374, EXH 27, pp. 50-51)

On the other hand, AT&T/MCI witness Pitkin claims that BellSouth's inflation factors should reflect more recently available data. (TR 582, 599) Witness Pitkin questions the reliance on forecasting when actual data is now available. (EXH 33, pp. 21-24) 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. (Pitkin TR 599) For this reason, witness Pitkin recommends revised inflation factors developed using actual 2000 and 2001 inflation data, and linear trending for 2002. (TR 602; EXH 59, BFP-11)

BellSouth witness Caldwell admits that it is not totally inappropriate to use more updated inflation factors. (TR 374-375, EXH 27, p. 51) 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. (EXH 22, p. 79) 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. (EXH 22, p. 79) 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. (EXH 22, p. 79)

BellSouth argues in its brief that the Commission 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. (BellSouth BR at 47)

<u>Appropriateness of using the same inflation factors in a "bottoms-up" cost study as in a "tops-down" cost study</u>

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. (TR 372-373) 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. (TR 592) Specifically, witness Pitkin argues that BellSouth applies an overall blended inflation factor, which includes inflation for both material and labor, to material-only investments, thereby overstating costs. (Pitkin TR 592; EXH 19; EXH 58, BFP-14, p. 1)

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. (TR 592)

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. (Pitkin TR 590-591) As such, witness Pitkin notes that the blended inflation factors were consistent with the application to combined material and labor investments. (TR 594)

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. (TR 594; EXH 1, p. 32; EXH 35, pp. 1-5; EXH 58, BFP-14, p. 1; EXH 59, BFP-11, pp. 1-8)

Witness Pitkin notes that material inflation has been significantly lower than labor inflation. (EXH 34, pp. 2-6) Based on witness Pitkin's analysis, he concludes that use of a blended inflation factor in a "bottoms-up" approach overstates material investments. (Pitkin TR 596-598; EXH 34, pp. 2-6; EXH 35, pp. 1-5; EXH 57, BFP-8a; EXH 58, BFP-14, p. 1) 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%. (TR 598; EXH 59, BFP-16, pp. 1-2) Therefore, witness Pitkin recommends 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. (TR 594-595)

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. (TR 599-600) The costs for placing and splicing cable are addressed in Issue 1(a).

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. (TR 373) However, if that is done, witness Caldwell asserts that engineering should be inflated as well. (TR 373; EXH 22, pp. 80, 88)

Witness Caldwell agrees that using a composite or blended inflation factor in a "bottoms-up" approach will tend to overstate material investments. (TR 373) However, since inflation was not applied to engineering, for accounts where engineering was included, these investments are understated. (Caldwell TR 373)

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. (TR 374) 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. (TR 375-376)

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. (EXH 22, p. 72-76) 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. (EXH 22, pp. 88-95) The third column shows the inflation rates recommended by AT&T/MCI witness Pitkin. (EXH 59, BFP-18, pp. 1, 6) 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. (Caldwell TR 373; EXH 22, p. 80) As discussed in Issue 1(a), 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. (Caldwell TR 366; EXH 22, pp. 20-22; EXH 24, Revision 3, Appendix B, Attachment 7, p. 1) 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. (Pitkin TR 595; EXH 59, BFP-13, pp. 1-4) 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. (TR 300)

ANALYSIS

BellSouth argues that its studies comply with Order 1181 and the Reconsideration Order regarding inflation. (Caldwell TR 233-238) Witness Caldwell asserts that the Commission 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. (TR 275-276) 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. (TR 261-262) BellSouth contends that inflation is a non-issue since the Commission approved the use of inflation in the Reconsideration Order. (BellSouth BR at 6)

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. (TR 601-602) AT&T/MCI's recommended inflation inputs are shown in Table 6-1.

If, as staff recommends in Issue 1, BellSouth's loop rates and rate structure are not modified as the result of the "bottoms-up" cost study, the inflation rates used by BellSouth in its original filing remain appropriate. In this respect, staff would agree with BellSouth that inflation is not at issue.

However, if BellSouth's loop rates and rate structure are modified based on the "bottoms-up" study, staff believes adjustments should be made to BellSouth's inflation factors. Staff agrees with AT&T/MCI witness Pitkin that, in a "bottoms-up" approach, a material-only inflation factor should be applied to the material investment. (TR 590-592) Likewise, a labor-only inflation factor should be applied to the labor cost. (TR 594-595) A blended inflation rate that includes inflation for both material and labor should not be applied to material-only investment. The result is an overstatement in material investments. (Pitkin TR 596-598; EXH 34, pp. 2-6; EXH 57, BFP-8a; EXH 58, BFP-14, p. 1)

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. (Caldwell TR 374-375) 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. (Caldwell TR 374; EXH 22, p. 79) Staff also notes 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, staff believes 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. (EXH 22, pp. 85-86) 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. (Caldwell TR 373; EXH 22, pp. 80, 88) 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, staff agrees with BellSouth that it is also appropriate to consider the impacts of inflation on engineering costs for installation and placement.

CONCLUSION

If the Commission concludes in Issue 1(b) that BellSouth's loop rates and rate structure should not be modified, the inflation rates as approved by Order 1181 remain appropriate. Therefore, any issue regarding inflation in this proceeding becomes moot. However, if the Commission concludes in Issue 1(b) that changes to BellSouth's loop rates and rate structure should be made based on the "bottoms-up" study, a material-only inflation should be applied to the material investments. The engineering factors also should be adjusted to reflect projected inflationary impacts.

ISSUE 7: Apart from Issues 1-6, is BellSouth's 120-Day filing consistent with the Orders in this docket?

RECOMMENDATION: Yes. Apart from Issues 1-6, BellSouth's 120-Day filing is consistent with the Commission's Orders in this docket. **(Bloom)**

POSITION OF THE PARTIES

BELLSOUTH: Yes. The cost studies BellSouth filed incorporate all of the adjustments ordered by the Commission.

AT&T/MCI: No position at this time.

FDN: Agree with AT&T and MCI.

SPRINT: No position.

Z-TEL: No position.

STAFF ANALYSIS: Florida Public Service Commission 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. (Caldwell TR 232; Donovan TR 762) Specifically the Commission 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)

Staff notes that the Commission revised its 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, staff believes that the inflation issue was not one of the Commission's requirements for BellSouth's 120-day filing.[7]

According to BellSouth witness Caldwell, the cost studies filed by BellSouth incorporate all of the adjustments ordered by this Commission. 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 the Commission's directives. (Caldwell TR 262) No other party

[7] Inflation was made an issue by the ALECs at the issue identification meeting.

provided any testimony on this issue nor did any party, other than BellSouth, take a position on this issue.

Staff has reviewed the Commission's 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, staff believes that apart from Issues 1-6, BellSouth's 120-Day filing is consistent with the Commission's Orders in this docket.

ISSUE 8: Should this Docket be closed?

RECOMMENDATION: Yes. If the Commission approves staff's recommendations in Issues 1-7, this track of this Docket may be closed (Docket No. 990649A-TP) after the time for filing an appeal has expired. **(Keating)**

STAFF ANALYSIS: If the Commission approves staff's recommendations in Issues 1-7, this track of this Docket may be closed (Docket No. 990649A-TP) after the time for filing an appeal has expired. No other action by the Commission will be necessary.