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March 1, 2000

VIA HAND DELIVERY

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Missouri Public Service Commission

Mr. Dale Roberts
Executive Secretary
Missouri Public Service Commission
301 West High Street, Suite 530
Jefferson City, Missouri 65101

Re: *In the Matter of the Petition of DIECA Communications, Inc. d/b/a Covad Communications Company for Arbitration of Interconnection Rates, Terms, Conditions and Related Arrangements With Southwestern Bell Telephone Company*
Case No. TO-2000-322

Dear Mr. Roberts:

Enclosed for filing with the Commission is DIECA Communications, Inc. d/b/a Covad Communications Company's Post Arbitration Brief. There are eight copies of the public version of this document and 6 copies of the Proprietary/Highly Confidential version of this document (in sealed envelopes). Also enclosed are eight copies of the Proprietary information and eight copies of the Highly Confidential information excerpted from the public version of the Post Arbitration Brief, all in envelopes to be filed under seal.

Also enclosed are the original and 14 copies of the Proposed Findings of Fact and Conclusions of Law. Please return one file-stamped copy of this document.

Please return one copy of the public version of the brief marked "filed" in the envelope enclosed for that purpose. Also, to evidence the filing of the Proprietary and Highly Confidential documents, please return one copy of this letter marked "filed."

If you should have any questions, please do not hesitate to contact me. Thank you for bringing this matter to the attention of the Commission.

Very truly yours,

Lisa Creighton /cmw

Lisa C. Creighton

LCC/cmw
Enclosures

cc: Office of Public Counsel
Office of General Counsel
Paul G. Lane, Esq.

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MAR 0 1 2000

Missouri Public Service Commission

BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION

IN THE MATTER OF THE PETITION OF DIECA COMMUNICATIONS, INC. D/B/A COVAD COMMUNICATIONS COMPANY FOR ARBITRATION OF INTERCONNECTION RATES, TERMS, CONDITIONS AND RELATED ARRANGEMENTS WITH SOUTHWESTERN BELL TELEPHONE COMPANY	)))))))	**Case No. TO-2000-322**

DIECA COMMUNICATIONS, INC. D/B/A COVAD COMMUNICATIONS COMPANY'S POST ARBITRATION BRIEF

I
INTRODUCTION

Since Congress enacted the Telecommunications Act of 1996 and the FCC issued the First Report and Order (CC Docket 96-98), various state utilities commissions have been working diligently to set unbundled network element ("UNE") prices. However, many of those proceedings did not, and indeed could not, have set prices applicable to DSL (digital subscriber line) technology. Covad introduced this country's first commercially available DSL service to northern California in December 1997 and the pricing issues unique to DSL are just beginning to be addressed across the country now.

DSL technology is fundamentally different from earlier telecommunications services. Consequently, Covad cannot simply purchase the same UNEs that traditional Competitive Local Exchange Carriers ("CLECs") have used. The disputes in this arbitration highlight those differences. Specifically, the parties disagree over ISDN loop pricing (Issue A(7)). Although the Missouri Commission previously adopted an ISDN UNE price in the broad ranging AT&T/MCI arbitration with SWBT in Case Nos. TO-97-40 & TO-97-67, that price never underwent the scrutiny it should have because AT&T & MCI do not provide ISDN services and

have never been concerned about ISDN loop pricing. ISDN loops only became useful when Covad began offering IDSL in its menu of DSL services. IDSL is the only DSL service that uses the ISDN loop. Thus, this arbitration presents this Commission with its **first** opportunity to rigorously examine ISDN loop pricing with a party that actually intends to purchase that UNE. Unless this Commission takes this opportunity to critically examine this price now – a price that is out of step with ISDN loop pricing in other states - Missouri consumers will be denied an important service for years to come.[1]

The parties also disagree over the pricing for removing load coils, bridged taps, and repeaters and the pricing for so called loop qualification, Issues A(6) and (3), respectively. Unlike ISDN loop pricing, the Missouri Commission has recently reviewed these issues in the Broadspan and Sprint arbitrations. Although Covad understands why the Commission may be reluctant to revisit these issues so soon, the factual record in this arbitration is substantially different from the record established in those arbitrations.

First, SWBT announced Project Pronto, which includes a $6 billion investment in a forward-looking network, in October 1999 after the Broadspan and Sprint arbitrations had ended. Obviously, the Commission could not consider this new architecture and its cost implications.

Second, unlike Covad, Broadspan and Sprint did not take depositions and extensive discovery. Consequently, these parties did not subject SWBT's cost studies to the same level of scrutiny that Covad has in this proceeding.

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[1] IDSL is particularly important because it can reach consumers that do not qualify for faster DSL services either by reason of distance from the central office or because they are served by digital loop carriers. IDSL could be of specific importance to Missouri residents located in more rural areas where homes and businesses tend to be farther from the central office. Thus, unless ISDN loop pricing is reasonable, many Missouri customers will never see the benefits of DSL. To date, SWBT does not offer IDSL but only offers the faster, but distance limited ADSL service.

Third, the FCC issued two important decisions in November of 1999 that affect SWBT's cost studies. For example, the Linesharing Order (Docket Nos. 98-147 and 96-98, Nov. 18, 1999) directed SWBT to dismantle the spectrum management program it employed during loop qualification. Consequently, SWBT no longer "qualifies" a loop, but simply provides loop makeup information to DSL CLECs. This change eliminates time spent by SWBT engineers and should dramatically reduce "loop qualification" costs. The issues at stake in this arbitration are far too important to ignore the new evidence that this record presents.

The participation of the Missouri Office of the Public Counsel and the request of the Missouri Office of Economic Development to intervene demonstrate that this arbitration is not simply a replay of the Commission's earlier proceedings. This arbitration will fundamentally shape Missouri's technology landscape. With all due respect to Broadspan and Sprint, those parties have not built a nationwide DSL infrastructure, and they did not have the requisite combination of DSL experience and resources necessary to adequately address the critical DSL issues.

Covad is the first national DSL provider to come to Missouri and to seriously examine SWBT prices - prices that are far higher than they are in other states, sometimes higher by a factor of two or three. For the sake of Missouri residents, this Commission cannot afford to let previously determined prices foreclose competition, by relying on its past decisions that were based upon different and less developed records. A mistake here could stunt Missouri's economic development.

DSL is not just an interesting hi-tech service. DSL enables the next generation of Internet applications that are changing the American economy. The importance of DSL is precisely why SBC is devoting $6 billion dollars to Project Pronto – to bring the next generation DSL infrastructure to its customers. The importance of DSL is reflected in the Department of

Justice's recent recommendation against SWBT's Texas 271 application; this recommendation was made to ensure that there is competition to build DSL infrastructure. Simply put, the digital revolution is now and Missouri is at a crossroads.

The Missouri Public Service Commission must carefully examine *this* record, and when it does it will find that SWBT's prices are too high because: (1) SWBT's prices are not based on a forward looking network design; (2) SWBT's cost studies assume inefficient procedures; and (3) SWBT overestimates its costs.

II
ANALYSIS

A. THE COMMISSION SHOULD NOT ADOPT SWBT'S PROPOSED CONDITIONING RATES

1. Issue A(6): SWBT Should Not Be Able To Apply Additional Charges for Conditioning Loops

Both parties agree that the starting place for any pricing analysis is TELRIC, total element long run incremental cost. (TR:51; Exh. 1, Murray Direct at 7; TR:241, Exh. 12, Smallwood Direct at 3). TELRIC is "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." 47 C.F.R. § 51.505(b)(1), (emphasis added).

a. SWBT's Project Pronto Architecture Does Not Require Conditioning Because It Includes A Forward Looking Plant Without Load Coils, Bridged Taps, or Repeaters

In October 1999, SBC announced Project Pronto, a $6 billion initiative that revises SBC's network to facilitate its own DSL market entry throughout its fourteen state region including Missouri. (Exh. 10, Response to DR 2, SBC Announces Sweeping Broadband Initiative). SBC will spend $4.5 billion on loop infrastructure that includes the deployment of fiber and next generation remote terminals. (Id. at 4). Project Pronto is the most recent and best

evidence of what a forward looking network is and is precisely the network that FCC pricing rules require state commissions to analyze.

Throughout its testimony, SWBT urges the Commission to force Covad to pay costs associated with its obsolete embedded plant and ignore an efficient forward-looking design. (TR:365, Exh. 17, Latham Direct at 7-8). That analysis is wrong as a matter of law and policy. The FCC has found that prices should be based on the cost of a "reconstructed local network" deploying "the most efficient technology for reasonably foreseeable capacity requirements." FCC First Report and Order at ¶ 685. Further, the FCC's rules explicitly preclude the consideration of embedded costs (i.e., costs "incurred in the past and that are recorded in the incumbent LEC's books of accounts."). 47 CFR Section 51.105(d).

Giving no weight to embedded costs is consistent with the underlying goals of the Telecommunications Act. TELRIC-based pricing was meant to mimic a competitive market. Exh. 1, Murray Direct at 10. In such a market, a supplier cannot charge for costs that were incurred as a result of past activities when there are currently more efficient ways to supply the same good. No consumer would pay $30,000 for a sedan if the latest technology allowed a manufacturer to now sell that same car for $15,000. Even if a supplier spent $30,000 to build each sedan in its inventory, that supplier would have to sell those sedans at $15,000 because that price reflects the current market reality of efficient forward-looking costs.

Project Pronto is SWBT's "currently available" DSL effort. (TR 272:13-18). SWBT's documentation shows that this architecture dramatically reduces the costs of an efficient forward-looking network. (Exh. 10, Response to DR 2, SBC Announces Sweeping Broadband Initiative at 1). Project Pronto saves SWBT specific costs that are at issue in this arbitration. By laying fiber feeder and shortening copper loops, the new architecture is "designed to overcome loop-length and line condition limitations in its network," Id. at 4. *** **BEGIN HIGHLY**

CONFIDENTIAL [redacted]

[redacted] END HIGHLY CONFIDENTIAL ***

Even though Project Pronto will save SWBT money and eliminate conditioning costs, SWBT is still trying to recover the conditioning costs associated with its embedded network from CLEC competitors, such as Covad. Such perverse rate setting is precisely what the FCC rules prohibit. The sedan supplier cannot charge $30,000 when the market price is far less. For conditioning costs, Project Pronto has set the market price at zero and that is what Covad should be charged. Allowing SWBT to base its retail prices on the Project Pronto architecture while recovering rates from CLECs that are premised upon SWBT's backward-looking, embedded network design flies in the face of the Telecommunications Act and the FCC's pricing rules.

Based on the new information concerning Project Pronto, the Commission should seriously consider whether its conclusions in the Broadspan and Sprint decisions are applicable to Covad today. Covad submits that they are not. Both decisions were issued prior to the Project Pronto announcement and the Commission could not have considered that architecture. Moreover, the cost studies at issue in the Sprint and Broadspan arbitrations did not consider Project Pronto, as those studies were completed before Project Pronto was even announced. Similarly, the cost studies at issue here have not taken Project Pronto into account.[2] SWBT's proposed prices in this arbitration, therefore, are clearly overstated.

b. Over the Last Two Decades Missouri Ratepayers Have Already Paid for A Modern Plant Without DSL Disturbers

Correctly designed outside plant during the past two decades should present minimal obstacles to the provisioning of xDSL services. The only reason why SWBT needs to condition

[2] SWBT's cost witness, James Smallwood, also testified that SWBT cost studies organization had not analyzed Project Pronto yet. TR at 274:24-275:3.

loops is because its plant is outdated and long past its useful economic life. Starting in 1980, Incumbent Local Exchange Carriers ("ILECs") developed long range outside plant plans for all central offices. Those long range plans identified the ultimate design configuration for the local loop – that is, meeting the Carrier Serving Area criteria of 100% non-loaded loops, and limited bridged tap so that digital services like ISDN could be supported by all loops without special conditioning. (TR:148, Exh. 4, Donovan Direct at 6-14, 17). These are the same Bellcore guidelines that SWBT has used to build its outside plant. "SWBT has deployed the CSA concept since the 1980s." (Exh. 10, Responses to DRs 37 and 40). Moreover, SWBT's own internal guidelines state that such loops should not be loaded. (TR:148, Exh. 4P, Donovan Direct schedule 2, Transport Engineering and Construction Policy).

By charging Missouri residents for a modern network over the last 20 years and then charging CLECs again for network upgrades that it failed to implement, SWBT is attempting to impermissibly recover twice for a loop free of load coils, bridged taps and repeaters. Imagine a situation where a customer pays $50,000 for a sports car that supposedly comes with a turbo-charged engine, but the dealer delivers a car with a plain engine under the hood. At first, the customer drives slowly and does not notice the missing power. Eventually, the customer takes the car on the highway and realizes that the car is missing the turbo-charged engine. The customer returns to the dealer and asks for the engine that should have come with the car originally. In response, the dealer says that will be another $10,000. Obviously, the car dealer's conduct was wrong both when the dealer failed to deliver the car with the correct engine and when the dealer tried to charge the customer for an "upgrade."

SWBT is attempting to get Commission approval for the very same kind of charges here. SWBT should have been deploying a modern plant for at least the past 20 years. (TR:148, Exh. 4, Donovan Direct at 13-14). SWBT has been charging Missouri consumers for building a

modern plant free of load coils and bridged tap over the past two decades. Now when the DSL CLECs like Covad order loops that supposedly exist in SWBT's "modern" outside plant, they find that SWBT has *not* deployed a modern plant in many locations. Instead, SWBT has pushed its antiquated pre-1980 plant past its useful life and has been pocketing money from Missouri ratepayers. Twenty years exceeds the expected service lives for outside plant. (TR:148, Exh. 4, Donovan Direct at 17). To add insult to injury, SWBT is now asking DSL CLECs like Covad to pay to modernize the plant for SWBT again. The Commission should not allow SWBT to recover the costs of a modern plant a second time.

SWBT proposed similar conditioning charges in Texas. The Texas Commission found, however, that the retention or existence of load coils on loops that are 18,000 feet or less in length is not consistent with TELRIC principles as applied to develop a forward looking network design. (TR:198, Exh. 7, Schedule 1 to the Direct Testimony of Bernard Chao). The prices charged to Covad should not be based upon SWBT's current network that includes what can only be considered mistakes or problem conditions, but rather should be based upon the most efficient technology available today, which includes deloaded loops under 18,000 feet[3]. SWBT, therefore, should not be allowed to charge for the removal of load coils and repeaters on loops of less than 18,000 feet at all.[4] (SWBT already does not charge for removal of load coils on loops of less than 12,000 feet, or for ISDN loops less than 18,000 feet).

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[3] SWBT, for some reason, has assumed a 17,500 break point rather than 18,000 in its cost studies and proposed prices to Covad. As stated by Mr. Donovan, generally accepted outside plan engineering practices do not recognize "17,500 feet" as an appropriate break point. The correct break point is, in fact, 18,000. (TR:148, Exh. 4-P, Donovan Direct at 15:12-16-3, citing SWBT's Responses to DR 80 (located in Exhibit 10) and SWBT's engineering guidelines (Schedule 2 to Donovan's Direct)).

[4] For many of the same reasons, Bell Atlantic-New York has not even sought to impose charges for the removal of load coils on loops less than 18,000 feet. Exhibit 1, Murray Direct at 37.

c. SWBT's Cost Studies Are Flawed Because They Do Not Assume The Same Network Architecture For Both Its Recurring and Nonrecurring Cost Studies

SWBT has based its recurring costs on an efficient forward-looking network, but based its non-recurring costs on portions of its obsolete embedded network. Mixing and matching networks to obtain costs for different charges violates TELRIC principles. TR:51, Exh. 1, Murray Direct at 8, 11-12. In essence, SWBT has arbitrarily selected the highest combination of recurring and non-recurring rates to maximize its return – a shrewd business decision if it did not violate the FCC pricing rules. SWBT's combination scheme does not reflect SWBT's actual costs under any analysis and the Commission must reject this approach.

The monthly recurring charge for the basic 8 dB unbundled loops reflects the cost of a network that deploys fiber feeder and DLC for long loops. (Exh. 10, Responses to Covad's DRs 28 and 43). This cost study reflects the full forward-looking economic cost of a modern network design that does not include components such as load coils that interfere with DSL-based services and analog POTS modems. (TR:51, Exh. 1, Murray Direct at 30). However, SWBT's proposed non-recurring conditioning charges are based on a different network, SWBT's embedded network. The pre-1980 design is the only network that has loops in excess of 18 thousand feet where load coils and excessive bridged tap reside. Thus, SWBT's proposed conditioning charges are features of the inefficient embedded network.

Under any analysis, SWBT's mix and match approach overestimates the costs it incurs. In a forward-looking network, SWBT incurs a higher recurring cost for fiber feeder and digital loop carrier. These higher charges are incurred to make the network friendlier for advance services like DSL. Specifically, load coils and bridged tap will not be present. (TR:51, Exh. 1, Murray Direct at 12-13). Thus, Covad is charged recurring charges (including depreciation of a new network) that include all costs necessary to provide a network without load coils and

excessive bridged tap. However, SWBT is now seeking to recover non-recurring conditioning charges too. SWBT cannot have the best of both worlds – non-recurring conditioning charges to retrofit its outmoded, largely depreciated network, and recurring charges based on the full cost, including depreciation, for a modern network. The conditioning charges SWBT proposes duplicate what SWBT has already promised with its recurring charges, a loop that is free of load coils and excessive bridged tap. (Id.).

The Texas Commission in the SWBT-Covad Arbitration Award has already rejected SWBT's cost studies because of this same flawed approach:

> [t]he Arbitrators find that the network design inconsistencies in the recurring and nonrecurring cost studies do not result in correct xDSL costs and rates and consequently render the proposed charges invalid. (Arbitration Award, *Petition of* DIECA *Communications, Inc. dba Covad Communications for Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with Southwestern Bell,* Dockets Nos. 20226 and 20272, November 30, 1999) TR:198, Exh. 7, Schedule 1 to Chao Direct at 96.

Consequently, SWBT has been ordered to file new recurring and nonrecurring cost studies for line conditioning that are "based on the.same network." Id. at 97.

Other jurisdictions agree with the Texas Commission. (New York and California both refused to use different networks to develop recurring and non-recurring costs. New York Public Service Commission, Case Nos. 95-C-0657 et. al., Opinion No. 99-8 at 24; TR 51, Exh. 1, Murray Direct at 14-15). In fact, the California Commission rejected the same proposals offered here with respect to Pacific Bell, SWBT's sister company. The California Commission stated:

> We think it would be both unfair and unreasonable to allow Pacific recurring cost recovery based on this ratio and then allow a different network mix in developing nonrecurring costs.[5]

This Commission should follow the lead of Texas, California and New York and reject SWBT's approach. Recurring and non-recurring charges must be based on the same network

architecture. When this analysis is used, additional conditioning charges are neither necessary nor appropriate.

d. SWBT Cannot Charge A Premium For A "Functional" Loop

This Commission has already determined that SWBT cannot charge a premium to make a loop functional. In the AT&T/MCI Final Arbitration Order (TO-97-40/TO-97-67 July 31, 1997), this Commission stated:

> Prices for unbundled network elements include the *full functionality* of each element. *No additional* charges for any such element, the functionalities of the element, or the activation of the element or its functionalities shall be permitted. Id. at 4 (emphasis added).

These statements must be viewed in terms of the November 5, 1999 UNE Remand Order (CC No. 96-98) which provided a more complete definition for the loop UNE. The rule codified at 47 CFR § 51.319(a)(1) states:

> The local loop network element includes all features, functions, and capabilities of such transmission facility. Those features, functions, and capabilities include, but are not limited to, dark fiber, attached electronics (except those electronics used for the provision of advanced services, such as Digital Subscriber Line Access Multiplexers), and line conditioning.

Importantly, this definition explicitly includes line conditioning. Applying this Commission's own order to the FCC's loop definition leads to the conclusion that SWBT cannot impose additional conditioning charges. This outcome is consistent with SWBT's practices for provisioning loops for other services.[5] Until DSL, SWBT had not even tried to charge for conditioning in other contexts. Loops often need to be modified for a particular service. SWBT does not include the cost of removing T-1 repeaters in its UNE loop pricing for either POTS loops or ISDN loops. (TR:51, Exh. 1HC, Murray Direct at 30:7 – 31:1, citing SWBT's Response to Covad DR 1-22). It is undisputed, however, that SWBT cannot provision either POTS or

(..continued)

[5] California PUC Decision 98-12-097 issued Dec. 17, 1998, Dockets R. 97-04 - 03/I.93-04-002, at 34; TR:51, Exh. 1, Murray Direct at 14.

ISDN service over a loop with a T-1 repeater, just as it cannot provision DSL-based services over such a loop. Similarly, SWBT has proposed no charges for removing load coils or excessive bridge taps when it provisions an ISDN loop. Yet SWBT cannot provision ISDN service over a loop with load coils or excessive bridge tap, just as it cannot provision DSL-based services over such a loop. The only instance in which SWBT is attempting to impose additional "conditioning" charges, in violation of the principles stated in the AT&T/MCI order, is the case in which a CLEC orders a loop to provide DSL-based services. (TR:51, Exh. 1, Murray Direct at 30-31). The Commission cannot allow such a violation. Because the UNE prices being charged to Covad already include the full functionality of the loop, including conditioning, SWBT should be prohibited from re-recovering the cost of that functionality through an additional nonrecurring charge.

e. The FCC UNE Remand Does Not Allow Double Recovery For Conditioning

SWBT has repeatedly relied on paragraphs 193 and 194 from the FCC's recent UNE Remand Order to justify nonrecurring line conditioning charges. That reliance, however, is misplaced because Covad has never requested free conditioning. SWBT is entitled to recover costs associated with a conditioned loop, and it is already receiving that compensation. First, SWBT charges a recurring rate that recovers the full cost of an efficient fiber and DLC-based network free of load coils, repeaters and excessive bridged tap. Second, Missouri ratepayers have been paying plant modernization for twenty years. The plant that needs conditioning is far beyond its useful life; by imposing "conditioning" charges for the modernization of its outdated, fully depreciated plant, SWBT will actually recover more than it is entitled. Third, as the Missouri Commission already stated, SWBT cannot place an additional charge to make a loop functional. SWBT is already recovering conditioning costs through its recurring loop charge; thus, Covad's proposals do not violate the UNE Remand Order.

2. Even Assuming That SWBT Is Authorized to Impose An Additional Charge For Conditioning, SWBT Prices Are Overstated and Unsupported.

SWBT's conditioning cost study is flawed in several different respects. First, the study calculates costs using inefficient engineering practices. Second, SWBT does not provide specific task times and its witnesses were in no position to defend, let alone explain, the inputs. Third, SWBT inappropriately includes charges for restoring bridged tap. Consequently, even if the Commission adopts some conditioning charges, it needs to reduce SWBT's proposed charges appropriately.

a. SWBT Employs Inefficient Conditioning Practices That Violate TELRIC Methodology.

SWBT's cost study assumes that SWBT will remove one load coil from one loop at a time.[6] This practice is not efficient, may cause future maintenance problems and should not serve as the basis for calculating costs. When SWBT encounters load coils on loops shorter than 18 thousand feet - the only kind of loop upon which Covad would request conditioning - SWBT should disconnect load coils from the entire binder group. There are a number of reasons for conditioning entire binder groups together.

First, as discussed above and in Mr. Donovan testimony, load coils simply do not belong on these shorter loops. Removing the load coil simply fixes a problem that should have been corrected earlier. (TR:148, Exh. 4P, Schedule 2 to Donovan Direct). Even SWBT's own witness, Mr. Lube, acknowledges that under the H88 standard, there should not be load coils on loops shorter than 18,000 feet. (TR 384:10-13).

Second, it is a standard efficient practice to remove load coils from at least an entire 25-pair bundle within a binder group,[7] regardless of the number of DSL-capable loops that Covad

[6] Analogous assumptions apply in the case of removal of repeaters and excessive bridged tap.
[7] SWBT has already acknowledged that the load coils it typically deploys "can load from 100 to 1500 pairs and that, even in rural areas, the small load coils it deploys "can load from 2 to 25

orders from that binder group. The Texas Commission rejected SWBT's the inefficient practice of deloading one pair at a time – the same practice at issue here - and ruled that efficiency dictated deloading 50 pairs at a time. (TR:198, Exh. 7, Schedule 1 to Chao Direct at 98). Consequently, the Texas Commission ruled that the nonrecurring cost for removal of load coils for a loop less than 18,000 feet should be based upon a *pro rata* share of the cost for deloading a 50 pair binder. deloading costs should be divided by 50 to arrive at an appropriate non-recurring cost. Id.[8]

Third, deloading multiple pairs at one time reduces the frequency of reentry into outside plant splices, and thus decreases the risk of damage to the cable. (TR:148, Exh. 4, Donovan Direct at 21-22; TR:148, Exh. 6, Donovan Surrebuttal at 21-22). Staff agrees that the more times wires in a splice are handled, the greater the potential of creating wire troubles and compromising the cable.[9] Consequently, Mr. Couch agreed with Mr. Donovan and testified that "it is efficient to remove more load coils when the closure is open."[10] Even SWBT's own witness acknowledges that repeated re-entry into the splice causes "shiners," which is when insulation breaks off of a cable pair and produces shining copper. (TR:148, Exh. 6-HC, Donovan Surrebuttal at 18; TR:215, Exh. 9C, Borders Depo. at 175). Utilizing the efficient conditioning practice of multiple deloading would assist in maintaining the integrity of the cable.

(..continued)
pairs." TR:299, Exhibit 11, SWBT Response to ACI Third Request for Information, Request No. 20, in consolidated Texas ACI/Covad Arbitration.

[8] SWBT has repeatedly claimed that it never in fact instituted a practice of pre-conditioning entire binders or 50 pairs at a time. The fact that such an efficient practice was never actually deployed in no way affects SWBT's obligation to present Covad with TELRIC compliant rates. There is no dispute that such multiple-pair deloading is viable. Accordingly, Covad should not have to pay for SWBT's chosen inefficiency.

[9] TR:490, Exh. 25, Couch Rebuttal at 6.

[10] Id.

Fourth, removing the load coil actually improves the plant for all services. Load coils actually interfere with analog modems and SWBT should take this opportunity to improve its plant. (TR:148, Exh. 6, Donovan Surrebuttal at 15:17 - 16:10).

The Commission should base any conditioning charges that it might issue on efficient engineering practices. The conditioning charge to a CLEC should only reflect the fraction of loops it orders from the deloaded binder group.[11] Because SWBT has already identified the viability of grooming (removing load coils and bridged tap) in 50 pair binder groups[12], a logical charge would be a 1/50th of the allowable costs that SWBT submitted, the same conclusion that the Texas Commission adopted. The Commission should not be concerned about the other 49/50th of SWBT's costs because SWBT will reap the benefit of an improved plant for its own services. The other loops in the binder group will be better suited for analog modems, ISDN and DSL service. (And, in the case of repeaters, the conditioning is necessary for *any* service that would be provisioned over the loop in question, other than T-1 service.) If necessary, SWBT can recover additional prorated costs each time a new CLEC uses one of these conditioned loops for the first time.

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[11] In violation of efficient practice, SWBT's cost study assumes that line conditioning will always be done one loop at a time. The cost for this single act of conditioning includes ***Begin Highly Confidential [redacted] End Confidential*** in addition to performing the actual removal of the load, coil bridge tap or repeater for a particular loop. TR:241, Exh. 12HC, Smallwood Direct, Schedule 4, Unbundled Network Elements Digital Subscriber Line Loop Conditioning Nonrecurring Cost Study, December 1999.

Steps 1 through 9 would only be incurred once in a multiple conditioning environment. The only potential incremental cost would be the actual removal of additional load coils, bridged taps or repeaters; however, the unsnapping of a 25-pair splice module allows this to be done at no incremental cost.

[12] TR:299, Exh.11, SWBT Response to ACI Third Request for Information, Request No. 22, in Consolidated ACI/Covad Texas Arbitration.

b. SWBT's Work Times For Conditioning Are Unsubstantiated and Overstated.

SWBT has based it proposed rates upon its conditioning cost study that includes unsubstantiated work times. SWBT's task time "expert," Mr. Borders, purports to have verified time estimates in this arbitration. He, however, admits that he did not prepare any of these time estimates. TR 336: 6-12; 337:15-20. The task times that Mr. Borders sponsors in this arbitration actually came from a Mr. Hearst's testimony in another arbitration. (TR 338: 22 – 339:16). Mr. Borders never even spoke with Mr. Hearst regarding the time estimates. (TR 345:25 – 346:4). The only effort Mr. Borders exerted to verify the task times was to have general conversations with three other people regarding total time estimates. Notably, these conversations did not include discussions of the specific task times associated with conditioning.[13] (TR 352:18 – 357:15). Additionally, although SWBT's construction time and estimating and scheduling tool JMOS[14] includes information regarding task times associated with line conditioning, Mr. Borders admits that he failed to compare or verify the task times SWBT is proposing in this arbitration with the information regarding time estimates located in JMOS. (TR 351:15-25; 352:14-17). Although Mr. Borders is purporting to be an expert on the amount of time it takes to perform tasks in the outside plant, when asked if he could answer questions regarding the time inputs in SWBT's cost studies, Mr. Borders responded that he could not. (TR 358:13-20). In addition to the obvious lack of substantiation that Mr. Borders can supply, SWBT's cost study "expert," Mr.

[13] With respect to his conversation with Mr. Buckner, Mr. Borders did NOT discuss and did NOT receive any information regarding any of the following: **(1)** how long it takes to pull a cable report (TR 353:4-7), **(2)** how long it takes to investigate plant records (TR 353:8-11), **(3)** how long it takes to fill out a make-up form (TR 353:12-15), **(4)**how long it takes to design a job for the removal of a load coil (TR 353:16-19), **(5)** how long it takes to remove a bridged tap (TR 353:20 - 354:6), **(6)** aerial or buried configurations (TR 354:7-14); **(7)** how long it takes a drafting clerk to draw a job (TR 354:15-18), **(8)** how long it takes an engineer to prepare a work order for the removal of a repeater (TR 354:19-23) or **(9)** specific time estimates regarding how long it takes a technician to drive to and set up a job site (TR 354:24 – 355:20).

Smallwood, admits that he reviewed no time and motion studies or statistical studies regarding line conditioning to verify the accuracy of SWBT's work times. (TR 277: 23 – 278:7). In fact, he acknowledges that time and motion studies for SWBT's conditioning activities do not even exist. Id.

As the above discussion demonstrates, SWBT has presented no witness[15] in this arbitration who has personal knowledge of the task times that SWBT claims support its costs to condition lines. People who allegedly do have actual personal knowledge of the task times, such as Mr. Hearst, were not presented and not subject to cross examination in this proceeding.

Covad, on the other hand, presented Mr. Donovan, an outside plant and engineering expert with vastly more "hands on" and engineering experience than any of SWBT's witnesses.[16] Mr. Donovan is the only witness who provided a detailed breakdown of time estimates (as opposed to SWBT's lump sum totals) and was subject to cross-examination regarding his suggested time estimates that are premised upon his years of personal experience.

Specifically, Mr. Donovan suggested time estimates and total average cost for removing load coils at three sites[17]. TR:148, Exh. 6, Donovan Direct at 25-27. Similarly, Mr. Donovan

(..continued)

[14] *See* TR:148, Exh. 6, 24:14 – 25, Surrebuttal Testimony of Donovan for a discussion of what information is included in JMOS.

[15] SWBT's two other witnesses, Mr. Latham and Mr. Lube, are also unable to verify that SWBT's conditioning tasks times are accurate. Mr. Latham admitted on the stand that he is (1) not responsible for verifying the accuracy of the cost studies and relied upon Mr. Smallwood to make such verifications and (2) he is not responsible for the technical aspects of SWBT's DSL loop offering and relied upon Mr. Lube for a discussion of such technicalities. (TR: 366-367). Mr. Lube has already admitted, however, that he has no first hand experience or personal knowledge of the time required to complete particular tasks that occur in the outside plant. (TR:381:5-9). Additionally, Mr. Lube admits that he did not prepare the time estimates that were used in the cost study for loop conditioning. (TR: 382:15-19). Apparently, Mr. Wren created those time estimates. Id. Mr. Wren, however, has filed no testimony in this matter and was never subjected to cross-examination in order to determine whether his estimates were accurate.

[16] Unlike Mr. Donovan, Mr. Borders (1) has no formal degree in engineering (2) has never held a formal engineering position (3) has never drawn a an engineering job (4) has never supervised anyone who has drawn an engineering job (5) has never taught outside plant engineering courses

suggested times estimates for removing bridged tap and repeaters at a pole and at a pedestal. (TR:148, Exh. 6, Donovan Direct at 34-35, 38-40). SWBT's attorney actually conceded at the hearing Mr. Donovan could have performed some of these conditioning tasks in the hearing room in the same times frames that were presented in his testimony. (TR:151:10:16). As SWBT has provided no detailed time estimates and the time estimates that it has provided are unsubstantiated, the Commission, at a minimum, should order SWBT to re-run its cost studies based upon Mr. Donovan's time estimates if it rules that SWBT is allowed to charge for conditioning at all.

c. SWBT's Charge for the Removal of Bridged Tap Is Both Inappropriate and Overstated.

As Mr. Smallwood verified at the hearing, SWBT's conditioning cost study assumes that bridged tap will be restored approximately 34% of the time. TR 279:3 –16. This estimate allegedly reflects the percentage of "non-interfaced plant" in SWBT's network. TR 279:17-19. SWBT contends that, where its embedded plant is not interfaced, it must restore bridged tap when a DSL provider ceases to use an unbundled loop so that the same loop may subsequently be usable for voice-grade services.

SWBT's assumption that it must restore bridged tap is not only inconsistent with the basic concept of a forward-looking network design, it is backward-looking! Consistent with the standard outside plant engineering practices and SWBT's own internal policies discussed in section II(A)(1)(b), SWBT should have eliminated bridged tap on a going-forward basis with the advent of the Serving Area Concept in 1972. For at least the past two decades, industry standards and SWBT's own policies would not support the "restoral" of bridged tap into SWBT's network. Indeed, SWBT's recurring cost studies assume that 100% of its loop plant is

(..continued)
and (6) has never instructed others in outside plant engineering in any way. (TR: 336:13-337:14).

interfaced, which would eliminate SWBT's rationale for restoral of bridge tap. (TR:52, Exh. 3-HC, Murray Surrebuttal fn. 27).

SWBT's Project Pronto documents also contradict SWBT's assertions concerning the need to restore bridge tap. *** **BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL** *** It is an absolute mystery how SWBT can justify charging CLECs to restore an embedded design that (1) cannot be used to provide advanced services and (2) should have been abandoned long ago.

SWBT's bundling of the removal and restoral costs of bridged tap is also flawed because such a bundling is incompatible with the goal of establishing costs and prices that accurately reflect cost causation. As pointed out in Ms. Murray's Direct Testimony, when Covad requests that bridged tap be removed, thereby enabling the loop to be used for DSL service, SWBT does not incur any cost to restore the bridged tap at that time. (TR:51, Exh. 1, Murray Direct at 48). In fact, SWBT may never incur such a restoral cost if (1) Covad utilizes that loop for DSL service for the entire economic life of the loop, (2) SWBT or another CLEC uses that same loop to provide DSL service or (3) SWBT ceases to use that loop to provide POTS service. Even if SWBT restores the line to its original condition after Covad relinquishes the loop, SWBT has no way of knowing at the time *removal* of bridged tap is ordered, how long Covad will the loop. SWBT has not included a calculation of the net present value of reconnecting costs.

(..continued)
[17] The average cost to remove load coils at 3 sites was $5.77. Id. at 24.

Consequently, even if such a charge were correct in all other respects (which it clearly is not), SWBT's estimation of restoral charges is overstated.

If the Commission allows SWBT to charge for conditioning on a nonrecurring basis, it should, as the Texas Commission did, "remove the bridged tap re-installation from the cost of removing a bridged tap." (TR:198, Exh. 7, Schedule 1 to Chao Direct, Texas Arbitration Award at 97).[18]

d. If The Commission Allows SWBT To Charge Covad A Nonrecurring Charge For Conditioning, Covad Supports Staff's Suggestion That Such Charge Should Not Include A Common Cost Markup.

Covad agrees with Staff that any common cost markup on SWBT's nonrecurring charges would lead to over-recovery of SWBT's common overhead costs. As the nonrecurring charge for conditioning results from a one-time event and is calculated using load labor rates, SWBT already will recover all costs associated with that singular event through the loaded labor rate. (TR:433, Exh. 23, Clark Rebuttal at 4). Moreover, the joint and common costs are already recovered in the recurring rates. (Id.). If the Commission allows SWBT to apply joint and common cost allocation its nonrecurring charges, SWBT will over recover its costs at Covad's expense.

[18] If the Commission decides to allow SWBT to charge CLECs for the restoral of bridged tap, it should require SWBT to re-run its cost study in order to establish what the forward looking cost of such restoral would be in light of Project Pronto. Apparently, SWBT's 34% restoral figure was derived from the amount of non-interfaced plant in SWBT's network. TR 279:17-22. Mr. Smallwood, however, has neither prepared nor reviewed any study regarding the actual amount of non-interfaced plan in SWBT's network. TR 279:23-281:6. Mr. Smallwood also admits that he has not considered the effect of Project Pronto on the amount of non-interfaced plant that will be in SWBT's network in the immediate future. The Project Pronto architecture will undoubtedly reduce SWBT's overstated restoral percentage. The rates charged to Covad should reflect this forward-looking design, rather than SWBT's embedded, flawed network assumptions.

e. If The Commission Allows SWBT To Charge Covad A Nonrecurring Charge For Conditioning, Covad Supports Staff's Suggestion That Such Charges Be Capped

Staff witness, Anthony Clark, in his rebuttal testimony, agrees with Covad. Load coils, bridged tap and repeaters on loops of less than 17,500 feet are not consistent with an efficiently-designed forward looking network. (TR:433, Exh. 23, Clark Rebuttal at 7). Additionally, Mr. Clark, citing Staff witness Mr. Couch, states that the possible existence of such disturbers on loops of less than 17,500 should be rare. Specifically, Mr. Clark states that "such occurrences are the exception rather than the rule." (Id. at 9). SWBT in fact agrees that only 3% to 5% of the loops in its network between 12,000 and 17,500 feet would require conditioning. (Id.). Consequently, Staff recommends that the Commission cap the percentage of loops that SWBT can charge Covad for conditioning at 4/100 or 4%.

Covad supports limiting the amount that SWBT can charge for conditioning. In fact, that cap should be the absolute maximum that SWBT could charge given that SWBT has already recovered and possibly re-recovered the cost of these conditioning functions elsewhere.

Through the discovery process, Covad learned that SWBT's retail study assumes that (1) load coils will need to be removed 2% of the time, (2) bridged tap will need to be removed 6% of the time and (3) repeaters will need to be removed .6% of the time. TR 290-293. On the stand, Mr. Smallwood confirmed that a Kansas cost study assumed the exact same percentages of occurrence. (*See* TR 290-293, wherein Mr. Smallwood discusses Hearing Exhibit 9a, which is Exhibit 14 to his deposition). Unfortunately, Mr. Smallwood does not know what the percentages for the 5-state area are. (TR 291:16-24). The fact that the exact same percentages were used in the retail and Kansas wholesale studies would appear to be more than a mere coincidence. In any case, the percentages assumed for SWBT's retail studies should not be

higher than those assumed in its state-specific studies, lest CLECs such as Covad will be placed at an obvious competitive disadvantage.

Therefore, in the event that this Commission allows SWBT to charge for conditioning on a nonrecurring basis, that charge should be capped according to Staff's has recommendation. Covad would alter Staff's recommendation only by suggesting that the Commission use the foregoing conditioning occurrences (2%, 6% and .6%) rather than Staff's proposed 4% cap, and to have such percentages apply only to loops between 12,000 and 18,000 feet.[19] . This result would be consistent with the Commission's policy in the Sprint arbitration to limit conditioning charges in a way that would be nondiscriminatory with SWBT's (or now its affiliate's) retail charges. The percentages that Covad recommends for use in the cap are the very percentages that SWBT used in studying conditioning in its retail study. Thus, SWBT should have no hesitation in assuring CLECs that it will not require conditioning for their lines any more frequently than it assumed it would need to condition lines on behalf of its DSL customers.

C. A(3): SWBT's Proposed ISDN Loop Rates Are Discriminatory And Contrary To FCC Pricing Rules.

SWBT proposes recurring rates of $25.79, $42.10, $58.44 and $41.44, for ISDN UNE loops in Zones 1, 2, 3 and 4, respectively. As shown below, these rates are both discriminatory and contrary to federal pricing rules because (1) they are not based upon a forward-looking network architecture consisting of the most efficient technology currently available, (2) they rely on outdated equipment prices that have declined significantly since SWBT prepared its cost studies, (3) they grossly overestimate the need for repeaters on ISDN loops, and (4) they impermissibly shift the cost of SWBT's network equipment to the price of equipment used by CLECs through "bundled" pricing arrangements with SWBT's vendors. Accordingly, this

[19] See footnote No. 3 above for description of why Covad supports 18,000 feet rather than 17,500 feet as the appropriate break point.

Commission should reject SWBT's proposed ISDN UNE rates, set interim ISDN rates, and order SWBT to submit a cost study using the network assumptions promulgated by the FCC and current equipment prices.

1. SWBT's Proposed ISDN Loop Prices Are Inflated Because They Fail to Rely on The Most Efficient Technology Presently Available.

a. Next-Generation Digital Loop Carrier Is the Most Efficient Telecommunications Technology Available.

As stated above, the FCC's TELRIC pricing rules are "based upon the use of the most efficient telecommunications technology available and the lowest cost network configuration . . . ." 47 C.F.R. § 51.505(b)(1). For ISDN loops, the "most efficient telecommunications technology available" consists of a fully integrated Next-Generation Digital Loop Carrier ("NGDLC") that complies with Bellcore's GR-303 technical standards.[20] Vendors began manufacturing NGDLC systems that complied with GR-303 standards over eight years ago to resolve problems with ISDN services that operated over older DLC equipment.[21] NGDLC technology is presently available.[22] NGDLC uses only one (1) ISDN card, which is installed in the remote terminal, for every four (4) ISDN loops. After installing a single ISDN card in the remote terminal for the first ISDN loop, the NGDLC card may be configured remotely for the following three (3) ISDN loops, thereby significantly reducing installation and configuration costs.[23]

[20] TR:148, Exh. 4, Donovan Direct at 43:13 – 15.
[21] TR:148, Exh. 4, Donovan Direct at 43: 16 – 17.
[22] TR at 272:13 – 18.
[23] TR:148, Exh. 4, Donovan Direct. at 43: 17 – 44: 3.

b. SWBT Presently Deploys Next-Generation DLC Technology.

In an attempt to justify SWBT's faulty technical assumptions, SWBT's witness, Mr. Lube, claims that SWBT presently deploys equipment other than NGDLC.[24] This claim, however, is contradicted by SWBT's engineering guidelines ***BEGIN PROPRIETARY

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Likewise, SBC has publicly stated that its Project Pronto network architecture depends on the use of NGDLC equipment, which will enable SWBT to provide DSL-based services over fiber/DLC loops.[27] SWBT witnesses confirmed this statement at the hearing.[28] Thus, even if SWBT did not previously deploy NGDLC equipment, its forward-looking network architecture is unambiguously NGDLC-based.

[24] TR:379, Exh. 21, Lube Rebuttal at 25: 4 - 6.
[25] TR:148, Exh. 4P, Sch. 2, SBC Loop Deployment Policies and Guidelines § 5.3.2 – 5.3.3.
[26] TR:52, Exh. 3-P, Murray Surreb. at 29: 16 - 21.
[27] Exh. 10, Supp. Resp. to DR No. 2, Investor Briefing at 2.
[28] TR at 285: 25 – 286: 6.

c. SWBT's Cost Studies Do Not Comply With TELRIC or SWBT's Engineering Guidelines Because They Do Not Assume the Use of NGDLC.

As SWBT's witness Mr. Smallwood conceded, SWBT's ISDN cost studies do not assume a forward-looking network architecture using the NGDLC technology described above.[29] Instead, SWBT's cost studies assume the use of antiquated DISC*S DLCs and "BRITE" cards,[30] which significantly affects the cost of the ISDN loop.[31] In particular,

- For each ISDN loop, DISC*S DLCs require the installation of a total of six (6) BRITE cards (i.e., three cards in the central office and three cards in the Remote Terminal). In contrast, NGDLC requires the installation of a total of only one (1) card, which is placed in the remote terminal, for every four (4) ISDN loops. (TR:148, Exh. 6; Donovan Dir. at 43: 17 – 44: 3.) Thus, SWBT's cost studies assume card installation costs that are **24 times higher** than costs allowed by TELRIC;

- For each ISDN loop, DISC*S DLCs require a technician to manually configure all six BRITE cards, forcing SWBT to incur two (2) "truck rolls" (i.e., one truck roll to the central office and one truck roll to the remote terminal) for each ISDN loop installation. In contrast, NGDLC cards, after installed in the remote terminal, can be configured with only one (1) truck roll to the remote terminal for every four (4) ISDN loop installations. (TR:148, Exh. 6, Donovan Dir. at 43: 17 – 44:3.) Thus, SWBT's cost studies assume "truck roll" costs that are **eight times higher** than costs allowed by TELRIC;

- For each ISDN loop, DISC*S DLCs require the use of three (3) card slots. NGDLC, however, requires only one (1) card slot for every four (4) ISDN loops. Thus, SWBT's incorrect equipment assumptions reduce the capacity of a standard 168-slot NGDLC from 672 lines to 56 lines. (TR:148, Exh. 6, Donovan Dir. at 43: 19 – 44: 3.) As a result, SWBT's cost studies assume that SWBT will incur DLC equipment costs **12 times as often** as SWBT would incur under TELRIC.

In sum, SWBT's blatant refusal to apply the FCC's pricing rules has significantly inflated SWBT's ISDN UNE loop rates. Accordingly, this Commission should require SWBT to "re-run" its ISDN UNE cost studies assuming the use of a forward-looking network architecture and the "most efficient telecommunications technology available."

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[29] TR. at 275: 13 – 20.
[30] TR at 282: 5 – 283: 1; Smallwood Depo. at 112: 3 - 23.
[31] TR:215, Exh. 9A, Smallwood Depo. at 118: 8 – 20.

2. Even If SWBT's Faulty Technological Assumptions Were Correct, SWBT's Cost Studies Still Unjustly Inflate SWBT's Proposed ISDN Loop Prices.

Information provided in SWBT's pre-filed testimony, in deposition testimony, in hearing testimony, and in responses to Covad's discovery requests further confirms that SWBT's ISDN costs are overstated. In particular, SWBT's cost study not only uses equipment prices from 1996, which SWBT admits have decreased significantly since that date, it grossly overestimates the frequency with which ISDN loops require "repeaters," further inflating ISDN loop prices. Finally, SWBT impermissibly shifts the cost of its own network equipment to equipment charged to CLECs through "bundled" pricing arrangements with its vendors.

a. SWBT's Cost Study Fails to Incorporate Significant Reductions in Equipment Prices That Have Occurred Over the Past Four Years.

Mr. Smallwood admits in his rebuttal testimony that SWBT's ISDN cost study relies on equipment pricing from 1996:

> SWBT's investments reflect SWBT's vendor prices as of the date of the original unbundled loop study, September 1996.[32]

In his deposition testimony, Mr. Smallwood also admits *** **BEGIN HIGHLY CONFIDENTIAL** [redacted][35] **END HIGHLY CONFIDENTIAL***** Because SWBT's ISDN cost study assumes 1996 price inputs, the study

[32] Exh. 12, Smallwood Rebuttal at 14.
[33] TR:241; *see also* Smallwood Depo. at 113: 25 – 114: 18. Indeed, Mr. Smallwood conceded that "many inputs" to the ISDN loop cost study have changed since 1996, but that the cost study does not reflect those changes. TR:215, Ex. 9A, Smallwood Depo. at 116: 16 – 117:3.
[34] TR at 282: 5 – 9.
[35] (Exh. 10, Supp. Response to DR No. 56).

does not incorporate this significant cost reduction. Simply put, the prices that SWBT is proposing in this arbitration are not cost based.

SWBT's argument that the dramatic reduction in ISDN electronics cost would not directly and straightforwardly reduce the ISDN unbundled loop cost is disingenuous. First, SWBT's argument ignores evidence showing that SWBT's ISDN loop price is substantially too high relative to SWBT's existing basic unbundled loop price.[36] The additional electronics required to provide ISDN is the source of the cost difference between the basic and ISDN loop types. Therefore, the change in the cost for ISDN electronics is the only relevant data required to reexamine the level of SWBT's ISDN loop price relative to its basic loop price. In other words, the Commission need only recognize that the cost of ISDN loop electronics has declined substantially to conclude that the increment between SWBT's basic and ISDN loop prices is now too large.

Second, SWBT has failed to identify any other input to the ISDN cost study that would offset the decline in electronics costs, even though it possesses the cost information necessary to make such a showing. ***BEGIN HIGHLY CONFIDENTIAL [redacted]

[36] TR:51, Exh. 1, Murray Direct at 51: 10 – 54: 5.
[37] TR:52, Exh. 3-HC, Murray Surrebuttal at 30: 14 – 31: 13.
[38] TR:52, Exh. 3-HC, Murray Surrebuttal At 31: 4 – 13.

[redacted][39]**END HIGHLY CONFIDENTIAL*****

Accordingly, even if SWBT's faulty technological assumptions were correct, this Commission should conclude that SWBT's ISDN cost study does not accurately reflect SWBT's actual costs for ISDN loops and should order SWBT to re-run its cost study with appropriate inputs.

b. SWBT's Cost Study Grossly Overestimates the Need for Repeaters on ISDN Loops.

In his Rebuttal Testimony, SWBT's witness Mr. Smallwood states that "in some cases a mid-span repeater will be required."[40] Actually, SWBT's cost studies improperly assume that

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[redacted]

[redacted]**END HIGHLY CONFIDENTIAL*****

[39] TR:52, Exh. 3-HC, Murray Surrebuttal at 31: 4 - 13.
[40] TR:241, Exh. 13, Smallwood Rebuttal. at 12.
[41] Exh. 10, Supp. Resp. to DR No. 57.
[42] Exh. 10, Supp. Resp. to DR No. 60, Circuit Provisioning Methods & Procedures at 1 – 2 (emphasis added).
[43] Exh. 10, Supp. Resp. to DR No. 60 at 2.
[44] TR:148, Ex. 6-HC, Donovan Surrebuttal at 27: 21 – 25.

Accordingly, SWBT's cost studies significantly inflate the cost of ISDN loops. This Commission, therefore, should order SWBT to re-run its cost study with appropriate inputs.

c. SWBT Impermissibly Shifts the Costs of Its Remote Terminal Racking to CLECs Through "Bundled" Pricing Arrangements With Its Vendors.

Other information produced by SWBT in response to Covad's data requests shows that SWBT has negotiated arrangements with its equipment vendors that shift the costs for expensive central office frames and channel bank to CLECs in the form of inflated ISDN card prices. In particular, SWBT's supplemental response to Covad's Data Request No. 55 shows ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL*** This information regarding the *de minimis* cost to SWBT for significant equipment shows that line card costs are significantly inflated to recover the costs of other equipment used by SWBT. A real-world example of this type of arrangement is the pricing of razors and razorblades: Razors are sold at below cost, but those profits are recovered through the sale of razor blades at far above cost.

In sum, SWBT's cost studies significantly inflate the cost of ISDN loops. This Commission, therefore, should order SWBT to re-run its cost study with appropriate inputs.

2. The Commission Should Set Interim ISDN Prices And Order SWBT To Submit Cost Studies With Appropriate Network Assumptions And Cost Inputs.

As shown above, SWBT's proposed ISDN rates are inflated because (1) they do not comply with the FCC's TELRIC pricing rules and (2) assume incorrect cost inputs and network assumptions. This Commission, therefore, should require SWBT to resubmit appropriate cost studies and use such cost studies to set permanent ISDN rates. To prevent SWBT's proposed

[45] Exh. 10, Supp. Resp. to DR No. 55.

rates from creating barriers to entry for competitive DSL providers during SWBT's revision of their cost study, this Commission should order SWBT to provide ISDN loops at interim rates, subject to true-up to the permanent rates established at a later date.[46]

Covad's witness Ms. Murray suggested interim rates of $17.54 in Zone 1, $28.58 in Zone 2, $45.94 in Zone 3, and $25.16 in Zone 4, based upon a methodology using the ISDN rates offered by SWBT's sister ILEC, Pacific Bell.[47] This recommendation is based upon the ratio of Pacific Bell's ISDN loop price to Pacific Bell's analog loop price (i.e., Pacific Bell's ISDN loops are 38% more expensive than Pacific Bell's analog loops). Because Pacific Bell's ISDN loop rates are based upon cost studies that assume forward-looking Next-Generation DLC technology, they provide a reasonable proxy for the additional cost of loop electronics associated with ISDN. These interim rates should remain in effect until SWBT provides a properly documented ISDN loop cost study and all affected parties have an opportunity to review and comment on those costs.

D. Issue A(3): SWBT's Loop Qualification Charge Is Excessive

1. SWBT's Loop Qualification Cost Study Has Studied Only A Partially Mechanized Process, Not A Long-Run TELRIC-Compliant Process.

As indicated in SWBT's response to Covad's petition for arbitration, it is undisputed that SWBT's prices for its "partially mechanized" loop qualification reflect only interim processes.[48] SWBT's proposed loop qualification price, by its own admission[49], does reflect an efficient fully

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[46] The Arbitrators for the Public Utility Commission of Texas used an identical procedure in Texas to allow CLECs to provide competitive services during the permanent ISDN loop rate proceeding. (TR:190, Ex. 7, Sch. 1, Arbitration Award at 86 - 89, Docket Nos. 20226 & 20272, Before the Public Utility Commission of Texas (Nov. 30, 1999)).

[47] TR:51, Exh. 1, Murray Dir. at 56: 1 – 10.

[48] *See* Exhibit A to SWBT's Answer to Covad Petition for Arbitration at p. 4

[49] Specifically, SWBT stated:

Effective August 1, 1999, the rates for Loop Qualification reflect SWBT's planned implementation of partial mechanization. SWBT agree to notify CLEC of any additional changes in the Loop Qualification process and any associated rate modification . . .. Id.

mechanized process that SWBT expects to deploy in the long run. SWBT's price, accordingly, violates TELRIC, which is a long run cost measure.

a. SWBT's Partially Mechanized Loop Qualification Study Is Not Adequately Substantiated

SWBT's partially mechanized loop qualification study assumes that 80% of the loops for which "qualification" is performed will "flow through,"electronically. (TR 301:6-10). For these loops, SWBT assumes a cost of zero dollars. (TR:215, Exh. 9A, Excerpt from Smallwood Deposition at 77:20-25). For the other 20% of loops for which "qualification" is performed, SWBT's cost study assumes that manual qualification will be required. (TR:301:11-15).

The only basis provided by SWBT for these percentages in an email from Larry Wren dated February 2, 1999. As pointed out in Ms. Murray's direct testimony, neither this email itself nor any other material submitted with SWBT's December 1999 cost study contains sufficient detail to determine how these percentages were determined. (TR:51, Exh. 1, Murray Direct at 19:8-19).

In fact SWBT's own cost study "expert" does not know the basis for the 20% fall out percentage. According to Larry Wren's email (which again is the only support provided for assumptions included in SWBT's partially mechanized loop qualification study), the 20% fall out percentage was premised upon three assumptions: (1) not all loops will be identified; (2) CLECs will request additional information; and (3) some identified loops will be inaccurate. (TR 303:21-304:3; TR:215, Exh. 9A, Smallwood Depo. Exh. 10). When asked what these assumptions mean, Mr. Smallwood did not know, "other than the plain meaning of the words." TR 304:1-22. Despite SWBT's assertions to the contrary, SWBT's cost study inputs have not been verified in light of Mr. Smallwood's admission that he does not even understand the assumptions made in the cost study. Moreover, Mr. Smallwood admitted on the stand that

SWBT's third assumption is inefficient. (TR:307:1-9). Mr. Smallwood's concession demonstrates that SWBT's cost study assumptions violate TELRIC.

Both the timing of Mr. Wren's February 2, 1999 email and SWBT's recent characterization of its proposed loop qualification charge as representing a process in place as of August 1, 1999, suggest that SWBT's cost study does not reflect any increase in mechanization anticipated to occur after August 1999. Specifically, SWBT's cost study does not take into account ***BEGIN HIGHLY CONFIDENTIAL [redacted][50] END HIGHLY CONFIDENTIAL*** SWBT's cost study did not include these reductions in the amount of time required for SWBT to "qualify" a loop and therefore cannot be said to be accurate in the short run, much less the long run.

A truly long-run TELRIC-compliant cost study would assume that loop makeup information is available directly in electronic format. In a fully mechanized environment, the forward-looking cost of providing electronic access to loop make-up information would be *de minimis*.[51] SWBT's own cost study makes this point by imputing no cost for 80% of loops that flow through electronically. Accordingly, the best estimate of a TELRIC-compliant cost for the electronic provisioning of loop make up information is zero.

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[50] Exhibit 10, Attachment to October 27, 1999 email from Erin K. Blain to George R. Phillips, Jr., provided in response to DR No. 1-65.

[51] The Texas Commission has adopted a $0.10 per "dip" interim charge for both mechanized access to loop makeup information and any manual efforts that SWBT must engage in because it has not yet provided mechanized access to databases that are fully populated with the relevant loop makeup data. (TR:198, Exh. 7, Schedule 1 to Chao Direct, Texas Arbitration Award at 103).

b. Project Pronto Will Eliminate The Need To Qualify Loops And Therefore Eliminate Any Associated Cost

SWBT's proposed price of $15 for loop qualification directly contradicts SBC's projections for loop qualification pursuant to Project Pronto. SBC has publicly admitted that "[network] improvements will **eliminate** the need to 'qualify' a customer for DSL services . . ." and its business case analyses further demonstrates that SWBT's current charge is overstated. ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL*** (Exhibit 10, Investor Briefing produced in response to DR No. 2; Exhibit 10, Investing in the Future at 31st page entitled "Loop Qualification and Conditioning Savings" provided in response to DR No. 2). SWBT's loop qualification charge is further undermined by SWBT's admission that ***BEGIN PROPRIETARY [redacted][52] END PROPRIETARY***

Applying the manual occurrence percentages taken directly from SBC's business cases to SWBT's current partially mechanized loop qualification study yields a cost of ***BEGIN

HIGHLY CONFIDENTIAL [redacted] **. END HIGHLY CONFIDENTIAL***** (TR:52, Exh. 3-HC, Murray Surrebuttal at p. 7). By its own admission, SWBT's cost can be no greater and this Commission should consider that amount to be the absolute maximum that SWBT can charge Covad for loop qualification, if it is allowed to impose any charge at all.

2. SWBT Cost Studies Include Incorrect Inputs

Originally, SWBT planned to "qualify" a loop based on certain criteria set out by its spectrum management program. Consequently, SWBT's "loop qualification" cost study included engineering time spent on its selective feeder separation program. (TR:307:22-308:6). Selective feeder separation required SWBT engineers to check adjacent binders for disturbers before qualifying a loop for DSL service. Several national DSL CLECs, including Covad, objected to selective feeder separation because the program discriminated against specific types of DSL selected by many CLECs in favor of SBC's chosen DSL, ADSL. These concerns were raised before both the FCC and the Texas Public Utilities Commission. In November 1999, the two agencies issued separate orders that found the program anticompetitive and unjustified. Both agencies ordered SWBT to discontinue its selective feeder separation program. (Nov.18, 1999 Third Report at para. 178-220, CC Docket Nos. 98-147, 96-98; November 30, 1999 Texas Public Utilities Commission Arbitration Award, Docket Nos. 20226 and 20272). As a result, SWBT is no longer allowed to qualify a loop on behalf of a CLEC, and the term "loop qualification" is a misnomer. SWBT simply provides the loop makeup information requested by Covad.

Although SWBT seeks to charge Covad for a partially mechanized process, the information Covad seeks is already available in its databases. Attachment xDSL sets forth the

(..continued)

[52] Exhibit 10, George Phillips, "Loop Qual System: SWBT Functional Requirements Specification Baseline Document, March 18, 1999 at p. 5, provided in response to DR No. 1-65; *see also* TR:52, Exh. 3HC, Confidential version of Murray Surrebuttal at p. 6.

loop makeup that SWBT must provide. (TR:309:2 – 310:13; *see also* TR:215 Exh. 9A, Excerpt from Smallwood Deposition, Exh. 11). SWBT is only required to provide information regarding the presence of load coils and repeaters and the total length of bridged taps. Id. That information already exists in SWBT's LFACS system. (TR:148, Exh. 4, Donovan Direct at 41). Although SWBT's witnesses repeatedly point out that its databases do not include the location of those disturbers, SWBT's argument is completely irrelevant to the dispute at issue—whether SWBT should be able to charge for electronic access to information regarding the **presence** of disturbers. SWBT is not required to provide any information regarding the *location* of such disturbers. (TR. at 310:1-13). Again, Covad is only requesting information that should already be available in SWBT's automated databases.. Therefore, SWBT should NOT charge for access to this information.

However, if this Commission deems a charge appropriate, it must reduce the costs SWBT proposes. Although SWBT has promised to discontinue its selective feeder separation program, its cost study includes time for a SWBT engineer to perform a spectrum management analysis to implement that program. Mr. Smallwood testified that SWBT has not updated the loop qualification cost study since SWBT abandoned selective feeder separation. TR 308:17-309:1. His direct testimony even attaches a schedule that includes a description of SWBT's old selective feeder separation program. "Spectrum Management is the use of assignment data, knowledge of interference relationships . . . to provision, maintain and grow broadband services in common plant." Exh. 12, Smallwood Direct, Schedule 3. ***** BEGIN HIGHLY CONFIDENTIAL**

[redacted]

[redacted] **END HIGHLY CONFIDENTIAL *****

Because SWBT is no longer permitted to use selective feeder separation, its cost study is overstated in two ways. First, SWBT must eliminate those costs it no longer incurs, specifically, costs associated with spectrum management analysis. Second, because SWBT is no longer analyzing loops and their adjacent binders for potential spectrum interference, SWBT does not need an engineer to gather loop makeup information for Covad. A drafting clerk an provide the loop makeup information that Covad is requesting and has access to the databases they need to obtain that information. (TR:148, Exh. 4, Donovan Direct at 41-42; TR:148, Exh. 6, Donovan Surrebuttal at 4). Indeed, SWBT's prior cost studies for purely manual loop qualification assumed that a drafting clerk gathered the relevant information. (TR:52, Exh. 1-HC, Murray Direct at 27. Moreover, as noted above, *** **BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL** ***

Taking these adjustments into account, but not reflecting the updated Project Pronto assumptions, Ms. Murray calculated a *** **BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL** *** charge for loop makeup information. (TR:51, Exh. 1, Murray Direct at 27-28). If the Commission chooses to use actual costs instead of forward-looking efficient costs, it should reduce the charge to *** **BEGIN HIGHLY CONFIDENTIAL** [redacted] **END HIGHLY CONFIDENTIAL** ***[53]

[53] This figure does not reflect any additional reduction in price that results from the Project Pronto architecture that will further reduce, if not eliminate, the cost of loop qualification. Covad proposes the ***BEGIN HIGHLY CONFIDENTIAL [redacted] END HIGHLY CONFIDENTIAL*** charge only in the event that the Commission refuses to require SWBT's cost to reflect Project Pronto savings.

3. Any Loop Qualification Charge That The Commission Establishes Should Be Temporary and Should Not Include A Common Cost Markup.

There appears to be internal consistency within SWBT regarding what loop makeup information will be available to CLECs. As pointed out on page 10 of Ms. Murray's surrebuttal, Mr. Lube asserts that all LFACS and TIRKS data that is "relevant to xDSL provisioning **will** be made available to CLECs via electronic access . . .." (TR:379, Exh. 21, Lube Rebuttal at 5 (emphasis in original)). Mr. Borders, on the other hand, argues that an engineer will still be required to analyze SWBT's data because SWBT, apparently, will not provide sufficient electronic access to the data that would enable Covad's engineers to do its own loop qualification. (tr:335, Exh. 16, Borders Rebuttal at 17-18).

Staff has suggested a way in which to address SWBT's internal inconsistency. Assuming that the Commission allows SWBT to charge for loop qualification at all, Mr. Clark recommends, and Covad concurs, that the charge for access to loop makeup information should be temporary and should end on the date by which SWBT must comply with the order to mechanize its system. At a minimum, this Commission should adopt Staff's recommendation, regardless of whether SWBT has actually met its deadline for mechanization. By doing so, the Commission will ensure that the burden and cost of any manual loop qualification will reside where it should on SWBT, who failed to mechanize its system. Additionally, as argued above, Covad supports Staff's recommendation that the Commission remove joint and common costs from all of SWBT's nonrecurring charges, lest SWBT recover more than it is due.

E. ISSUE A(8): SWBT's Proposed Cross-Connect Charges Are Not Supported By Cost Studies or Cost Data.

To date, Covad has not had the opportunity review cost studies supporting SWBT's non-recurring rates for cross connects. It is Covad's understanding that such studies do not yet exist. It has been impossible for Covad to effectively challenge SWBT's proposed prices in the

absence of reviewing relevant cost studies. Covad, therefore, requests that the Commission adopt only interim prices for cross-connects in this arbitration and direct SWBT to provide Covad with relevant cost data for both shielded and non-shielded cross-connects, thereby providing Covad, to the extent that it disagrees with such cost studies, with the opportunity to meaningfully voice its concerns.

F. ISSUE (B): No Party Should Unilaterally Modify The Agreement

By definition, a contract requires the consent of both parties. Otherwise, there is simply no agreement. Similarly, an amendment to a contract also needs consent of both parties. SWBT is attempting to alter this basic principle of contract law and reserve the right to unilaterally modify the Covad/SWBT Interconnection agreement through the use of technical publications.

This Commission should not allow SWBT to force substantive changes in technical publications on Covad. The undisputed record demonstrates that SWBT has already abused its technical publications once when it attempted to implement the spectrum management program that both the FCC (Nov. 18, 1999 Third Report at para 178-220, CC Dockets Nos. 98-147,96-98) and Texas Commission (November 30, 1999 Texas PUC Arbitration Award, Docket Nos. 20226 and 20272) threw out. (tr:198, Exh. 7, Chao Direct at 3). SWBT's only response is to point out that it withdrew references to technical publications in the DSL Appendix here. (TR:379, Exh. 21, Lube Rebuttal at 23). However, that modification does not address other technical publications and does not prevent future anticompetitive abuses in those areas.

Commission Staff agrees with Covad on the technical publication issue. Mr. Clark testified that "SWBT should not affect agreements in place prior to the change, unless the agreement is renegotiated or arbitrated." (TR:433, Exh. 23, Clark Rebuttal at 18). Covad's proposed language accomplishes this goal.

> Modifications to SWBT Technical Publication that attempt to modify substantive rights under this interconnection agreement will have no effect on the parties respective rights and obligations under this agreement. (TR:198, Exh. 7, Chao Direct at 4).

This language will prevent SWBT from using technical publications to make unfair substantive changes to the interconnection agreement.

WHEREFORE, DIECA Communications, Inc. d/b/a Covad Communications Company requests that for all of the reasons stated above, this Commission grant Covad the relief it requests on all issues in this arbitration.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the above and foregoing was forwarded via Federal Express, this 1st day of March, 2000, to:

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