BEFORE THE TENNESSEE REGULATORY AUTHORITY

NASHVILLE, TENNESSEE

April 3, 2002

IN RE:	)	
	)	
GENERIC DOCKET TO ESTABLISH UNE PRICES FOR LINE SHARING PER FCC 99-355, AND RISER CABLE AND TERMINATING WIRE AS ORDERED IN TRA DOCKET 98-00123	)	**DOCKET NO. 00-00544**

FIRST INITIAL ORDER

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This docket came before the Tennessee Regulatory Authority ("Authority") at a regularly scheduled Authority Conference held on November 20, 2001 for resolution of the issues presented by the parties in the Hearing held from November 27, 2000 through December 1, 2000.

I. Procedural History

On May 9, 2000, during a regularly scheduled Authority Conference, the Directors voted unanimously to open a generic docket for the purpose of establishing permanent Unbundled Network Element ("UNE") prices for line sharing per the Federal Communications Commission's ("FCC") *Line Sharing Order*[1] and permanent prices for riser cable and Unbundled Network Terminating Wire ("UNTW") per the Authority's Order in Docket No. 98-00123.[2] The Authority also requested that all interested parties file cost studies, proposed permanent prices, and proposed terms and conditions for the line sharing, riser cable, and UNTW elements by June 30, 2000. The Authority further directed the parties that the cost studies, prices, terms, and conditions were to be consistent with the cost methodology adopted by the Authority in Docket No. 97-01262, the Permanent Prices Docket,[3] and the FCC's line sharing requirements. In addition, the Authority instructed all interested parties to file reply comments on the proposals by July 15, 2000. At a regularly scheduled Authority Conference on July 11, 2000, the Directors voted unanimously to appoint Director H. Lynn Greer, Jr. as the Pre-Hearing Officer.

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[1] *See In re: Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, FCC 99-355, CC Docket No. 98-147, 14 FCC Rcd. 20912 (Dec. 9, 1999) (hereinafter *Line Sharing Order*).

[2] *See In re: Petition of NEXTLINK Tennessee, L.L.C. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996*, Docket No. 98-00123, *Final Order of Arbitration*, p. 7 (Jun. 25, 1999).

[3] *See In re: Petition of BellSouth Telecommunications, Inc. to Convene a Contested Case to Establish "Permanent Prices" for Interconnection and Unbundled Network Elements*, Docket No. 97-01262 (hereinafter *Permanent Prices*).

Numerous parties sought to intervene in this docket. Time Warner Telecom of the Mid-South, L.P. ("Time Warner") filed a petition to intervene on June 27, 2000. Petitions to intervene were also filed on June 30, 2000 by United Telephone-Southeast, Inc. and Sprint Communications Company, L.P. (collectively "Sprint/United"),[4] AT&T Communications of the South Central States, Inc. ("AT&T"), TCG MidSouth, Inc. ("TCG"), Telephone Data System Companies ("TDS"),[5] Rhythm Links, Inc., MCI Telecommunications, Inc. d/b/a MCI WorldCom ("MCI"), BellSouth Telecommunications, Inc. ("BellSouth"), NEXTLINK Tennessee, Inc. ("NEXTLINK"), BlueStar Networks, Inc. ("BlueStar"), and DIECA Communications, Inc. d/b/a Covad Communications Company ("Covad"). Broadslate Networks of Tennessee, Inc. ("Broadslate") and Network Telephone Corporation ("Network Telephone") filed petitions to intervene on July 14, 2000.[6]

BellSouth and Sprint/United filed cost studies on June 30, 2000.[7] BellSouth's cost study contained rates, terms, and conditions for all the elements requested by the Authority. Sprint/United's cost study did not include rates, terms, and conditions for the riser cable and UNTW elements nor did it include costs for the local loop and the splitter. On August 18, 2000, Sprint/United filed revised cost studies and proposed rates to reflect changes in Operational Support Systems ("OSS") costs as well as costs and rates for the provisioning of a splitter in those instances where the competing local exchange carrier ("CLEC") purchases the splitter, the

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[4] United is an incumbent local exchange carrier in Tennessee and Sprint is a competing local exchange carrier in Tennessee. Because Sprint and United participated in this proceeding as if they were one party, the term "Sprint/United" is used in this Order to identify these entities.

[5] TDS includes Tennessee Telephone Co., Humphreys County Telephone Co., Concord Telephone Exchange, Inc., and Tellico Telephone Co., Inc.

[6] Network Telephone filed a *Notice of Withdrawal* on September 26, 2000.

[7] BellSouth did not file the proprietary portions of its cost study on June 30, 2000 because the parties had not entered into a proprietary agreement. The parties filed a proposed protective order on July 20, 2000, and upon entry of the proposed order by the Pre-Hearing Officer, BellSouth filed the remaining portions of its cost study on July 21, 2000. Nevertheless, the date on the proprietary portions of BellSouth's cost study is June 30, 2000.

incumbent local exchange carrier ("ILEC") maintains the splitter, and the splitter is located in the ILEC's common space.

On July 11, 2000, BlueStar and Covad filed a *Motion to Expand Docket No. 00-00544 to Set Rates for Unbundled Copper Loops, Loop Conditioning and Access to Loop Make-Up Information*. The motion to expand requested that the Pre-Hearing Officer set both permanent and interim rates. Also on July 11th, BlueStar, Covad, AT&T, TCG, and NEXTLINK filed a *Motion to Establish a Procedural Schedule and Motion to Extend the Deadline for Filing Reply Comments*. Broadslate and Network Telephone filed comments on July 14, 2000, in support of the motion to expand.

On August 10, 2000, the Pre-Hearing Officer issued an Order reflecting the rulings rendered during a Pre-Hearing Conference held on August 3, 2000. In the Order, the Pre-Hearing Officer granted the interventions, ordered that interim rates be set, and established a procedural schedule to simplify the filing of proposed interim rates and responses thereto.[8] In addition, the Pre-Hearing Officer granted BlueStar and Covad's motion to expand the docket to include the setting of rates for unbundled copper loops ("UCLs"), loop conditioning, and access to Loop Makeup ("LMU") information as well as BellSouth's oral motion to expand the docket to include setting rates for the *UNE Remand Order*[9] elements, but limited such expansion to those elements that are the subject of a pending arbitration.

On August 14, 2000, Vectris Telecom, Inc. ("Vectris") filed a petition to intervene. On August 23, 2000, the Pre-Hearing Officer transmitted a letter to all parties requesting that any

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[8] The Order stated that the Pre-Hearing Officer would set the interim rates. During the September 26, 2000 Authority Conference, the Pre-Hearing Officer corrected the August 10th Order by announcing that the Order should have stated that the Authority would set the interim rates. *See* Transcript of Proceedings, Sept. 26, 2000, p. 39 (Authority Conference).

[9] *See In re: Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* FCC 99-238, CC Docket No. 96-98, 15 FCC Rcd. 3696 (Nov. 5, 1999) (Third Report and Order and Fourth Further Notice of Proposed Rulemaking) (hereinafter *UNE Remand Order*).

comments on the petition to intervene be filed no later than August 28, 2000. None of the parties filed comments. The Pre-Hearing Officer entered an order granting Vectris' petition to intervene on September 1, 2000.[10]

On August 18, 2000, Sprint/United filed its revised line sharing cost studies and interim rate proposals, and BellSouth, the Data Coalition,[11] and MCI and Broadslate[12] filed interim rate proposals. In addition, NEXTLINK and Time Warner filed joint comments adopting the comments and proposed rates filed by the Data Coalition for UCLs, loop conditioning, access to LMU information, line sharing, riser cable, and UNTW and MCI's proposed interim rates for high capacity lines.

On August 25, 2000, BellSouth, the Data Coalition, MCI, NEXTLINK, and Time Warner filed comments on the proposed interim rates. On September 5, 2000, BellSouth filed its supplemental reply. The Data Coalition filed its surrebuttal comments on September 6, 2000, and BellSouth filed its surreply on September 12, 2000.

The Authority issued data requests related to the *UNE Remand Order* elements on September 8, 2000. Sprint/United, the Data Coalition, and BellSouth each filed a response to the data requests on September 15, 2000. AT&T filed its response on September 22, 2000.

The Authority first considered interim rates at a regularly scheduled Authority Conference on September 26, 2000. During that Conference, the Directors unanimously adopted interim rates for numerous elements, but declined to adopt interim rates at that time for riser cable, UNTW, and *UNE Remand Order* elements.[13] In addition, the Authority approved and

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[10] On November 6, 2000, Vectris filed *Vectris Communications, Inc.'s Notice of Withdrawal.*
[11] The Data Coalition includes BlueStar, Covad, Broadslate, and Vectris.
[12] Broadslate joined in both the Data Coalition's and MCI's filings. In the latter, MCI and Broadslate supported the Data Coalition's rates and proposed additional rates for elements the Data Coalition's filing did not address.
[13] *See* Transcript of Proceedings, Sept. 26, 2000, pp. 40-45 (Authority Conference).

modified the terms and conditions for line sharing, riser cable, and UNTW proposed by BellSouth. The Authority ordered BellSouth to amend its terms and conditions to allow CLECs to purchase and provide their own splitter, consistent with the FCC's *Line Sharing Order*.[14] Lastly, the Authority ordered BellSouth to amend its cost studies by October 2, 2000 as follows: 1) amend OSS cost recovery to include in its line sharing rates those reasonable incremental costs of OSS modifications caused by the obligation to provide line sharing as a UNE; 2) amend cross connects so that the rates reflect clearly whether the splitter is located within BellSouth's Main Distributing Frame; and 3) amend line sharing rates to reflect whether a CLEC provides a splitter in its own cage or in a common area of a central office and whether the CLEC is self-provisioned within its collocation space.[15]

Also on September 26, 2000, the Authority approved Sprint/United's terms and conditions for line sharing and directed Sprint/United to propose terms and conditions for riser cable and UNTW. Specifically, the Authority held that Sprint/United's terms and conditions should set out specific rates for riser cable and UNTW as well as standardizing the ordering and provisioning process for all potential users of those elements.[16]

The Authority issued data requests related to BellSouth's and the Data Coalition's proposed interim rates for the riser cable and UNTW elements on September 29, 2000. The request asked each party to explain the similarities and differences among the elements proposed by BellSouth and the elements proposed by the Data Coalition.

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[14] *See Order Adopting Interim Rates*, p. 5 (Nov. 7, 2000).
[15] *See id.* at 7.
[16] *See id.* at 5.

BellSouth filed its *Unbundled Network Element Cost Studies* and Sprint/United filed its *Revised Line Sharing Cost Studies and Interim Rate Proposals* on October 2, 2000. Sprint/United did not propose any rates for the riser cable or UNTW elements.

On October 11, 2000, BellSouth and the Data Coalition responded to the Authority's September 29, 2000 data requests. Based on the filings and responses to data requests, during the November 7, 2000 Authority Conference, the Authority unanimously adopted the interim rates proposed by BellSouth for UNTW and for the riser cable elements subject to true-up upon the setting of permanent rates.[17]

On October 20, 2000, BellSouth filed supplemental cost studies for additional UNEs that were not included in the October 2, 2000 filing. On November 13, 2000, BellSouth filed corrections to the nonrecurring costs for certain elements, xDSL,[18] loop modification and line sharing.

The Authority held a Hearing in this docket from November 27, 2000 through December 1, 2000. The post-hearing briefs were due on January 19, 2001, but on January 11, 2001, the parties filed an agreed motion for continuance requesting until January 23, 2001 to file the briefs. Sprint/United, BellSouth, MCI, the Data Coalition, and AT&T filed their post-hearing briefs on January 23, 2001.

On January 29, 2001, the Authority asked the parties to file supplemental briefs on the impact to this proceeding of the FCC's *Line Splitting Order*[19] and the FCC's *SBC Kansas-*

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[17] The parties have agreed that interim rates are subject to a true-up once permanent rates are set. *See* Transcript of Proceedings, Aug. 3, 2000, pp. 37-63 (Pre-Hearing Conference).

[18] "DSL" is an acronym for Digital Subscriber Line. The "x" represent a general service that utilizes a portion of the bandwidth of copper loops that is not used for plain old telephone service. Specific forms of DSL include Asymmetric ("ADSL"), High-Bit Rate ("HDSL"), Symmetric ("SDSL"), and Very High Bit Rate ("VDSL").

[19] *See In re: Deployment of Wireline Services Offering Advanced Telecommunications Capability*, FCC 01-26, CC Docket No. 98-147, 16 FCC Rcd. 2101 (Jan. 19, 2001) (Third Report and Order on Reconsideration) (hereinafter *Line Splitting Order*).

Oklahoma Order.[20] Only BellSouth and the Data Coalition filed supplemental briefs on February 5, 2001. BellSouth also filed a supplemental reply brief in response to the Data Coalition's supplemental brief.

On February 9, 2001, BellSouth and the Data Coalition requested approval of a settlement agreement as to BellSouth's interim, monthly, recurring rate for Line Sharing Splitter-Per Line Activation in the Central Office. On March 20, 2001, during a regularly scheduled Authority Conference, the Directors unanimously approved a new interim rate as agreed to by the parties. This new interim rate is subject to true-up once the Authority establishes permanent rates.[21]

On April 16, 2001, Sprint/United filed additional cost studies that included proposed terms and conditions for riser cable and UNTW. On June 14, 2001, Staff sent a data request asking BellSouth to file a single complete line sharing cost study containing the relevant portions of the cost studies filed with the Authority on October 2, October 20, and November 13, 2000. BellSouth filed the requested cost studies on July 6, 2001. On July 23, 26 and August 6, 2001, the Authority sent data requests to AT&T, BellSouth, and Sprint/United. The Authority received responses to the data requests on August 6, 8, 15, and 22, 2001 and on September 10, 2001.

On August 8, 2001, BellSouth filed the affidavit of D. Daonne Caldwell and supplemental cost studies for the following elements: Engineering Information, Unbundled

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[20] *See In re: Joint Application by SBC Communications, Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma*, FCC 01-29, CC Docket No. 00-217, 16 FCC Rcd. 6237 (Jan. 22, 2001).

[21] *See Order Approving Agreed Interim, Monthly, Recurring Rates for Element J.4.3*, p. 2 (Apr. 23, 2001).

Copper Loop-Non-Designed, Loop Testing, Physical Collocation Space Availability Report, and Adjacent Collocation. BellSouth claims that these elements fall within the scope of this docket.[22]

II. Findings and Conclusions

1. What terms and conditions should the Authority adopt for ILECs' provisioning of the Unbundled Network Elements ("UNEs") included in this docket?

The terms and conditions proposed by Sprint/United and BellSouth in this docket for line sharing, riser cable and UNTW are not sufficient because they do not address all the issues that may emerge as a result of the development of advanced services in Tennessee. There is no prejudice to either CLECs or ILECs in Tennessee if the Directors do not adopt these proposed terms and conditions at this time, because the carriers may use interconnection agreements and the protections associated with those agreements, such as pick and choose and arbitration. Further, the parties may continue to use the interim terms and conditions adopted by the Authority until the Authority establishes permanent terms and conditions. Therefore, the Directors unanimously voted to address the terms and conditions for line sharing within Docket No. 01-00526, *In re: Generic Docket to Establish Generally Available Terms and Conditions for Interconnection.*

2. What cost studies should the Authority approve for Tennessee? Should the Authority approve only <u>one</u> cost study and select between Sprint/United's and BellSouth's cost studies?

BellSouth maintained throughout this proceeding that its cost studies comply with the Authority's earlier order in this docket requiring BellSouth and Sprint/United to use the methodology ordered in the Permanent Prices Docket and the FCC's costing methodology.[23]

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[22] The analysis of these elements is not included in this Order because the parties to this proceeding have not had an opportunity to reply to this filing, to analyze the proposed rates and their inputs, or to cross-examine BellSouth's witness, D. Daonne Caldwell.

[23] *See Order Opening Generic Docket and Appointing a Hearing Officer* (Aug. 15, 2000).

Meanwhile, Sprint/United requests that the Authority allow Sprint/United to resubmit its cost studies so that it incorporates the methods and assumptions found in BellSouth's cost study.[24] If the methods and assumptions found in BellSouth's cost study are wrong, as Sprint/United contends, it is not clear why Sprint/United would request to incorporate them in its cost study. However, if the Authority determines that the assumptions underlying BellSouth's cost studies are inappropriate compared to Sprint/United's assumptions, then the Authority is obligated to achieve regulatory parity between the two substantially similar service providers by ordering the use of Sprint/United's assumptions. For these reasons, the Authority unanimously voted to order that the two cost studies will continue to be considered in this proceeding, BellSouth's cost studies for BellSouth's territory in Tennessee and Sprint/United's cost studies for Sprint/United's territory in Tennessee, and that modification will be ordered where necessary.

3. **Are the cost studies presented by Sprint/United and BellSouth consistent with the cost methodology adopted by the Authority in Docket No. 97-01262, the Permanent Prices Docket, and the FCC's line sharing requirements?**

The FCC promulgated rules in its *First Report and Order* in August 1996, which defined the forward-looking economic cost as the sum of the Total Element Long-Run Incremental Cost ("TELRIC") of the element and a reasonable allocation of forward-looking common costs.[25] The TELRIC of a UNE is defined by Section 51.505(b) of the FCC Rules as: "[T]he forward-looking cost over the long run of the total quantity of the facilities and functions that are directly attributable to, or reasonably identifiable as incremental to, such element, calculated taking as a given the incumbent LEC's provision of other elements."[26] Further, Section 51.505(b)(1)

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[24] *See Sprint's Post-Hearing Brief*, p. 13 (Jan. 23, 2001).
[25] *See In re: Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* FCC 96-325, CC Docket No. 96-98, 11 FCC Rcd. 15,499, para. 672 (Aug. 8, 1996) (First Report and Order) (hereinafter *First Report and Order*).
[26] 47 CFR § 51.505(b).

explains how to measure the TELRIC of an element using an efficient network configuration. This Section provides: "The 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."[27]

In the *Line Sharing Order,* the FCC established guidelines that either follow directly from the TELRIC methodology set forth in the *First Report and Order* to govern interconnection and UNE pricing or, if not a direct outgrowth of those principles, are consistent with them in the context of the line sharing UNE.[28] On July 18, 2000, the Eighth Circuit vacated Rule 51.505(b)(1), but stayed its decision on September 22, 2000 pending appeal to the U.S. Supreme Court.[29] Therefore, the TELRIC pricing methodology is an appropriate methodology to use in this proceeding.

All CLECs in this proceeding agree that TELRIC is the appropriate methodology to use in pricing line sharing UNEs and other UNEs considered in this docket.[30] In addition, the ILECs claim to have utilized the TELRIC methodology.[31] However, the CLECs and Sprint/United argue that BellSouth failed to employ reasonable assumptions in calculating line sharing costs.[32]

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[27] *Id.* § 51.505(b)(1).
[28] *Line Sharing Order* at para. 131.
[29] *See Iowa Utils. Bd. v. FCC*, Docket No. 96-3321 (8th Cir. Sept. 22, 2001) (order granting FCC's motion for partial stay of mandate).
[30] *See, e.g., Post-Hearing Brief of the Data Coalition*, pp. 1-2 (Jan. 23, 2001); *Post-Hearing Brief of MCI WorldCom*, p. 18 (Jan. 23, 2001); *AT&T's Post-Hearing Brief*, p. 1 (Jan. 23, 2001) (generally supporting MCI's and the Data Coalition's positions).
[31] *See* Daniel R. Gordon, Pre-Filed Direct Testimony, p. 17 (Nov. 13, 2000); D. Daonne Caldwell, Pre-Filed Direct Testimony, pp. 7-8 (Nov. 13, 2000).
[32] *See, e.g., Post-Hearing Brief of the Data Coalition*, p. 12 (Jan. 23, 2001) (arguing that BellSouth's assumption that all xDSL loops require dispatch is untrue and unsupported); *Sprint's Post-Hearing Brief*, p. 9 (Jan. 23, 2001) (arguing that BellSouth's assumption that it will unload 10 pairs is undocumented, contradicts BellSouth's statements on its website, and ignores on-going upgrades).

Although BellSouth followed the Authority's directives concerning the methodology utilized in its cost studies, the problems with BellSouth's assumptions are mainly due to a lack of supporting documentation. BellSouth failed to explain most of the assumptions used in its cost studies. During the Hearing, BellSouth's witnesses stated that BellSouth did not provide detailed support for the assumptions because BellSouth did not consider such explanation to be necessary. For example, when asked where one could find detailed descriptions of the process BellSouth used to provision an xDSL loop, BellSouth witness, D. Daonne Caldwell, answered: "The detail process is not in there. But, there are assumptions in the narrative associated with the XDSL loop. What you would need to do is to look at the work centers and in the work times that are in the actual worksheet itself."[33]

When the Authority opened this docket, the Authority directed that the cost studies, terms, and conditions were to be consistent with the cost methodology adopted by the Authority in the Permanent Prices Docket and the FCC's line sharing requirements. The Authority also ordered that the cost studies must be documented and supported by sufficient evidence. BellSouth did not fully comply with this requirement, and in fact, during a status conference, the Pre-Hearing Officer commented: "[M]y concern at this point is that we believe there's a black box there that needs to be opened up. And I think that as we go through this process, we're going to have to have a lot more information than we have at this point."[34]

Sprint/United maintains in its June 30, 2000 filing that "[c]onsistent with the FCC line sharing order, [United] utilized the TELRIC methodology to calculate the line sharing costs."[35] Sprint/United's cost study is consistent with the pricing methodology adopted by the Authority

[33] Transcript of Proceedings, Nov. 27, 2000, v. I-C, p. 118 (Hearing).
[34] *Id.* Aug. 3, 2000, p. 32 (Status Conference).
[35] *Petition of United Telephone-Southeast, Inc. for Leave to Intervene*, cover letter (Jun. 30, 2000).

and FCC's line sharing requirements in that it uses a forward-looking, least-cost, most-efficient network configuration. Sprint/United did not have to include some of the adjustments ordered by the Authority in the Permanent Prices Docket because they were BellSouth specific adjustments. Sprint/United provided sufficient narratives and exhibits to explain its approach. Clearly, Sprint/United's cost studies utilized a TELRIC methodology.

Based on the foregoing, the Authority found that, with the exception of the methodology used by BellSouth in calculating the rates for 2-wire and 4-wire copper loops[36] and the costs for physical collocation elements,[37] the methodologies employed in BellSouth's and Sprint/United's cost studies are consistent with the cost methodology adopted by the Authority in the Permanent Prices Docket and the FCC's line sharing requirements. Therefore, the Authority unanimously voted to use the proposed models as the starting point and to require BellSouth and Sprint/United to modify their cost studies as ordered by the Authority in this proceeding.

4. Should the Authority address DS3, OC3, OC12, OC48, STS-1 loops, local channels, dedicated and shared interoffice facilities, as well as operator services and directory assistance ("OS/DA") in this proceeding?

Sprint/United's cost study did not include the disputed UNEs because Sprint/United does not offer those UNEs and no CLEC has requested them. BellSouth proposed rates for dark fiber, OC3, OC12, OC48, STS-1, and DS3, but presented no supporting documentation sufficient to allow close scrutiny of the rates for these elements. The CLECs contested most of these rates, claiming that the rates proposed in Tennessee are not only far higher than the rates BellSouth proposed in other states, but are also higher than the rates offered by other ILECs. In addition, some DS1 and DS3 loops were included in the Permanent Prices Docket, while other loops, such as DS3, OC3, OC12, OC48, and dark fiber, are not involved in line sharing and are not the

[36] *See infra* Issue 6.
[37] *See infra* Issue 23.

subject of a pending arbitration in Tennessee. Moreover, as some CLECs argue, even if these elements were included in this proceeding, more time and sufficient supporting documentation are required in order to analyze the proposed rates.

With respect to OS/DA, in the *Order Denying [BellSouth's] Tariff No. 01-00205 and Opening Docket No. 01-00526*, the Authority stated: "Before BellSouth may be relieved of its obligations under FCC Rule 319(f),[38] the Authority must find that BellSouth's routing solution is functionally adequate and delineate the service areas where the compliant routing solution is available to competing carriers.[39] The Authority has not made such a finding in any docket."[40]

Based on the foregoing, the Directors unanimously voted to exclude DS3, OC3, OC12, OC48, and STS-1 loops and local channels and dedicated and shared interoffice facilities at DS3, OC3, OC12, OC48, STS-1 transmission rates, and related UNE combinations from this docket at this time. These UNEs will be addressed in Docket No. 01-00339, *In re: Generic Docket to Consider Technology Advances and Geographic Deaveraging*. The Directors also unanimously voted to adopt the rates proposed by BellSouth for these elements as interim rates subject to true-up upon the establishment of permanent rates for these elements. Lastly, the Directors unanimously voted to order BellSouth to continue to make OS/DA available as a UNE in Tennessee until the Authority makes a final finding in any docket that BellSouth's routing

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[38] 47 C.F.R. § 51.319(f) provides:

> Operator services and directory assistance. An incumbent LEC shall provide nondiscriminatory access in accordance with § 51.311 and section 251(c)(3) of the Act to operator services and directory assistance on an unbundled basis to any requesting telecommunications carrier for the provision of a telecommunications service only where the incumbent LEC does not provide the requesting telecommunications carrier with customized routing or a compatible signaling protocol. Operator services are any automatic or live assistance to a consumer to arrange for billing or completion, or both, of a telephone call. Directory assistance is a service that allows subscribers to retrieve telephone numbers of other subscribers.

[39] *UNE Remand Order* at para. 463.

[40] *Permanent Prices, Order Denying Tariff No. 01-00205 and Opening Docket No. 01-00526*, p. 6 (Jun. 21, 2001) (footnotes 37 and 38 in original).

solution is functionally adequate and delineates the service areas where the compliant routing solution is available to competing carriers.

5. Work times and work groups:

a. What are the appropriate and reasonable tasks and task times for provisioning an xDSL loop?

b. Should the following BellSouth intermediary work groups be eliminated: Address and Facility Inventory Group, Circuit Provisioning Group, Complex Resale Service Group, Outside Plant Engineering, Local Carrier Service Center, Unbundled Network Element Center, Service Advocacy Center, Work Management Center?

Before setting rates, the Authority must determine the necessary tasks for provisioning line sharing and the appropriate amounts of time to perform those tasks. BellSouth and the CLECs in this docket offered estimated work times. There are significant differences, however, in the time estimates presented by the parties for all the tasks necessary to provide the line sharing UNE. Nonetheless, the Authority cannot reject in whole the work times and costs proposed by BellSouth and Sprint/United because to do so would result in setting many of the costs in this docket at zero. Such a result would not be in the public interest, as it would not provide BellSouth and Sprint/United proper compensation for the use of their networks.

Using market-based work times paid to contractors can be proper for cost studies. Sprint/United proposed work times based on actual times paid to its contractors for loop conditioning. Sprint/United, however, also used estimated of work times for many tasks and failed to specify how the figures were calculated for some of the tasks. In addition, the record reveals that the work times proposed by Sprint/United for splitter engineering and installation tasks are inflated.[41] The other parties did not offer alternative proposals for Sprint/United's work times.

[41] *See Line Sharing Cost Study United Telephone-Southeast, Inc.*, p. 19 (Aug. 18, 2000) (Proprietary Filing).

BellSouth also failed to adequately support its proposed work times. BellSouth's proposed work times are "estimates from the subject matter experts on the amount of time that's required to perform the activity."[42] BellSouth chose to use estimated work times even though it has recorded information on direct salaries, wages, and total classified and unclassified productive hours.[43] Indeed, the same source for labor rates can be used to produce actual work times because labor rates are obtained by dividing actual costs by actual classified productive hours for plant and engineering work groups and total productive hours for cost groups.

Moreover, as to BellSouth's proposed work times, it is unclear whether costs are being double recovered through monthly recurring charges and nonrecurring charges. The Authority lacks the ability to verify whether the subject matter experts meticulously reported relevant data, and BellSouth's witnesses provided little assurance that such occurred. In fact, in some instances it appears BellSouth counted work tasks many times without a clear explanation.[44] On the other hand, many of the work times proposed by CLECs are too low, as they fail to cover all reasonably required provisioning steps.[45]

BellSouth's cost studies demonstrate that only a manual service inquiry is used for most UNEs and that many special services work groups are involved.[46] This methodology tends to inflate work times due to the numerous intermediary work groups. It also tends to inflate costs because it uses too many manual service inquiries instead of the cheaper electronic service inquiries. BellSouth witness, William H. Greer, admitted that "in this cost study there isn't one

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[42] Transcript of Proceedings, Nov. 27, 2000, v. I-B, p. 91 (Hearing).
[43] *BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 4, pp. 31-34 (Oct. 2, 2000) (Public Version).
[44] *See* D. Daonne Caldwell, Pre-Filed Direct Testimony, Exh. DDC-1, xDSL Capable and Copper Loops, Inputs_Connect & Test (file name TN-xdsl.xls), p. 000162 (Nov. 13, 2000) (listing "Performs frame continuity and due date coordination and testing" three times).
[45] *See, e.g.,* Dean R. Fassett, Pre-Filed Rebuttal Testimony, pp. 26-43, 70-72 (Nov. 20, 2000).
[46] *See* D. Daonne Caldwell, Pre-Filed Direct Testimony, Exh. DDC-1, xDSL Capable and Copper Loops, Inputs_Connect & Test (file name TN-xdsl.xls), pp. 000119-65 (Nov. 13, 2000) (provisioning xDSL loops).

iota of data from Tennessee's actual network that BellSouth relies on in this proceeding."[47] BellSouth could have used its actual network in Tennessee to derive the inputs for its cost study.

For these reasons, the Directors unanimously voted to:

1. Accept BellSouth's intermediary work groups as necessary at this time, although the Authority expects that manual activities will continue to be replaced by electronic activities as they become technically feasible;

2. Order BellSouth to substitute the work times, attached hereto as Exhibit 1, in its cost studies and to file adjusted cost studies within 30 days of the entry of the Authority's written order; and

3. Order BellSouth and Sprint/United to provide supporting documentation for any work time that is not listed in Exhibit 1 or that is not supported by documentation by a date to be determined by the Pre-Hearing Officer; and

4. Order BellSouth and Sprint/United to use the proposed work times as interim measures pending further orders of the Authority.

6. Loops capable of provisioning xDSL services:

a. What types of loops should the Authority require ILECs to make available to CLECs for the provisioning of xDSL services?

b. Should the Authority require ILECs to mark loops qualified and ordered by CLECs in order to prevent those copper loops from being rolled to fiber? [48]

The Authority confronts this issue in light of the following statement by the FCC:

> Unbundling basic loops, with their full capacity preserved, allows competitors to provide xDSL services. This in turn will foster investment, innovation, and competition in the local telecommunications marketplace. Without access to these loops, competitors would be at a significant disadvantage, and the incumbent LEC, rather than the marketplace, would dictate the pace of the deployment of advanced services.[49]

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[47] Transcript of Proceedings, Dec. 1, 2000, v. V-C, p. 203 (Hearing).

[48] Sprint/United did not address this issue as a result of a ruling of the Pre-Hearing Officer. During a Pre-Hearing Conference on August 3, 2000, the Pre-Hearing Officer granted a motion to expand this docket to include rates for the UCL element. *See Order of Pre-Hearing Officer Granting Petitions for Leave to Intervene, Motions to Expand the Docket, Motion for Interim Relief, Motion to Establish a Procedural Schedule, and Motion to Extend Deadline to File Reply Comments*, p. 2 (Aug. 10, 2000). The Pre-Hearing Officer allowed Sprint/United to continue to participate in the docket without filing additional cost studies regarding the UCL after learning that Sprint/United does not offer a product like the UCL and has not received requests for UCLs or its equivalent. *See* Transcript of Proceedings, Aug. 3, 2000, pp. 50- 53, 64 (Pre-Hearing Conference).

[49] *UNE Remand Order* at para. 190.

BellSouth offers a variety of xDSL loops that can be divided into the following groups: High Bit-Rate Digital Subscriber Line ("HDSL") Compatible Loop, Asymmetrical Digital Subscriber Line ("ADSL") Compatible Loop, Unbundled Copper Loop ("UCL") short and long, Integrated Services Digital Network ("ISDN") capable loop, and Universal Digital Channel ("UDC").[50] CLECs argue that they do not require loops specifically "designed" to provide xDSL services and, therefore, claim that all engineering and test point installation costs are unnecessary and unwarranted.[51] Accordingly, the CLECs contend that BellSouth should modify its cost studies by offering "non-designed" loops in addition to "designed" loops so that CLECs may design loops independently rather than purchase the loops designed by BellSouth.[52]

The distinction between a copper loop used by BellSouth to provide voice grade service level 1 and a UCL is not always obvious. According to BellSouth, UCLs "are commonly referred to as 'dry copper' loops because they have no intervening equipment such as load coils, bridged taps, repeaters, etc., between the end user premises and the Serving Wire Center."[53] Thus, by definition, a UCL does not require loop conditioning. However, it will always be necessary for the CLECs to purchase LMU information in order to find out whether the loop has any impediments to xDSL services. Once load coils and bridged taps are removed from a loop, that loop will be classified as a UCL. Thus, an SL1 becomes a UCL once bridged taps, load coils, and repeaters are removed from the loop or once it is determined through obtaining LMU information that such disturbers do not exist.

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[50] *BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 4, pp. 55-57, 60-61 (Oct. 2, 2000) (Public Version); *BellSouth's Post-Hearing Brief*, pp. 7-8 (Jan. 23, 2001).
[51] *See* Michael Starkey, Pre-Filed Rebuttal Testimony, pp. 15-17 (Nov. 20. 2000); Transcript of Proceeding, Dec. 1, 2000, v. V-A, p. 12, 28 (Redacted Version).
[52] *See* Michael Starkey, Pre-Filed Rebuttal Testimony, pp. 15-17 (Nov. 20. 2000); Transcript of Proceeding, Dec. 1, 2000, v. V-A, p. 28, 78-79 (Redacted Version).
[53] *BellSouth Telecommunications Inc. Unbundled Network Element Cost Studies*, Section 5, p. 60 (Oct. 2, 2000) (Public Version).

When BellSouth priced a 2-wire or a 4-wire copper loop in the Permanent Prices Docket, it made no distinction between a short and a long loop.[54] BellSouth's cost studies demonstrate that the recurring cost for a "2-wire copper loop – short" is $13.10 while the recurring cost for a "2-wire copper loop – long" is $45.66.[55] In the Permanent Prices Docket, the statewide, weighted average of a 2-wire analog voice grade loop is $14.92 regardless of the length of the loop.[56] BellSouth also proposed rates for 4-wire copper loops, both short and long, in this docket.[57]

The 2-wire and the 4-wire copper, short or long, presented in this proceeding by BellSouth are, according to BellSouth, "**designed** circuits and include test access points."[58] The 2-wire and the 4-wire analog voice grade copper loops presented in Permanent Prices Docket **are not designed loops**. In addition, the methodology used in calculating the cost of these copper loops in this docket differs from that used in the Permanent Prices Docket. In this proceeding, BellSouth uses a per foot equivalent of the loop matched with the average length of loop for each element, while this approach was not used in the Permanent Prices Docket.[59]

Simply put, BellSouth introduced a new pricing methodology in violation of the Pre-Hearing Officer's order to use the methodology approved in the Permanent Prices Docket. BellSouth offers no support whatsoever for the change in loop cost methodology. Moreover,

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[54] *See Permanent Prices, Summary of Modifications and Adjustments to BellSouth Telecommunications Inc.'s Cost Studies Ordered by the Tennessee Regulatory Authority*, Executive Summary, Attachment 1, p. 1 (Dec. 1, 1999).
[55] *See BellSouth Telecommunications Inc. Unbundled Network Element Cost Study*, Executive Summary, p. vii (Oct. 2, 2000) (Public Version).
[56] *See Permanent Prices, Final Order*, p. 20 (Feb. 23, 2001); *Permanent Prices, Summary of Modifications and Adjustments to BellSouth Telecommunications Inc.'s Cost Studies Ordered by the Tennessee Regulatory Authority*, Executive Summary, Attachment 1, p. 1 (Dec. 1, 1999).
[57] *See BellSouth Telecommunications Inc. Unbundled Network Element Cost Study*, Executive Summary, p. vii (Oct. 2, 2000) (Public Version).
[58] *Id.* Section 5, p. 60 (emphasis added).
[59] *See id.* at 61.

there is a question as to the need for designed loops given that CLECs do not claim to require loops designed to provide specific services.

BellSouth's nonrecurring costs filed on October 2, 2000 differed according to loop length. BellSouth corrected this difference in its November 13, 2001 filing when BellSouth recognized that the nonrecurring costs were the same for short and long UCLs. Further analysis of BellSouth's cost studies reveals the following:

Cost Element	Recur-ring costs	Nonrecurring Costs with LMU		Nonrecurring Costs without LMU	
		First	Additional	First	Additional
2-Wire UCL – Short[60]	$13.10	$187.34	$74.90	$109.48	$40.41
2-Wire UCL – Long[61]	$45.66	$187.34	$74.90	$109.48	$40.41
2-Wire Analog Voice Grade Loop (Service Level 1)[62]	$14.92	$109.85	$54.51	$31.99	$20.02

There is no reason to justify why the cost of a 2-wire copper loop in the Permanent Prices Docket should differ from the cost of a 2-wire UCL short or long in this docket; especially if the same cost methodology was applied in both proceedings. Thus, the recurring and nonrecurring costs for a 2-wire and a 4-wire UCL (short or long) should equal the recurring and nonrecurring cost of a 2-wire analog voice grade loop (SL1) and a 4-wire analog voice grade loop established in the Permanent Prices Docket.

Based on the foregoing, the Directors unanimously voted to:

1. Order that the recurring and nonrecurring costs for a 2-wire and a 4-wire UCL, short or long, be set equal to the recurring and nonrecurring cost of a 2-wire analog voice grade loop (SL1) and a 4-wire analog voice grade loop established in the Permanent Prices Docket;

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[60] *See id.* Executive Summary, p. vii (recurring costs); D. Daonne Caldwell, Pre-Filed Direct Testimony, Exh. DDC-1, Executive Summary, p. iii (Nov. 13, 2000) (nonrecurring costs).

[61] *See BellSouth Telecommunications Inc. Unbundled Network Element Cost Study*, p. vii (Oct. 2, 2000) (Public Version) (recurring costs); D. Daonne Caldwell, Pre-Filed Direct Testimony, Executive Summary, p. iii (Nov. 13, 2000) (nonrecurring costs).

[62] The figures for this element are not from BellSouth's cost studies in this docket. Instead, they are derived as follows: The 2-Wire Analog Voice Grade Loop (Service Level 1) is from the Permanent Prices Docket. *See Permanent Prices, Final Order*, p. 20 (Feb. 23, 2001); *Permanent Prices,* Cost Study, Executive Summary, Sec. 1, pp. iv-v (Jun. 9, 2000). The nonrecurring costs with LMU is calculated by adding respectively $77.86 (i.e., $187.34 - $109.48) and $34.49 (i.e., $74.90 - $40.41) to the nonrecurring costs without LMU.

2. Order BellSouth to provide "non-designed" loops to CLECs and to provide to the Authority additional cost studies for loop design that BellSouth performs at the request of a CLEC within 30 days of the entry of the Authority's written order in this proceeding;

3. Defer setting rates for BellSouth's other xDSL compatible loops (i.e., HDSL, ADSL, and IDSL/UDC) until after BellSouth revises its cost study; and

4. Order that BellSouth should mark loops qualified for xDSL services and that before BellSouth rolls xDSL capable copper loops to fiber, it must notify CLECs, giving them enough time and information to inform their customers about when and for how long the service will be disrupted and when the service will be restored. This notice must be the same as the notice BellSouth serves its own ADSL customers. In addition, BellSouth must minimize service disruptions whenever technically feasible.

7. What should ILECs charge for a shared loop?

For a shared loop, both Sprint/United and BellSouth appropriately allocated $0.00 to the cost of the local loop. This does not include splitter, DSLAM, collocation or other related items necessary to operate a shared loop, but is for use of the high frequency portion of the loop facility only. Because line sharing is only possible when an ILEC is the voice service provider to the end user, any CLEC that would like to provide both analog voice service and xDSL services should purchase stand-alone loops at the rates approved by the Authority in the Permanent Prices docket. This is also true whenever a CLEC wishes to continue providing xDSL services to a customer who terminates its ILEC provider's voice services. Therefore, the Directors found that there is no incremental loop cost associated with the use of the high frequency portion of the loop via a line sharing arrangement and unanimously voted to order that for a loop purchased by a CLEC to provide both analog voice services and xDSL services, or in the event a CLEC wishes to continue providing xDSL services to a customer who terminates its ILEC provider's voice services, ILECs shall charge the recurring and nonrecurring rates of a stand-alone loop.

8. Should the Authority order ILECs to make line splitting available in Tennessee?

Neither Sprint/United's nor BellSouth's cost study included line splitting. At the time cost studies were filed, the FCC had not made line splitting a clear requirement of ILECs. With the issuance of the *Line Splitting Order*, however, the FCC clearly required ILECs to allow line splitting. In that order, the FCC required ILECs to make all necessary network modifications to facilitate line splitting, including providing nondiscriminatory access to OSS necessary for pre-ordering, ordering, provisioning, maintenance and repair, and billing for loops used in line splitting arrangements. The FCC concluded that ILECs must perform the central office work necessary to deliver unbundled loops and switching to a CLEC's physically or virtually collocated splitter that is part of a line splitting arrangement.[63]

According to the FCC, ILECs are encouraged to work with CLECs to develop processes and systems to support the development of line splitting and to address other issues.[64] The FCC also stated:

> Furthermore, because no central office wiring changes are necessary in a conversion from line sharing to line splitting, we expect incumbent LECs to work with competing carriers to develop streamlined ordering processes for migrations between line sharing and line splitting that avoid voice and data service disruption and make use of the existing xDSL-capable loop.[65]

The FCC believes that the availability of line splitting will further speed the deployment of competition in the advanced services market and will foster the development of new technologies to support new forms of telecommunications services.[66] The FCC expected to

[63] *See Line Splitting Order* at para. 20.
[64] *See id.* at para. 21
[65] *Id.* at para. 22 (footnotes omitted).
[66] *See id.* at paras. 23 & 24.

further address issues closely related to line splitting, including splitter ownership, in upcoming proceedings where the record better supports the analysis of these complex issues.[67]

The FCC refused to decide the splitter ownership issue.[68] For line sharing, the FCC stated that ILECs were not required to provide splitters to CLECs.[69] Nonetheless, based on the nondiscriminatory provisions of the Telecommunications Act of 1996 and Tennessee statutes, the Authority should require ILECs to provide ILEC-owned and maintained splitters.[70] We see no reason to treat line splitting differently.

For the foregoing reasons, the Directors voted to:

1. Order that, pursuant to the FCC *Line Splitting Order,* and the directives of the Authority herein, ILECs in Tennessee should make line splitting available to requesting CLECs;

2. Order Sprint/United and BellSouth to submit cost studies for the limited situation where the ILEC permits CLECs to engage in line splitting using UNE-P and the CLEC purchases the entire loop and provides its own splitter, within 30 days of the entry of the Authority's written order.

3. Order Sprint/United and BellSouth to submit cost studies for the situation where the ILEC permits CLECs to engage in line splitting using UNE-P and the CLEC purchases the entire loop and the ILEC provides the splitter, within 30 days of the entry of the Authority's written order.

9. What process should ILECs use to provision line splitting?

Issues related to line splitting, even though raised by some parties, were not fully addressed in the pre-filed testimony or during the Hearing. The FCC has not fully addressed line splitting issues, but the FCC encouraged ILECs and CLECs to use existing state collaboratives to address such issues.[71] Given that there is no such collaborative under way in Tennessee, the

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[67] *See id.* at para. 25.
[68] *See id.* at para. 25.
[69] *See Line Sharing Order* at paras. 77 & 146.
[70] *See* 47 U.S.C. § 251(c) (Supp. 2000); 47 C.F.R. § 51.311(a); Tenn. Code Ann. § 65-4-124 (Supp. 2001); *see also infra* Issue 10.
[71] *See Line Splitting Order* at para. 21.

Directors unanimously voted to address the terms and conditions for line splitting within Docket No. 01-00526, *In re: Generic Docket to Establish Generally Available Terms and Conditions for Interconnection.*

10. What splitter ownership options should ILECs be required to offer in Tennessee?

The FCC's *Line Sharing Order* does not require ILECs to own splitters, but recognizes that ILECs have experience in splitter installation and functionality, because they have been providing DSL services even before the *Line Sharing Order* was issued.[72] Although not mandated by the FCC, allowing ILECs and CLECs to share splitters would efficiently reduce the number of splitters required.

Given that ILECs own splitters for their data affiliates to use in providing xDSL services, ILECs should offer CLECs ILEC-owned and maintained splitter options for xDSL services pursuant to Tenn. Code Ann. § 65-4-124(a). Absent this requirement and as long as ILECs own splitters for their data affiliates' use in the provision of DSL services, ILECs will favor their data affiliates to the detriment of CLECs.

CLECs involved in line sharing or splitting that can afford to own and maintain their own splitters could manage their capacity better and use the best technology available without depending on ILECs. This would benefit the development of competition for xDSL services in Tennessee and should be encouraged.

Therefore, the Directors unanimously voted to:

1. Order three splitter-ownership options: ILEC-owned/ILEC-maintained, CLEC-owned/ILEC-maintained, and CLEC-owned/CLEC-maintained;

2. Order Sprint/United to modify its splitter cost methodology as follows: (a) include Sprint/United-owned/maintained splitter; (b) allow CLECs to purchase either a 96-line or a 24-line splitter; (c) capitalize installation costs at the cost of capital ordered in the Permanent Prices

[72] *See Line Sharing Order* at paras. 145 & 146.

Docket and recover them through monthly recurring rates over a fixed period of time; and (d) replace estimated CLEC investment per shelf by actual investment amount; and

3. Order Sprint/United to file a modified cost study within 30 days of the entry of the Authority's written order.

11. Splitters and cross-connects:

a. Where should ILEC-owned splitters be collocated in the Central Office?

b. What should be the rate of cross connects for ILEC-owned splitters?

c. What process should ILECs use to provision ILEC-owned splitters?

In its *Line Sharing Order*, the FCC decided:

> We would expect that the costs of installing cross connects for xDSL services in general would be the same as for cross connecting loops to the competitive LECs' collocated facilities, particularly where the splitter is located within the incumbent LEC's MDF. Accordingly, we find it reasonable to establish a presumption that, where the splitter is located within the incumbent LEC's MDF, the cost for a cross connect for entire loops and for the high frequency portions of loops should be the same. We would expect the states to examine carefully any assessment of costs for cross connections for xDSL services that are in excess of the costs of connecting loops to a competitive LECs' collocated facilities where the splitter is located within the MDF. If the splitter is not located within the incumbent LEC's MDF, however, then we would expect the states to allow the incumbent LEC to adjust the charge for cross connecting the competitive LEC's xDSL equipment to the incumbent LECs' facilities to reflect any cost differences arising from the different location of the splitter, compared to the MDF. We would expect that this amount would be only minimally higher than for cross connecting a splitter located within the MDF to the competitive LEC's xDSL equipment.[73]

Clearly, if the splitter is not located within the ILEC's MDF, the FCC expected that the cost would be higher, but that the difference would be small. The states were urged to scrutinize any discrepancy between costs for cross connections for entire loops and for the high frequency portions of the loops.

Nothing in the FCC's *Line Sharing Order* suggests that CLECs may dictate the location of an ILEC-owned splitter. However, an ILEC-owned splitter could be located in any of the

[73] *Id.* at para. 145.

following locations within the central office: the MDF, in a relay rack mounted arrangement or intermediate frame arrangement.

Because line sharing equipment is not located near BellSouth's MDF, cross connect costs can be artificially inflated. The FCC did not determine where the line sharing equipment should be located. However, the FCC determined that cross connect costs should not differ substantially regardless of where the equipment is located.

BellSouth recovers part of its cross connects cost through its per line activation costs and its collocation costs. The Authority ordered BellSouth to modify its cost studies for cross connects rates to reflect whether the splitter is located within the ILEC's MDF.[74] However, BellSouth maintains that splitters cannot be located on or adjacent to the MDF and did not modify its cost study to reflect this arrangement.

Placing splitters on the MDF would be an inefficient use of space and would create security and/or testing problems. BellSouth's placement of the splitter at an average of 150 feet from the MDF may be excessive, however, as it leads to higher costs and could be anti-competitive. Therefore, where BellSouth can place the splitter adjacent to the MDF or at a distance less than 150 feet, it should do so to minimize cost.

BellSouth's proposed costs for 2-wire and 4-wire cross-connects do not seem excessive. The monthly recurring costs for DS1 cross-connects, however, are significantly higher than the costs adopted in the Permanent Prices Docket.[75] This difference arises because BellSouth exceeds the maximum allowable length for a DS1 jumper and then must compensate by using a

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[74] *See Order Adopting Interim Rates*, p. 7 (Nov. 7, 2000).

[75] In this Docket, BellSouth proposed a rate of $12.45 for element H.3.3 Assembly Point: DS-1 Cross-Connects. *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Executive Summary, p.8 (Oct. 2, 2000) (Public Version). In the Permanent Prices Docket, BellSouth proposed a rate of $0.38 for Connection to DSX. *See Permanent Prices, Competitive Local Exchange Carrier Tariff for the State of Tennessee*, Tennessee Price Schedule, p. 9 of 21 (Oct. 24, 2001).

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bi-directional DS1 intra-office repeater on every DS1 cross-connect. A remedy is for BellSouth to place an ILEC-owned splitter on the MDF, but this is not efficient. A better alternative is for BellSouth, whenever possible, to place splitters within 100 feet of the ILEC's MDF (Sprint/United assumed 95 feet from the MDF to the splitter)[76] and to provide additional cost studies for splitter collocation.

Unless ILECs prove to the Authority that it is not technically feasible to offer both "line-at-a-time" and "shelf-at-a-time," it is in the interest of competition to order ILECs to offer a menu of services that allow CLECs the maximum reasonable amount of flexibility. Before xDSL services massively penetrate the market, a "shelf-at-a-time" offer could result in under-utilization of the splitter and over-recovery for ILECs owning the splitter.

BellSouth requires CLECs to purchase access to its splitter in either 24-port or 96-port increments. It does not offer a per-port option. If a small CLEC is only interested in a small number of ports, it will be forced to purchase more capacity than it needs. This may constitute a barrier to entry in the market for advanced services. Offering a choice between shelf-at-a-time and port-at-a-time provisioning will allow CLECs more flexibility.

Based on the foregoing, the Directors unanimously voted to:

1. Order Sprint/United to mount the splitter adjacent to Sprint/United's MDF if it is technically feasible as envisioned by the FCC when Sprint/United offers ILEC-owned/maintained splitters;

2. Order Sprint/United and BellSouth to modify their splitter cost methodology so that, for ILEC-owned/maintained splitter, they provide splitter functionality on an individual "port-at-a-time" or on a "shelf-at-a-time" basis, at the option of the CLEC;

3. Order that when ILEC-owned/maintained splitters are used, BellSouth should mount the splitters in a relay rack adjacent to or within 100 feet of its MDF where technically feasible as envisioned by the FCC; and

[76] *See* Daniel R. Gordon, Pre-Filed Direct Testimony, p. 12 (Nov. 13, 2000).

4. Order BellSouth and Sprint/United to submit new collocation cost studies, which include all ordered splitter placement options within 30 days of the entry of the Authority's written order.

12. What should be the monthly recurring charge for the functionality of ILEC-owned splitters?

Sprint/United's cost study is based on its belief that it is not required to provide splitters to CLECs.[77] Therefore, there is no monthly recurring rate proposed in its cost study for ILEC-owned splitters. BellSouth proposed monthly recurring costs of $183.79 for a 96-Line Capacity Splitter System and $45.95 for a 24-Line Capacity Splitter System.[78] During cross-examination, BellSouth's witness, D. Daonne Caldwell, could not explain the difference between BellSouth's invoice price of $3,335.21 and the material price of $4,242.70 for a splitter reflected in BellSouth's cost study.[79] If BellSouth had filed supporting documentation for the cost study, its witness may have been able to explain this difference. Instead, Ms. Caldwell suggested that BellSouth may have added the cost of additional equipment to the price on the invoice.[80]

The actual material prices from BellSouth's suppliers or vendors are proprietary among BellSouth and its suppliers. This raises concerns as to the veracity of the material prices that BellSouth used, since none of the parties – not even the Authority – could verify the authenticity of the numbers that are included in the cost studies. The Authority is being asked to blindly accept BellSouth's material prices even though BellSouth was not able to explain some of its price inputs in the cost studies. As such, there is a need to further review BellSouth's material prices.

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[77] *See Sprint's Post-Hearing Brief*, p. 8 (Jan. 23, 2001).
[78] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Executive Summary, p. xii (Oct. 2, 2000) (Public Version).
[79] *See* Transcript of Proceedings, Nov. 27, 2000, v. I-C, p. 144-45 (Hearing).
[80] *See id.* at 145.

Based on the foregoing, the Directors unanimously voted to:

1. Order Sprint/United to file a new cost study containing monthly recurring rates for all splitter ownership options ordered in this proceeding within 30 days of the entry of the Authority's written order;

2. Reject the Data Coalition's proposed charges of $291.48 for all tasks associated with engineering and installation of the ILEC-owned splitter because adopting this charge is not justified by the use of BellSouth's network;

3. Order BellSouth to adjust the splitter monthly recurring rate for an ILEC-owned splitter to reflect BellSouth's invoice for the material price;

4. Order BellSouth and Sprint/United to offer CLECs three alternatives for the monthly recurring costs: (a) ILEC-owned splitter without the bantam jack test; (b) ILEC-owned splitter with the bantam jack test; and (c) Mechanized Loop Testing; and

5. Order BellSouth to file the adjusted rates within thirty (30) days of the entry of the Authority's written order.

6. Remand this Docket to the Pre-Hearing Officer to devise a mechanism through which the Authority and parties can verify the material prices in an expedient and efficient manner. BellSouth shall use the material prices previously submitted in the interim.

13. What should be the nonrecurring charge for the functionality of ILEC-owned/maintained splitters?

Sprint/United's cost study does not include the ILEC-owned splitter option. For the CLEC-owned splitter options, the nonrecurring charges proposed by Sprint/United for cross connects and jumpers associated with splitter installation will be reduced by the work time adjustments adopted herein. BellSouth proposed splitter nonrecurring costs of $371.63 for 96-line and 24-line splitters. It does not make sense that when a CLEC orders a 24-line splitter it is charged $15.48 per port and when it orders a 96-line splitter it is charged $3.87 per port. Therefore, the Directors unanimously voted to order BellSouth and Sprint/United to adjust their splitter nonrecurring rates to reflect the Authority's directives to provision splitters a port-at-a-time and a shelf-at-a-time.

14. Loop Conditioning:

a. What network assumptions should support recurring and nonrecurring loop conditioning costs?

b. What loop conditioning rates should the Authority adopt?

The FCC requires ILECs to condition loops, regardless of loop length, in order to enable requesting carriers to provide xDSL services on the same loops over which ILECs provide analog voice service unless conditioning that loop would significantly degrade the ILEC's voice service.[81] The FCC also concluded that ILECs should be compensated for conditioning loops less than 18,000 feet.[82]

BellSouth separated loop conditioning costs between short loops, under 18,000 feet, and long loops, over 18,000 feet.[83] However, as explained below, the assumptions underlying BellSouth's loop conditioning costs may result in inflated costs. As with other costs presented in this proceeding, BellSouth does not support its loop conditioning costs with sufficient documentation.

Unlike Sprint/United, which assumes it will condition 25 pairs at a time,[84] BellSouth assumes that it will only condition 10 pairs at a time for shorter loops and two pairs at a time for longer loops.[85] In addition, BellSouth assumes an average of 2.1 load coils/equipment per short loop and 3.5 load coils/equipment per long loop.[86] It also assumes that bridged taps exist at 3 points on a loop, and that CLECs will order 6 pairs while the remaining 4 will be used by

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[81] *See Line Sharing Order* at paras. 84 & 85; *UNE Remand Order* at para 172.
[82] *See id.* at para. 82.
[83] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 5, pp. 60, 67-68 (Oct. 2, 2000) (Public Version).
[84] *See Sprint's Post-Hearing Brief*, p. 4 (Jan. 23, 2001).
[85] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 5, pp. 67-68 (Oct. 2, 2000) (Public Version); *See* D. Daonne Caldwell, Pre-Filed Direct Testimony, Exh. DDC-1, xDSL Capable and Copper Loops, Inputs_Connect & Test (file name TN-xdsl.xls), pp. 000174 - 178 (Nov. 13, 2000) (Unbundled Loop Modification)
[86] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 5, pp. 67 (Oct. 2, 2000) (Public Version).

BellSouth.[87] In effect, BellSouth developed a nonrecurring "additive" charge to assess on each xDSL unbundled loop purchased by a CLEC. The purpose of the "additive" is to recover conditioning costs associated with 4 out of every 10 loops conditioned.

This charge may not be appropriate, as BellSouth fails to present any proof demonstrating that the share of CLECs in this market is or will be 60%. Moreover, BellSouth witness, D. Daonne Caldwell, admitted that BellSouth has counted some loop conditioning costs in the maintenance account. She stated: "But I think you need to look at our factors to see that we do not have an aggressive plan for removing load coils at this point in time, so there's not a lot of money in those projected maintenance accounts."[88] CLECs claim that BellSouth does not charge its retail ADSL services for loop conditioning and BellSouth's federal tariff does not mention loop conditioning.[89]

Other assumptions that were challenged by the parties include the plant mix: underground, buried, and aerial plant mix factors.[90] These assumptions may inflate the costs for loop conditioning and can constitute a barrier to entry for CLECs.

CLECs also argue that BellSouth has seriously inflated the work times and associated costs for loop conditioning.[91] A demonstration performed by one of the parties during the Hearing casts serious doubts on BellSouth's estimated task times in its cost studies even though

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[87] *See id.* at 67-68.
[88] Transcript of Proceedings, Nov. 27, 2000, v. I-B, p. 107 (Hearing).
[89] *Post-Hearing Brief of the Data Coalition*, pp. 40, 45-46 (Jan. 23, 2001) (Public Version).
[90] *See* Michael Starkey, Pre-Filed Rebuttal Testimony, pp. 62-65 (Nov. 20. 2000); Dean R. Fassett, Pre-Filed Rebuttal Testimony, pp. 60-62 (Nov. 20, 2000)
[91] The Data Coalition proposes 8 minutes excluding travel time for underground cable load coil removal in a manhole. *See* Dean R. Fassett, Pre-Filed Rebuttal Testimony, pp. 71-72, 74 (Nov. 20, 2000). BellSouth proposes 51.03 minutes for the same activity. *See* D. Daonne Caldwell, Pre-Filed Direct Testimony, Exh. DDC-1, xDSL Capable and Copper Loops, Inputs_Connect & Test (file name TN-xdsl.xls), pp. 000176 (Nov. 13, 2000) (Unbundled Loop Modification).

the demonstrator, Mr. Dean Fassett, admitted that he did not follow all the required steps and that he based his estimates from his personal experience and opinion.[92]

In the Permanent Prices Docket and in this proceeding, when calculating recurring rates, BellSouth did not assume the existence of load coils or repeaters on loops less than 18,000 feet because it assumed that loops in excess of 12,000 feet were fiber.[93] Indeed, BellSouth assumed that "Loops 12 kilofeet (KFT) and greater are redesigned to be served with Digital Loop Carrier (DLC) and fiber feeder. Loops less than 12 KFT in length are redesigned to be served on either 26 gauge or a combination of 26 and 24 gauge copper cable."[94]

Some of BellSouth's work times and the costs associated with them are unreasonably high. In addition, BellSouth's cost studies do not show cost savings due to the use of a forward-looking network. Further, the cost studies fail to include any new generation DLC technology even though BellSouth's witnesses admitted that this new technology was deployed in Tennessee.[95] In the Permanent Prices Docket, the Authority ordered the use of 70.38% Integrated DLC and 29.62% analog line terminations in calculating switching ports.[96] This mix must be used in setting recurring and nonrecurring rates in this proceeding. BellSouth must account for the proportion of its network served on DLC and fiber feeder that does not require loop conditioning and the proportion of loop conditioning costs accounted for in its maintenance accounts in order to show the savings due to a forward-looking network.

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[92] *See* Transcript of Proceedings v. VI-C, pp. 182-83 (Hearing).
[93] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Studies*, Section 3, p. 11 (Oct. 2, 2000) (Public Version); *Permanent Prices, BellSouth Telecommunications, Inc. Tennessee Benchmark Cost Proxy Model 2.5*, p. 000022 (Nov. 24, 1997).
[94] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Study*, Section 3, p. 11 (Oct. 2, 2000) (Public Version).
[95] *See* Keith Milner, Pre-Filed Direct Testimony, pp. 3-9 (Nov. 13, 2000).
[96] *See Permanent Prices, Interim Order on Phase I of Proceeding to Establish Prices for Interconnection and Unbundled Network Elements*, p. 26 (Jan. 25, 1999).

Sprint/United's loop conditioning methodology is more efficient than BellSouth's methodology and should be adopted for both Sprint/United's and BellSouth's loop conditioning cost. Adopting Sprint/United's loop conditioning methodology for BellSouth's cost study is warranted because it is cost-effective and pro-competitive. BellSouth's methodology lacks of sufficient documentation and is not supported by industry loop conditioning practices.

Based on the foregoing, the Directors unanimously voted to:

1. Order that ILECs in Tennessee are entitled to recover loop conditioning costs even on loops less that 18,000 feet;

2. Adopt Sprint/United's loop conditioning methodology and rates as proposed in this proceeding for United's territory in Tennessee;

3. Order BellSouth to account for the portion of its network served on DLC and fiber feeder that does not require loop conditioning and the portion of loop conditioning costs accounted for in its maintenance accounts in order to show the savings due to a forward-looking network;

4. Order BellSouth to use Sprint/United's loop conditioning cost methodology for loops less than 18,000 feet as follows: (a) remove load coils on an entire binder of 25 cable pairs at a time and adjust the cost per cable pair by the feeder fill percentage; (b) calculate a weighted average cost for all loops (underground, aerial, and buried); (c) multiply the weighted average cost for all loops by the percentage of loaded loops; (d) reduce the result by a CLEC customer churn factor; and (e) spread all loop conditioning costs across all digital-capable loops shorter than 18,000 feet; and

5. Order BellSouth to file new loop conditioning rates within 30 days of the entry of the Authority's written order.

15. What is the appropriate time interval for ILECs to provide the line sharing UNE to CLECs?

It is important that neither BellSouth's nor Sprint/United's data affiliate enjoy preferential treatment as compared to CLEC data providers. Compared to the ILECs, however, the Data Coalition provided most of the testimony on the interval necessary for ILECs in Tennessee to enable line sharing for a CLEC data carrier's customer and the interval necessary

for ILECs in Tennessee to expand a CLEC's existing collocation arrangement in order to enable line sharing for a CLEC data carrier's customer.

Sprint/United did not propose any provisioning intervals. From BellSouth's interconnection agreement with Covad, BellSouth states:

> 2.11 BellSouth will initially provide access to the HUNE [High Frequency Portion of the Line Sharing UNE] within the following intervals: Beginning on June 6, 2000, BellSouth will return a Firm Order Confirmation ("FOC") in no more than two (2) business days. BellSouth will provide Covad with access to the HUNE as follows:
>
> 2.11.1 For 1-5 lines at the same address within three (3) business days from the receipt of Covad's LSR [Local Service Request]; 6-10 lines at the same address within 5 business days; and more than 10 lines at the same address is to be negotiated. BellSouth and Covad will re-evaluate these intervals on or before August 1, 2000.[97]

In response to an Authority data request, BellSouth clarified its position on provisioning intervals as follows: 1) for 1-5 Plain Old Telephone Service ("POTS") lines without Network Interface Device ("NID") or Synchronization-at-NID, BellSouth provisions the line sharing UNE in 3 business days; 2) for 1-5 POTS lines with NID or Synchronization-at-NID, BellSouth provisions the line sharing UNE in 4 business days; 3) for 6-14 POTS and Centrex lines with or without NID or Synchronization-at-NID, BellSouth provisions the line sharing UNE in 5 business days; and 4) for more than 14 lines, the installation process follows guidelines of a negotiated project.[98] The provisioning intervals proposed here are for a data rate of 1.5 Mbps x 256 Kbps. For higher data rates, BellSouth proposes a minimum of 5 business days.[99] Further, BellSouth states that it does not have an ADSL unit, but instead, provisions BellSouth

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[97] *BellSouth Telecommunications, Inc.'s Notice of Filing*, Attachment 4: Amendment to the Interconnection Agreement Between Dieca Communications, Inc. d/b/a Covad Communications Company and BellSouth Telecommunications, Inc., Section 2.11 (Jun. 30, 2001).
[98] *See* BellSouth's Response to the Staff's Data Request, Item 2 (Aug. 6, 2001).
[99] *See id.*

FastAccess® Internet Service, BellSouth's retail, non-regulated Internet access service, from BellSouth's wholesale ADSL tariff.[100]

Based on the limited testimony and the work times necessary for ILECs to provide line sharing as described in Exhibit No. 1 to this Order, the Authority unanimously voted to:

1. Order that for 1-5 lines at the same end-user address, the provisioning and installation interval for the high frequency portion of the loop UNE, where **no conditioning is necessary** should be 3 business days from the receipt of a CLEC's Local Service Request ("LSR");

2. Order that for 1-5 lines at the same end-user address, the provisioning and installation interval for the high frequency portion of the loop UNE, where **conditioning is necessary** should be 5 business days from the receipt of a CLEC's LSR;

3. Order that for 6-14 lines at the same end-user address, the provisioning and installation interval for the high frequency portion of the loop UNE, where **no conditioning is necessary** should be 5 business days from the receipt of a CLEC's LSR;

4. Order that for 6-14 lines at the same end-user address, the provisioning and installation interval for the high frequency portion of the loop UNE, where **conditioning is necessary** should be 10 business days from the receipt of a CLEC's LSR; and

5. Order that the parties should negotiate an appropriate provisioning interval for orders of more than 14 lines per order or per end-user location, whether conditioning is necessary or not.

16. Should the Authority require ILECs to provide CLECs full test access to all technically feasible points of interconnection?[101]

In its *UNE Remand Order*, the FCC stated: "Thus, we conclude that, in so far as it is technically feasible, the incumbent must test and report trouble on conditioned lines, if requested

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[100] *See id.*

[101] Sprint/United did not address this issue as a result of a ruling of the Pre-Hearing Officer. During a Pre-Hearing Conference on August 3, 2000, the Pre-Hearing Officer granted a motion to expand this docket to include rates for the UCL element. *See Order of Pre-Hearing Officer Granting Petitions for Leave to Intervene, Motions to Expand the Docket, Motion for Interim Relief, Motion to Establish a Procedural Schedule, and Motion to Extend Deadline to File Reply Comments*, p. 2 (Aug. 10, 2000). The Pre-Hearing Officer allowed Sprint/United to continue to participate in the docket without filing additional cost studies regarding the UCL after learning that Sprint/United does not offer a product like the UCL and has not received requests for UCLs or its equivalent. *See* Transcript of Proceedings, Aug. 3, 2000, pp. 50- 53, 64 (Pre-Hearing Conference). Given this ruling, Sprint/United did not address this issue.

by the competitor, for all of the line's features, functions, and capabilities, and may not restrict its testing to voice-transmission only."[102] In its *Line Sharing Order,* the FCC stated:

> Thus, we require that incumbent LECs must provide requesting carriers with access to the loop facility for testing, maintenance, and repair activities. We require that, at a minimum, incumbents must provide requesting carriers with loop access either through a cross-connection at the competitor's collocation space, or through a standardized interface designed for [sic] to provide physical access for testing purposes. Such access must be provided in a reasonable and nondiscriminatory manner.[103]

BellSouth's proposed nonrecurring first and additional rates for testing might be unreasonably high, because of the unsupported underlying assumptions about labor rates and the half-hour work time increment. Therefore, the Directors unanimously voted to:

1. Order that no action is necessary for Sprint/United on this issue at this time;

2. Reject the costs that BellSouth proposed for loop testing beyond voice grade; and

3. Order the parties to file testing procedures and proposed rates based on splitter ownership options, along with supporting documentation for all assumptions, within 30 days of the entry of the Authority's written order.

17. What cost and investment assumptions should be considered when ILECs upgrade their Operational Support Systems ("OSS") for line sharing?

According to the FCC, "incumbent LECs should recover in their line sharing charges those reasonable incremental costs of OSS modification that are caused by the obligation to provide line sharing as an unbundled network element."[104] Further, the FCC determined: "[T]he OSS capabilities required for incumbent LEC provision of shared-line xDSL services are substantially similar to the OSS capabilities required for competitive LEC provision of shared-line xDSL services, and could be easily adapted to support unbundled access to the high

[102] *UNE Remand Order* at para. 195.
[103] *Line Sharing Order* at para. 118.
[104] *Id.* at para. 144.

frequency portion of the loop network element."[105] Accordingly, the monthly recurring charges should be capitalized so that the charges do not burden CLECs with large up front charges. The FCC gave states authority to require ILECs to recover such OSS costs through recurring charges over a reasonable period of time.[106]

Sprint/United used projected demand provided by various CLECs and a five-year cost recovery life to calculate the monthly recurring costs due to OSS modification for line sharing purposes.[107] It proposes that actual OSS modification costs and collected cost recovery be tracked such that this charge can be eliminated from the line sharing price once the recovery is completed.[108]

BellSouth's proposed rates for Line Sharing Splitter in the Central Office attracted the most discussion from the parties and the Authority during the Hearing. BellSouth contends that it had to develop a separate OSS database for CLECs to use for line sharing.[109] BellSouth implemented a very expensive solution through a contract with Telecordia.[110] Because the expense to upgrade its OSS was enormous, the monthly rate proposed by BellSouth, $8.45 for Element J.4.3: Line Sharing Splitter – Per Line Activation in the Central Office,[111] was also very high compared to Sprint/United's $0.83 monthly rate.[112]

On February 9, 2001, BellSouth informed the Authority that BellSouth and the Data Coalition reached a region-wide settlement of the rates for Element J.4.3: Line Sharing Splitter –

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[105] *Id.* at para. 99.
[106] *See id.* at para. 144.
[107] *See* Daniel R. Gordon, Pre-Filed Direct Testimony, p. 7 (Nov. 13, 2000).
[108] *See id.*
[109] *See* Ronald M Pate, Pre-Filed Direct Testimony, pp. 3, 14-19 (Nov. 13, 2000).
[110] *See* Transcript of Proceedings, Nov. 27, 2000, v. I-C, pp. 167-69 (Hearing) (dollar amounts marked as proprietary).
[111] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Study*, Executive Summary, p. xii (Oct. 2, 2000) (Public Version).
[112] *See* Daniel R. Gordon, Pre-Filed Direct Testimony, p. 7 (Nov. 13, 2000).

Per Line Activation in the Central Office. In this filing, BellSouth agreed to the following:

1. BellSouth will charge $0.61 per month as an interim rate, subject to retroactive true-up once a permanent rate has been established.

2. BellSouth will not seek to establish a permanent rate until (1) the Telcordia solution has been implemented and is commercially available; and (2) the parties in this docket have been advised in writing of BellSouth's intent to seek the establishment of a permanent rate.

3. BellSouth will only seek to establish a permanent rate in the context of an Authority proceeding in which the Authority must affirmatively approve the proposed rate rather than merely allowing the rate to go into effect.[113]

After setting forth the parties' agreement, BellSouth requested only that the Authority adopt the monthly recurring rate of $0.61 as interim rate subject to true-up, for Element J.4.3. The Authority granted BellSouth's request and adopted the monthly recurring rate of $0.61 for Element J.4.3. as an interim rate, and this new interim rate replaced the monthly recurring interim rate for the same element incorporated in the Authority's *Order Adopting Interim Rates* entered in this proceeding on November 7, 2000.[114]

Based on the foregoing, the Directors unanimously voted to approve the assumptions and adopt the rate proposed by Sprint/United for OSS recovery for line sharing. As to BellSouth, the Directors unanimously voted to adopt the monthly recurring rate of $0.61 for Element J.4.3: Line Sharing Splitter – per Line Activation – Central Office as a permanent rate for BellSouth in Tennessee.

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[113] *See* Letter from BellSouth Telecommunications, Inc. dated Feb. 9, 2001 (filed Feb. 9, 2001).

[114] *See Order Approving Agreed interim, monthly, Recurring Rates for Element J.4.*3, pp. 2-3 (Apr. 23, 2001) (altering *Order Adopting Interim Rates*, Exh. 1, p.2, Line Item 2 (Nov. 7, 2000)).

18. Loop Makeup ("LMU") information:

a. What access should CLECs have to ILECs' LMU information?

b. What rate, if any, should CLECs pay when they place a manual local service request, if there is no electronic ordering interface available?

The FCC has made it clear that

> Loop qualification information identifies the physical attributes of the loop plant (such as loop length, the presence of analog load coils and bridge taps, and the presence and type of Digital Loop Carrier) that enable carriers to determine whether the loop is capable of supporting xDSL and other advanced technologies. This information is needed by carriers seeking to provide advanced services over those loops through the use of packet switches and DSLAMs.[115]

The FCC also stated that the information that ILECs must provide to requesting carriers is, at a minimum, the same underlying information that the ILECs have in any of their own databases or other internal records.[116] According to the FCC:

> [A]n incumbent LEC must provide the requesting carrier with nondiscriminatory access to the same detailed information about the loop that is available to the incumbent, so that the requesting carrier can make an independent judgement about whether the loop is capable of supporting the advanced services equipment the requesting carrier intends to install.[117]

The FCC also stated:

> [A]ccess to loop qualification information must be provided to competitors within the same time intervals it is provided to the incumbent LEC's retail operations. To the extent such information is not normally provided to the incumbent LEC's retail personnel, but can be obtained by contacting incumbent back office personnel, it must be provided to requesting carriers within the same time frame that any incumbent personnel are able to obtain such information.[118]

In addition, the FCC clarified that

> the relevant inquiry is not whether the retail arm of the incumbent has access to the underlying loop qualification, but rather whether such information exists anywhere within the incumbent's back office and can be accessed by any of the incumbent LEC's personnel. Denying competitors access to such information,

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[115] *UNE Remand Order* at para. 426 (footnotes omitted).
[116] *See id.* at para. 427.
[117] *Id.* at para. 427.
[118] *Id.* at para. 431.

> where the incumbent (or an affiliate, if one exists) is able to obtain the relevant information for itself, will impede the efficient deployment of advanced services. To permit an incumbent LEC to preclude requesting carriers from obtaining information about the underlying capabilities of the loop plant in the same manner as the incumbent LEC's personnel would be contrary to the goals of the Act to promote innovation and deployment of the new technologies by multiple parties.[119]

Further, the FCC made a very important finding when it addressed SBC Communications, Inc.'s loop qualification system stating:

> [T]he incumbent LEC must provide access to the underlying loop qualification information contained in its engineering records, plant records, and other back office systems so that requesting carriers can make their own judgements about whether those loops are suitable for the services the requesting carriers seek to offer. Otherwise, incumbent LECs would be able to discriminate against other xDSL technologies in favor of their own xDSL technology.[120]

Based on the above cited authority, the Directors unanimously voted to:

1. Order that CLECs are entitled to both electronic and manual LMU;

2. Order Sprint/United to replace estimated times by actual times that its employees spend performing loop qualification tasks;

3. Order Sprint/United to offer two separate charges for loop qualification, one for manual and one for electronic LMU information;

4. Order BellSouth to reduce its proposed clerical time input for manual LMU performed by the Service Advocacy Center from 15 minutes to 10 minutes and to file with the Authority, within 30 days of the Authority's written order, new proposed rates for LMU information with or without a facility reservation number;

5. Order BellSouth to charge CLECs requesting LMU $0.76 as an interim rate for both electronic and manual LMU information until BellSouth makes a showing that electronic access to LMU is available to all CLECs in Tennessee and the Authority establishes permanent rates for manual and electronic access to LMU information;

6. Order BellSouth to adjust its cost studies such that both manual and mechanized LMU information options are available when a CLEC orders a UNE with or without LMU, and to file the adjusted cost studies within 30 days of the entry of the Authority's written order;

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[119] *Id.* at para. 430.
[120] *Id.* at para. 428.

7. Order that the electronic or manual access to Loop Facilities Assignment Control System ("LFACS") and Loop Qualification System ("LQS") available to CLECs is sufficient for LMU information at this time; and

8. Order BellSouth to modify its cost study such that the percentage of time LMU does not exist in LFACS be reduced from 58.8% to 20%, and to file adjusted cost studies within 30 days of the entry of the Authority's written order.

19. What should be the fallout rate accounting for orders that cannot flow through the system electronically? Should the fallout rate ordered by the Authority in the Permanent Prices Docket apply in this docket?

In the Permanent Prices Docket, the Authority held: "Operational Support Service costs associated with all activities shall reflect a 7% fallout rate."[121] Further, the Authority also ordered: "[U]pon clarification of its Interim Order regarding non-recurring prices, BellSouth shall adjust its TELRIC model to reflect fifteen (15) minutes of work time to resolve a fallout situation that will occur 7% of the time. This adjustment results in an average work time per order of sixty-three (63) seconds."[122] Based on these earlier rulings, the Directors unanimously voted to order BellSouth to modify its cost studies, within 30 days of the entry of the Authority's written order, such that OSS costs associated with all work group activities reflect a 7% fallout rate and 15 minutes of work time to resolve a fallout situation.

20. Should the Authority require ILECs to install, for the CLECs' use, dual-purpose line cards in the digital loop carrier system?

In its *Line Splitting Order*, the FCC stated:

> The Line Sharing Order also addressed the implications of a digital loop carrier (DLC) network architecture, in which the portion of the loop running from the central office to a remote terminal is on fiber facilities and the portion of the loop running from the remote terminal to the customer is on a copper loop facility. We concluded that incumbent LECs are required to unbundle the high frequency portion of the local loop even where the incumbent LEC's voice customer is served by DLC facilities. We also concluded that incumbents must provide

[121] *Permanent Prices, Interim Order on Phase I of Proceeding to Establish Prices for Interconnection and Unbundled Network Elements*, p. 40 (Jan. 25, 1999).
[122] *Id., Order Re Petitions for Reconsideration and Clarification of Interim Order on Phase I*, p. 44 (Nov. 3, 1999).

> unbundled access to the high frequency portion of the loop at the remote terminal as well as the central office.[123]

The FCC also stated:

> If our conclusion in the *Line Sharing Order* that incumbents must provide access to the high frequency portion of the loop at the remote terminal as well as the central office is to have any meaning, then competitive LECs must have the option to access the loop at either location, not the one that the incumbent chooses as a result of network upgrades entirely under its own control. This approach is consistent with the dual goals expressed in the Line Sharing Order of allowing incumbents to deploy whatever network architecture they deem to be most efficient, while also requiring them to engage in good faith negotiations regarding their unbundling obligations.[124]

The FCC clarified:

> We also recognize that there are other ways in which line sharing may be implemented where there is fiber in the loop and we do not mandate any particular means in this Order. Solutions largely turn on the inherent capabilities of equipment that incumbent LECs have deployed, and are planning to deploy, in remote terminals.[125]

The FCC continued that "[a]ll indications are that fiber deployment by incumbent LECs is increasing, and that collocation by competitive LECs at remote terminals is likely to be costly, time consuming, and often unavailable."[126]

Given the above-cited authority, the Directors unanimously voted to:

1. Order BellSouth and Sprint/United to install, for the CLECs' use, dual-purpose line cards in the fiber-fed Next Generation DLC equipment in the remote terminal;

2. Order that such installation of line cards should be allowed under nondiscriminatory terms and at just and reasonable rates; and

3. Order BellSouth and Sprint/United to file additional cost studies for such installation of line cards in the fiber-fed Next Generation DLC equipment at the remote terminal within thirty 30 days of the entry of the Authority's written order.

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[123] *Line Splitting Order* at para. 8.
[124] *Id.* at para. 11 (footnotes omitted).
[125] *Id.* at para. 12.
[126] *Id.* at para. 13 (footnotes omitted).

21. What deaveraging methodology should the Authority adopt?

The Authority unanimously voted to defer consideration of this issue to Docket No. 01-00339, *In re: Generic Docket to Consider Technology Advances and Geographic Deaveraging.*

22. What process should the Authority adopt to enable CLECs to access Unbundled Network Terminating Wire ("UNTW") and riser cable or Unbundled Intrabuilding Network Cable ("UINC")?

The FCC has found:

> [L]ack of access to unbundled subloops materially diminishes a requesting carrier's ability to provide services that it seeks to offer. We also conclude that access to subloop elements is likely to be the catalyst that will allow competitors, over time, to deploy their own complementary subloop facilities, and eventually to develop competitive loops. . . . Accordingly, we conclude that incumbent LECs must provide unbundled access to subloops nationwide, where technically feasible.[127]

The FCC defines "subloops" and "accessible terminal" as follows:

> We define subloops as portions of the loop that can be accessed at terminals in the incumbent's outside plant. An accessible terminal is a point on the loop where technicians can access the wire or fiber within the cable without removing a splice case to reach the wire or fiber within. These would include a technically feasible point near the customer premises, such as the pole or pedestal, the NID . . . or the minimum point of entry to the customer premises (MPOE). Another point of access would be the feeder distribution interface (FDI), which is where the trunk line, or "feeder," leading back to the central office, and the "distribution" plant, branching out to the subscribers, meet, and "interface." . . . A third point of access is, of course, the main distribution frame in the incumbent's central office.[128]

Further, the FCC stated:

> In adopting a rule that requires incumbents to unbundle subloops at the points identified above, we seek to provide requesting carriers maximum flexibility to interconnect with the incumbent's network at technically feasible points in order to allow competitors to serve customers efficiently. Accordingly, we establish a rebuttable presumption that the subloop can be unbundled at any accessible terminal in the outside loop plant. If the parties are unable to reach an agreement pursuant to voluntary negotiations about the availability of space or the technical feasibility of unbundling the subloop at one of the points identified above, the incumbent will have the burden of demonstrating to the state, in the context of a

[127] *UNE Remand Order* at para. 205.
[128] *Id.* at para. 206 (footnotes omitted).

> section 252 arbitration proceeding, that there is no space available or that it is not technically feasible to unbundle the subloop at these points.[129]

Concerning a single point of interconnection accessible to multiple carriers, the FCC stated:

> To the extent there is not currently a single point of interconnection that can be feasibly accessed by a requesting carrier, we encourage parties to cooperate in any reconfiguration of the network necessary to create one. If parties are unable to negotiate a reconfigured single point of interconnection at multi-unit premises, we require the incumbent to construct a single point of interconnection that will be fully accessible and suitable for use by multiple carriers.[130]

BellSouth proposes the use of an intermediate terminal.[131] BellSouth claims that its proposal is motivated by the desire to ensure its network reliability and security and the need to maintain accurate records of the use of its network by its competitors.[132] BellSouth asserts that under its proposal there will be fewer wires that could be snipped than otherwise, because its technicians will perform the work instead of CLECs' technicians.[133] BellSouth wants to keep its terminal, that is, the terminal to which its loop facilities are connected, to itself.

During the Hearing, CLECs proposed that so long as their technicians follow the same proper safety standards and the same inventory control guidelines, the possibility of a network disruption and inventory control problems can be avoided. In addition, BellSouth failed to prove that CLECs' technicians are less competent or otherwise more likely to cause network outages than are BellSouth's technicians. In fact, BellSouth admitted that even its technicians do occasionally cause service disruptions.[134]

As for the inventory control issue, UNTW pairs are color-coded and BellSouth admitted that with enough time and effort, CLECs can gain the same information from BellSouth as to

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[129] *Id.* at para. 223 (footnotes omitted).
[130] *Id.* at para. 226 (footnotes omitted).
[131] *See* Keith Milner, Pre-Filed Direct Testimony, pp. 25-26 (Nov. 13, 2000).
[132] *See id.* at 27-28.
[133] *See id.*
[134] *See* Transcript of Proceedings, Nov. 28, 2000, v. II-D, p. 209 (Hearing).

which pairs to work.[135] Clearly, BellSouth failed to prove that it is not technically feasible to have direct access to its UNTW and INC subloops. BellSouth agreed that the procedures established in Georgia are working fine and that if Tennessee could subject CLECs to an enforcement mechanism that compels them to follow the procedures, then there should not be any problem.[136]

Sprint/United offers cost studies for the inside wire[137] UNEs based on two configurations: (1) interbuilding configuration – building addition or campus scenario and (2) intrabuilding configuration – multi-business or high rise scenario.[138] For each scenario, "[t]he costs were based on an analysis of the type of cable used within Sprint's territory and current material and labor costs for the cable and installation."[139] Sprint/United's cost study provides that nonrecurring charges will be developed based on specific site needs because of the variable nature of inside wire.[140] Although each location is unique, Sprint/United must present forward-looking cost studies for inside wire based on past inside wire expenses and projected future costs.

In light of the foregoing, the Directors unanimously voted to:

1. Order Sprint/United to file a cost study consistent with the Authority's decisions on this issue, including CLECs' access to its inside wire subloop, within 30 days of the entry of the Authority's written order;

2. Order that if BellSouth chooses to protect its network and refuse direct access to unbundled subloop elements, BellSouth must construct and maintain intermediate access to the subloops at its own expense;

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[135] *See id.* at 212.
[136] *See id.*, v. II-E, pp. 282-88.
[137] Sprint/United defines inside wire in accordance with FCC Rule 51.319(a)(2)(i), which states:

> Inside wire is defined as all loop plant owned by the incumbent LEC on end-user customer premises as far as the point of demarcation as defined in § 68.3 of this chapter, including the loop plant near the end-user customer premises. Carriers may access the inside wire subloop at any technically feasible point including, but not limited to, the network interface device, the minimum point of entry, the single point of interconnection, the pedestal, or the pole.

47 C.F.R. § 51.319(a)(2)(i); *see Inside Wire Cost Study – Methods United Telephone-Southeast, Inc.*, p. 3 (Apr. 16, 2001).
[138] *See Inside Wire Cost Study – Methods United Telephone-Southeast, Inc.*, p. 4 (Apr. 16, 2001).
[139] *See id.* at 5.
[140] *See id.* at 6.

3. Order the parties to negotiate procedures by which CLECs can notify BellSouth of any change made to BellSouth's network. Proposed procedures should be filed within 45 days of the entry of the Authority's order and should include, but should not be limited to, all issues related to network safety and security, inventory control, and performance measures; and

4. Order that if a CLEC chooses to reject the negotiated procedures addressing BellSouth's network safety and security concerns, or wants to protect its equipment, it can construct and maintain, at its own expense, an intermediate terminal for its exclusive use to access the subloops.

23. Should BellSouth utilize the AT&T/MCI Physical Collocation Model, as adopted by the Authority, when deriving costs for collocation elements proposed in this proceeding?

BellSouth proposed rates for physical collocation in the remote terminal.[141] In the Authority's January 25, 1999 Order in the Permanent Prices Docket, the Authority adopted the AT&T and MCI collocation approach for calculating the rates for physical collocation.[142] Further, the Authority adopted BellSouth's proposed collocation rates for virtual collocation and later decided to take no further action on the issue of collocation.[143] In response to the Authority's July 23, 2001 Data Request, AT&T informed the Authority as follows:

> [T]he AT&T/MCI Collocation Model does not currently produce rates for the collocation elements listed in BellSouth's cost study in this proceeding as Cost Reference No. H.0 and H.3 and H.6[]. The model could be adapted to produce such rates, but AT&T does not have any plans at this time to adapt the model to produce such rates.[144]

Based on the Authority's previous rulings and AT&T's response, the Directors unanimously voted to adopt BellSouth's proposed rates for collocation elements, that is, Cost Reference Nos. H.3 and H.6, and to inform the parties that rates for physical collocation adopted in this docket

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[141] *See BellSouth Telecommunications, Inc. Unbundled Network Element Cost Study*, Executive Summary, p. xii (Oct. 2, 2000) (Public Version).
[142] *Permanent Prices, Interim Order on Phase I of Proceeding to Establish Prices for Interconnection and Unbundled Network Elements*, p. 41 (Jan. 25, 1999).
[143] *See id., Final Order*, p.12 (Feb. 23, 2001).
[144] AT&T's Response to Staff's Data Request, p. 1 (Aug. 6, 2001).

can be revisited in the future if reconsidered by the Authority or if AT&T and MCI update the physical collocation model adopted by the Authority in the Permanent Prices Docket.

IT IS THEREFORE ORDERED THAT:

1. The decisions set forth herein are unanimously adopted by the Directors of the Tennessee Regulatory Authority.

2. Any party aggrieved by this Order may file a Petition for Reconsideration pursuant to Tenn. Code Ann. § 4-5-317 with the Tennessee Regulatory Authority within fifteen (15) days of the entry of this Order.

Sara Kyle, Chairman

H. Lynn Greer, Jr., Director

Melvin J. Malone, Director

ATTEST:

K. David Waddell, Executive Secretary

BellSouth's Work Times					
Disputed Inputs	**Probability of Occurrence**	**Minutes Proposed by BellSouth**	**Minutes Proposed by the Data Coalition**	**Minutes Proposed by Director Greer**	**Notes and Comments**
Inputs CONNECT & TEST					
Work Management Center (WMC)					
WMC coordinates dispatched technicians		15	0	10	For Unbundled Sub-Loop, UDC and NID - First Install / Connect and Test
Central Office Forces (CO)					
CO Field wires circuit at collocation site.	85%	20		15	For Unbundled Sub-Loop and UDC - First Install / Connect and Test
	100%		11		
SSI&M / FIRST INSTALL --CONNECT & TEST					For UDC SSI&M Work Activities
Processes requests	100.00%	20		10	
Checks continuity and dial tone	100.00%	15		5	
Tests from NID	100.00%	20		15	
Places/removes cross-connect at crossbox	100.00%	16		10	
Completes order	100.00%	19		10	
TOTAL SSI&M / FIRST INSTALL - CONNECT & TEST		**194**		**154**	
	20.00%		**50**		
UNEC/Connect & Test					For Unbundled Sub-Loop and UDC
Performs frame continuity and due date coordination and testing	85.00%	53.6		45	

BellSouth's Work Times					
Disputed Inputs	**Probability of Occurrence**	**Minutes Proposed by BellSouth**	**Minutes Proposed by the Data Coalition**	**Minutes Proposed by Director Greer**	**Notes and Comments**
OUTSIDE PLANT CONSTRUCTION (OSPC) - Load Coil Short					The Data Coalition assumes deloading 50 cable pairs
Underground Application	90%				at a time. Travel time is considered separately.
OSPC sets up manholes		120		60	BellSouth assumes 2.1 load coils per short loop and deloading 10 pairs at a time.
OSPC opens/closes splices		60		40	
OSPC deloads 10 pairs		90		90	
Total WorkTime - ULM-LC-Short-Underground -- PER PAIR		**51.03**	**0**	**39.9**	The Data Coalition assumes that there should be no loop conditioning on loops shorter than 18,000 feet
Aerial Application	10%				
OSPC sets up site		60		60	
OSPC opens/closes splices		60		40	
OSPC deloads 10 pairs		90		90	
Total WorkTime - ULM-LC-Short-Aerial -- PER PAIR		**4.41**	**0**	**3.99**	The Data Coalition assumes that there should be no loop conditioning on loops shorter than 18,000 feet
Buried Application	10%				
OSPC sets up site		60		60	
OSPC opens/closes splices		60		40	
OSPC deloads 10 pairs		90		90	
Total WorkTime - ULM-LC-Short-Buried -- PER PAIR		**4.41**	**0**	**3.99**	The Data Coalition assumes that there should be no loop conditioning on loops shorter than 18,000 feet
OUTSIDE PLANT CONSTRUCTION (OSPC) - Load Coil Long					BellSouth assumes 3.15 load coils per long loop and deloading 2 loops at a time.
Underground Application	90%				
OSPC sets up manholes		120	45	90	
OSPC opens/closes splices		60	15	60	
OSPC deloads one pair		18	40	18	
Total WorkTime - ULM-LC-Long-Underground -- PER PAIR		**280.67**	**8**	**238.14**	
Aerial Application	10%				
OSPC sets up site		60	35	60	
OSPC opens/closes splices		60	15	40	
OSPC deloads one pair		18	34	18	
Total Worktime - ULM-LC-Long- Aerial - PER PAIR		**21.74**	**0.84**	**18.585**	

To find out the actual number of minutes required to perform an activity, one must multiply the minutes with the probabilities of occurrence.

Disputed Inputs	Probability of Occurrence	Minutes Proposed by BellSouth	Minutes Proposed by the Data Coalition	Minutes Proposed by Director Greer	TRA Staff's Notes and Comments
Buried Application	10%				
OSPC sets up site		60	6	60	
OSPC opens/closes splices		60	5	40	
OSPC deloads one pair		18	34	18	
Total WorkTime - ULM-LC-Long-Buried -- PER PAIR		**21.74**	**0.45**	**18.585**	
OUTSIDE PLANT CONSTRUCTION (OSPC) - Bridged Tap (BT)					BellSouth assumes removing 1 bridged tap per loop and deloading 10 pairs at a time.
Underground Application					
OSPC - Setup manholes		120		30	
OSPC open/close splice		60		20	
OSPC removes bridged tap		45		20	
Total WorkTime - ULM-BT-Underground -- per pair		**22.5**	**0**	**7**	The Data Coalition assumes that bridged taps should not exist in underground feeder cable close to the central office.
Aerial Application					
OSPC - Setup site		60	35	40	
OSPC open/close splice		60	15	30	
OSPC removes bridged tap		45	4	20	
Total WorkTime - ULM-BT-Aerial -- per pair		**33**	**1.08**	**18**	
Buried Application					
OSPC - Setup site		60	6	40	
OSPC open/close splice		60	5	30	
OSPC removes bridged tap		45	4	20	
Total WorkTime - ULM-BT-Buried -- per pair		**33**	**0.3**	**18**	
TRAVEL - INSTALL	100%				
Travel - Install - Underground Load Coil Removal		30	20	30	
Travel - Install - Aerial- Laod Coil Removal		30	10	30	
Travel - Install - Buried-Load coil Removal		30	10	30	
Travel - Install - Underground Bridge Tap Removal		30	0	30	The Data Coalition assumes that bridge tap should not exist in underground feeder cable close to the central office.

To find out the actual number of minutes required to perform an activity, one must multiply the minutes with the probabilities of occurrence.

Travel - Install - Aerial/Buried-Bridge Tap Removal		30	20	30	

To find out the actual number of minutes required to perform an activity, one must multiply the minutes with the probabilities of occurrence.