BEFORE THE FLORIDA
PUBLIC SERVICE COMMISSION

ORIGINAL

In re: Investigation into Pricing of Unbundled Network Elements	)	Docket NO. 990649-TP

DIRECT TESTIMONY OF ERIC MCPEAK

ON BEHALF OF

Broadslate Networks, Inc.
Cleartel Communications, Inc.
Florida Digital Network
Network Telephone Co.

("The Coalition")

July 31, 2000

I. INTRODUCTION

Q. Please state your name and business address for the record.

A. My name is Eric McPeak. My current business address is 111 East Spring Street, El Dorado Springs, MO 64744.

Q. By whom are you employed and what is your position?

A. I am employed by QSI Consulting and my current position is Director of Technical Services.

Q. Please summarize your professional experience.

A. I started my telecommunications career in 1989 as a material purchasing specialist for Contel of Missouri. Contel of Missouri was an incumbent local exchange carrier managing numerous exchanges throughout rural portions of the West and Midwest before it was purchased by GTE North incorporated. My duties at Contel included purchasing all major and minor materials for approximately twenty (20) telephone exchanges in the Southwest District. I also supervised the distribution of all materials for company construction, contract construction, and splicing crews for the District. I worked directly with Engineering and Network Provisioning on all outside plant applications for both maintenance and new construction projects. Beginning in May 1990, I served Contel as an outside plant service technician in the customer services division. My duties included installing outside construction facilities; splicing copper and fiber cable; trouble shooting aerial, buried and underground cable problems; installing and repairing residential and business services, both analog and digital loop carrier systems, key system and PBX. I continued the same responsibilities as an employee for GTE of Missouri until 1997. From 1997 to 1999, I held the position of President of Integrated Communications Corporation (ICC). My duties included managing the installation and repair of PBX and key systems applications, conducting cellular and paging sales and service, and developing comprehensive business planning in both engineering and competitive local service engineering applications. In March of 1999 my current employer, QSI Consulting, purchased ICC. I am currently employed as the Director of QSI's Technical Services Division, where I provide telecommunications companies with advice and counsel for direct network planning, management and cost-of-service support. My specific areas of expertise include network engineering, facility planning, project management, business system applications, incremental cost research and issues related to the provision of unbundled network elements, including local loops.

Q. **Please summarize you educational background.**

A. I completed two years of course work in Electrical Engineering at Southwest Missouri State University in Springfield, Missouri. In addition, I completed numerous industry training courses provided by Nortel Networks, Contel Telephone and GTE including training courses at the

Contel Training Center, St. Charles, Missouri in outside plant construction practices, major and minor cable splicing (copper and fiber), installation and repair of residential and business telephone service, key and PBX installation, coin telephone installation and all OSHA safety practices.

Q. What is the purpose of your testimony?

A. This testimony will address the proper times and methods associated with all activities involved in the conditioning of loops for xDSL services. I will also be addressing the proposed rates submitted by BellSouth in this proceeding.

II. xDSL Background

Q. Please define loop conditioning and explain why loop conditioning is required within the network.

A. "Loop Conditioning" is the process wherein the electrical characteristics of a copper pair are altered, generally by adding equipment, so that the characteristics of the loop are consistent with a given service. Recently, however, with the onset of xDSL services, the term "loop conditioning" has been expanded to incorporate the process of removing these same pieces of equipment to return a copper pair to its original, unaltered state. This type of "loop conditioning" consists of the removal of load coils, repeaters and bridge taps from the copper loop. In order for advanced services such as xDSL to operate within the network, copper loops have to meet certain specifications. Certain copper facility applications that exist in the network, which I will refer to as "disturbers", affect the copper loop in a way that will not allow high bandwidth services such as xDSL to work properly. Load coils, bridge taps and repeaters all fall within the "disturber" category. The disturbers are actually designed to assist in the operation of voice grade services within the network. Advanced services such as xDSL operate at a much higher bandwidth than do voice services and therefore require much different copper facility specifications.

Q. **What is DSL?**

A. DSL is a technology initially developed to increase the digital transmission speeds over traditional copper-based loop facilities. ADSL, or *asynchronous digital subscriber line*, is a member of a larger family of technologies generally referred to as xDSL. The "x" in xDSL is generally used as a placeholder to identify more specific derivations of the digital subscriber line technology (i.e.HDSL –high speed DSL; SDSL – synchronous DSL VDSL – very high speed DSL; UDSL- universal DSL; and RDSL – rate adaptive DSL). Generally, xDSL technologies use a system of digital modems placed on each end of a transmission medium (generally two or four copper wires) to transmit digital information at rates far exceeding those typically achieved by other types of copper loop transmission.

xDSL technologies support a number of consumer data applications including wide area networking for purposes of telecommuting as well as high-speed internet access that dwarfs the speed achieved by a standard 56Kbps modem. In sum, advanced services drive ordinary telephone lines at speeds far greater than conventional dial-up modems, and allow consumers to enhance their Internet use and maximize efficiencies and productivity. The efficiencies and improvements offered by advanced services allow for the performance of a variety of tasks that make life easier and more productive. A few examples of ways in which consumers can take advantage of advanced services include the following:

(1) linking multiple personal computers to single digital subscriber line connections for a fully "networked" home office;

(2) downloading software and documents from the Internet at extremely high rates of speed; and

(3) conducting stock trades in real time fashion.

Q. How does xDSL work?

A. Generally speaking, xDSL modems are placed at each end of a non-loaded copper loop to transmit a digital data stream between the customer's premise and a packet switched network node that resides in the local exchange carrier's central office ("C.O."). Using complex digital compression techniques, ADSL supports substantial bandwidth on the "downstream" channel (i.e. from the packet switched network to the customer's premises) while supporting a more modest transmission capacity on the "upstream" channel (i.e. from the customer's premises to the C.O.). This "asynchronous" bandwidth capability separates ADSL from other xDSL technologies like HDSL which provides T1 transmission

(1.544 Mbs) in both directions. ADSL is engineered to overlay existing analog telephone service and basic rate ISDN[1] services by avoiding the use of frequencies in the range of 0 to 50 kHz where POTS and ISDN generally reside within the transmission medium. Stated another way, a customer can realize the high-speed data capabilities of the ADSL technology while at the same time continuing to use the same telephone line for traditional voice services.

Q. Do the characteristics of the copper pairs used as a transmission medium for the xDSL technology impact its efficiency?

A. Yes, they do. In fact, xDSL technologies (and ADSL in particular) are limited in the extent to which they can utilize existing copper loops that exceed a particular length (i.e. it is generally accepted that using a loop in excess of 18,000 feet for xDSL transmission is likely to result in substantial service degradation or even an unacceptable bit error ratio). Likewise, individual characteristics beyond the simple length of the loop can impact the quality (i.e. bit rate or bit error ratio) of the xDSL transmission. For example, an excessive deployment of bridged tap, load coils or repeaters within the loop can render a loop unusable for xDSL transmission.

[1] ISDN (Integrated Software Defined Network) is another family of technologies that attempts to increase the bandwidth available over copper loop facilities. ISDN services generally use central office switching software (as opposed to packet switching equipment) to manage the digital data stream between the central office and the customer's premises.

Q. How does the presence of load coils, bridged tap and/or repeaters degrade the quality of the ADSL transmission?

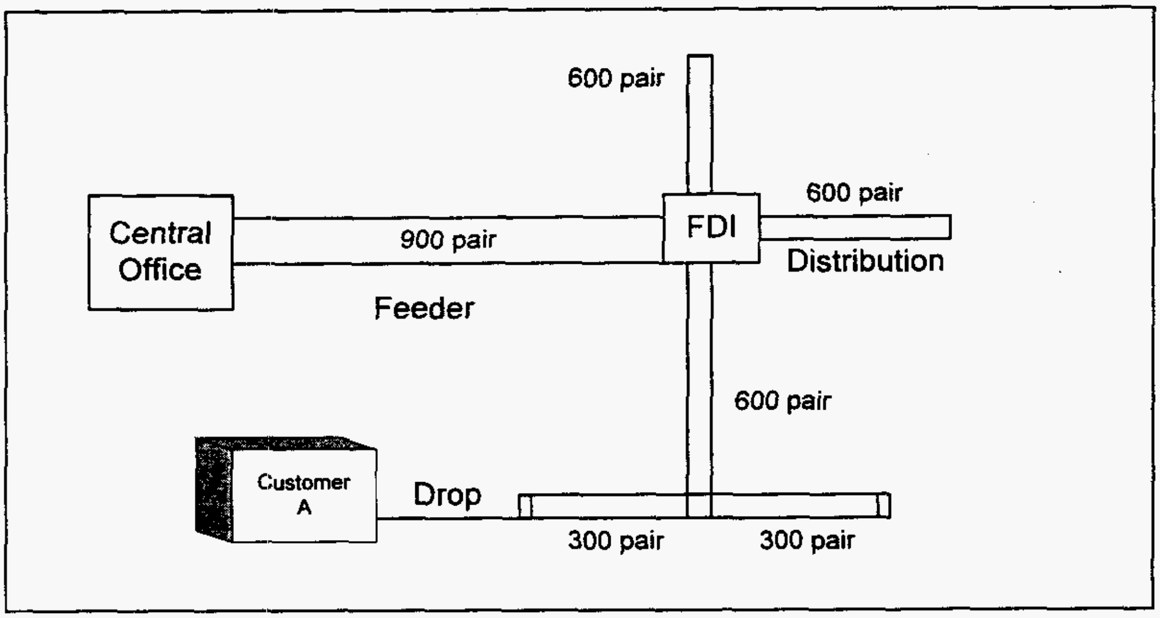
A. Generally speaking, these disturbers interfere with the ability of the two xDSL modems to communicate effectively. This inability to communicate effectively can either rob the system of potential data transmission speed (by reducing the amount of data that can be transferred per second), or it can degrade the transmission to an extent where the bit error ratio is unacceptable (i.e. the ratio of legitimate "bits" of data received by the device at either end compared to erroneous "bits" is so high that the transmission is rendered unusable). I will describe how each "disturber" affects the xDSL transmission in greater detail below.

Q. What is bridged tap?

A. Bridged tap is the result of an outside plant deployment strategy which attempts to maximize the use of a local exchange carrier's loop investment. Local exchange carriers generally provision loop facilities in three fairly discrete segments: (1) feeder or F1; (2) distribution or F2 and (3) drop. Feeder facilities generally extend from a central location which houses the exchange's central office switch. Feeder facilities are generally characterized by larger cables (housing anywhere from 900 to 2400 copper pairs) that carry traffic to a defined point within the exchange where they are cross-connected (usually via a feeder distribution interface "FDI") to the distribution portion of the network. It is the distribution portion of the network that then spreads out across a given defined area of the exchange (generally referred to as a distribution area or "DA") to extend a given loop to a particular neighborhood or group of customer premises. The drop portion of the network then extends the distribution cable (generally terminated at a drop pedestal or an aerial equivalent within a neighborhood) to a given customer premise. Diagram 1 below provides a simplified look at the these three loop components.

To better understand the use of bridged tap, we must look more closely at the distribution portion of the network. Each distinct distribution route from the FDI is generally referred to as a "tap." A given tap is used to connect a number of active customers to the feeder network to complete a circuit from the customers' premises to the central office. Each tap may incorporate a number of different splice points wherein the distribution cable is tapered to smaller cables that branch out to different neighborhoods.

Diagram 1

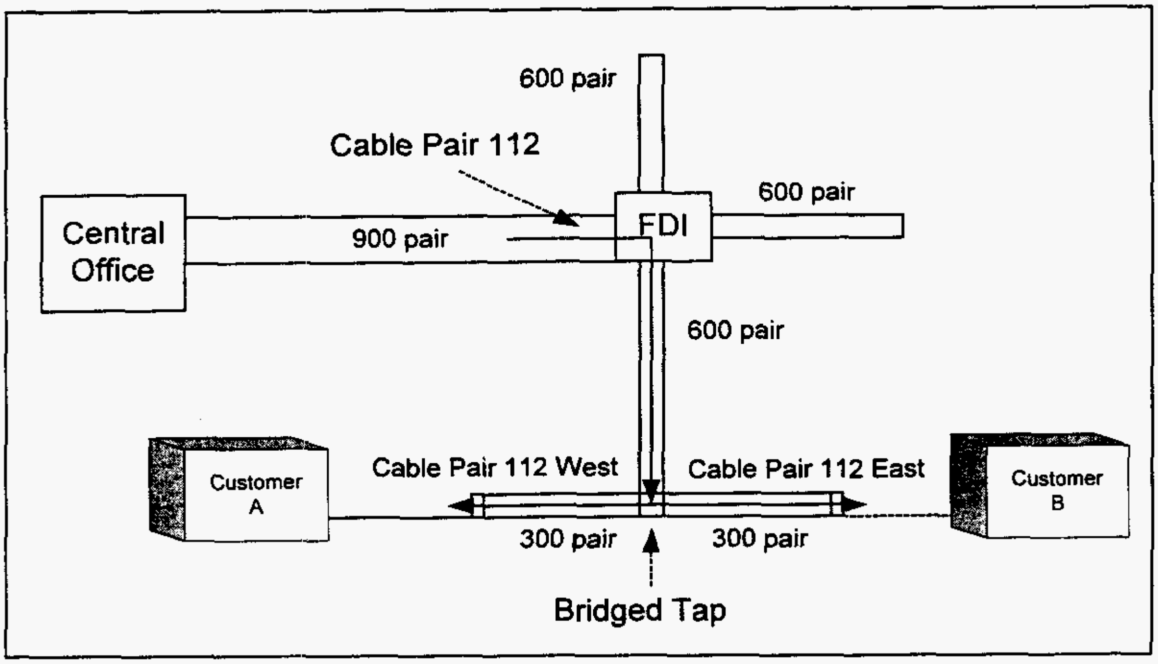


Although distribution cables generally grow smaller as we move from the FDI to the customer premise, the network is generally engineered to accommodate a larger number of distribution cables than feeder cables. Generally, there could be several distribution cables located at the FDI that are being fed by one feeder cable. This results from engineering the network such that individual feeder pairs can be provisioned to different portions of the distribution network as needed, without the need to provision additional distribution pairs. This is accomplished by two methods: (1) the cross-connect capability of the FDI itself (i.e. the ability to cross-connect a single feeder pair with any number of distribution pairs); an, (2) bridged tap.

Q. Please explain bridge tap in more detail.

A. Outside plant engineers generally design the network where a single distribution pair is actually connected to at least two downstream distribution pairs that may branch in two different directions. In other words, the tap is "bridged" such that it can provide service in either of two geographic areas (generally it is "bridged" to provide either an east or west circuit). This is accomplished generally within a cross-connect pedestal wherein a single distribution pair is simply cross-connected to two downstream pairs. Of course, a drop is attached to only one of these bridged pairs to provide service to an individual customer, but the "bridge" remains in place so if the customer leaves, that same distribution pair could be used in another geographic area to meet future demand. This "bridged tap" architecture allows the local exchange carrier to maximize the flexibility of its network without the expense that would be required to engineer direct circuits (i.e. a single pair reaching from the C.O. to each customer premises). Diagram 2 below depicts a cable pair that "appears" at two different locations using the "bridged" architecture as described above.

Diagram 2



In Diagram 2 above, Cable Pair 112 is "bridged" such that it could be used to provide service to Customer A or Customer B. In this example the pair is connected to a drop that serves Customer A; however, the "bridge" allows it to be used just as easily to provide service to Customer B (though it can provide service to only one of those customers at any one time).

Q. Why does bridged tap degrade the quality of an xDSL transmission?

A. Simply put, bridged tap increases the electrical loop length of the circuit in question. An electrical signal traversing cable pair 112 will actually travel the entire distance of the pair extending to both customer A and customer B, thus increasing the resistance and loss associated with the entire loop. This extended electrical loop length significantly reduces the efficiency of the ADSL transmission.

Q. What are load coils?

A. Load coils can be described as inductance coils used to improve the transmission performance of the voice band channel, thus increasing the allowed loop length for acceptable voice transmission. Generally speaking, a load coil on a loop "amplifies" a given analog signal by boosting the entire voice band channel so it can be "heard" on loops extending farther from the original point of analog transmission (generally the central office switch).

Q. Can a loaded loop effectively accommodate an xDSL signal?

A. No, it cannot. xDSL technology operates in the high speed frequency range of a copper loop. Load coil inductance alters the rate at which data is transmitted through the loop, and creates unacceptable fluctuations in bit rate speed and quality thereby degrading the overall performance of the transmission. Stated differently, the load coil's general purpose of "amplifying" an analog signal is not conducive to the digital communication that occurs between the two ADSL modems. By electronically amplifying the digital signal, the load coil's inductance alters the signal in a manner that is not recognized by the ADSL modem at the other end of the communication pathway.

Q. What is a repeater and what is it used for?

A. Repeaters are used in a number of different scenarios in provisioning outside loop plant. Repeaters are either Voice Frequency Repeaters ("VFRs") or digital repeaters. Voice Frequency Repeaters can be categorized in two classes: Central Office-Mounted and Field Mounted. Central Office-Mounted repeaters are required on customer loops when the 1000 Hz transmission loss exceeds the 8.0 dB limit (i.e. the voice grade standard). Field-Mounted VFR's are generally used for circuits with resistance greater than 3000 ohms or where more than the maximum available decibel gain from one terminal repeater is required. To satisfy minimum return loss requirements, repeaters must be located at or near the facility's electrical midpoint and centered as close as possible between two load coils.

Q. How does a repeater degrade the quality of an xDSL transmission?

A. Repeaters placed in a typical local loop are designed to operate under voice frequency standards only. Repeaters significantly distort the data stream resulting in high bit-rate error ratios that would ultimately result in unacceptable transmission levels for ADSL, which optimizes high band-width applications using digital transmission.

III. Multiple Loop Conditioning Practices

Q Mr. McPeak, have you had the opportunity to review BellSouth's proposed cost model?

A. Yes I have.

Q. Has BellSouth over inflated its loop conditioning rates?

A. Yes it has. In at least three significant ways, BellSouth has used inputs in its cost model that improperly lead to over-inflated loop conditioning rates. First, BellSouth unjustifiably presumes that only ten (10) pairs can be conditioned per conditioning activity. In addition, BellSouth has proposed extremely high labor activity times for most activities associated with loop conditioning. Finally, BellSouth has assumed that 90% of conditioning for load coils will be done in underground plant facilities and 10% will be done in aerial or buried plant facilities, which not only misrepresents BellSouth's network but also appears to conflict with other portions of BellSouth's cost model.

Q. Why is BellSouth's assumption that only 10 pair can be conditioned per activity improper?

A. I have a performed an analysis which conservatively estimates that approximately 224 loops less than 17,500 feet and 75 loops greater than 17,500 feet are available for conditioning per each location visited by a BellSouth technician.

Q. Can you please explain how you arrived at those numbers and why you believe them to be conservative?

A. Yes. I will begin by discussing loops under 17,500 feet. First, I have assumed that the average BellSouth cable contains 600 copper pairs.

Q. Is 600 a reasonable number?

A. Yes, based on my experience, 600 is a conservative estimate. Mr. Keith Milner of BellSouth in his testimony describes a cable as containing 1200 copper pairs. See Milner testimony at 9:15-16. The number I have used is half that.

Q. What is the next step in your analysis.

A. I then used a fill factor of 58%, which means that of the 600 loops, 58% or 347 currently are being used by BellSouth to provide voice service. I arrived at this number by using a weighted average. First, I took BellSouth's estimates for the average distribution (47%) and feeder (74%) fill factors. I then accounted for the fact that, in my experience, generally 60% of a network is made up of distribution and 40% of feeder. Based on this assumption, I came up with a weighted average of 58%. ((47% *60%) + (74% * 40%) = 58%.)

Q. What did you do next?

A. I assumed that BellSouth would set aside a certain amount of pairs for the future provision of services. To estimate the number of lines that should be reserved for future voice demand, I relied on population growth data from the U.S. Census Bureau, Population Division. Based on the most recent data, Florida's population is growing at an annual rate of 1.4%. I applied a 5.6% population growth rate (over a 4 year time horizon) and assumed a 99% penetration rate for telephone subscribership in order to calculate the number of lines that should be reserved to accommodate new voice service demand. My understanding from my colleague Mark Stacy is that most penetration rates are significantly less than 99%. The 5.6% growth rate utilized in the analysis would allow for 4 years of growth at the most recently observed rate of 1.4% annually, a time period that is sufficient to allow BellSouth to respond to both voice and data demand and to plan and implement network upgrades to accommodate all customer demand in the long term. Based on these numbers, 19 pairs would need to be reserved for future voice applications.

Q. You state, however, that 29 pairs would need to be set aside. How do you arrive at that number?

A. I have further assumed that one-half of all new customers will add a second line. In other words, in order to calculate the number of lines to be set aside for future voice demand over the next 4 years, 99% of new residents are assumed to require new voice service, and one-half of those new customers will require 2 lines. Based on these numbers, I have estimated that 29 lines will need to be set aside.

Q. What did you do next?

A. As stated above, using a fill factor of 58%, 253 of the 600 pairs per cable are spare. I then subtracted the 29 lines that BellSouth would set aside for future customers to arrive at 224 loops.

Q. Did you employ the same analysis to reach the conclusion that 75 loops of greater than 17,500 feet are available to be conditioned at each location.

A. Yes I did.

Q. Although 224 pairs under 17,500 feet and 75 pairs over 17,500 feet may be available for conditioning at an existing location, how many pairs have you assumed should be conditioned at one time by BellSouth.

A. In my calculations, I have presumed only that BellSouth will condition 25 pairs at a time. *See* Exhibit EM_7.

Q. Can BellSouth achieve the efficiencies associated with multiple loop conditioning in 25 pair increments without impairing the service of existing voice customers, or impairing the ability of BELLSOUTH to serve future voice customers?

A. Absolutely. As my analysis indicates, BellSouth can condition well over 25 loops without disturbing existing customer service and while still maintaining reserve loops for future voice service demand.

Simply, it is neither impractical nor inefficient to assume that multiple pairs can be conditioned at a time without impairing BellSouth or other providers' ability to serve voice customers..

Q. Moreover, isn't it true that you do not account for the fact that pairs under 17,500 feet currently used to provide voice service still may be conditioned without degrading that service?

A. That is correct. In my analysis, I conservatively have assumed that 347 pairs per cable are "filled" and unable to be conditioned. In reality, however, BellSouth could condition and provide a variety of xDSL services over those loops without degrading existing voice services.

Q. With 224 and 75 pairs available for conditioning, respectively, would it be likely that BellSouth would be conditioning loops unnecessarily if it conditioned 25 at a time?

A. No. A report published by Dataquest in May of 1999 entitled "Changing Traffic Patters: Data Versus Voice concludes that voice traffic is growing at an annual rate of 6.9% while data traffic is growing at a 36.5% annual rate. Although this data focuses on traffic rather than line demand, it clearly demonstrates that the relative demand for data is greater than that of voice, and implies that more lines will be needed to serve data customers than voice customers in the future. BellSouth itself has predicted a huge increase in demand for DSL related services in both the wholesale and retail market. [2] Given the strong demand by both BellSouth and competitive providers of advanced services, it seems much more likely that the supply of conditioned loops will be exceeded by the demand. Moreover, as I stated previously, conditioned loops under 18,000 feet still may be used to provide voice services. Realistically, therefore, it seems to me that the concern of this Commission should not be whether there will be a demand for xDSL capable loops, but rather BellSouth's reluctance to avail itself of the efficiencies associated with conditioning multiple loops in increments of 25 or larger.

Q. Are there other reasons why it is reasonable to assume that multiple loops should be conditioned in 25 pair increments?

A. There are many reasons for taking advantage of the efficiencies associated with conditioning multiple pairs. As I will discuss later in my testimony, the time estimates proposed by BellSouth, which are utterly unjustifiable on their face, also will be lowered when conditioning a minimum of 25 loops for each dispatch. In addition, the tools technicians use to splice connections are designed to condition multiple pairs. ILECs generally use either Lucent 710 25-pair splice connectors or 3M MS^2 25-pair splice connectors (See Exhibit EM_8). With the advent of such tools and other similar process enhancements, single pair splicing has become an outdated practice in the telecommunications industry for decades.

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[2] See http://biz.yahoo.com/bw/000605/ga_bellsou_3.html.

Still another reason for conditioning multiple pairs at a time is that multiple re-entries to splice closures in order to condition loops can cause serious degradation of the wire insulation and can cause failure of the wire. In other words, accessing the same network components over and over again has the effect of wearing them out. Common sense dictates that it would be more efficient and would cause less wear and tear if access occurred as infrequently as possible. Less frequent access can be accomplished by conditioning multiple loops at a time.

Finally, as I will discuss later in my testimony, the cable containing the pairs generally are divided up into twenty-five (25) pair binder groups. In most cases, the twenty five pair binder groups are spliced using splicing connectors that actually connect twenty-five pair at one time. This simply represents another reason why I have chosen to use 25 pair as my base number.

Q. To conclude this issue Mr. McPeak, despite the fact that well over 25 loops can be conditioned at one time, your recalculated rates assume that how many loops on average should be conditioned per conditioning dispatch?

A. I conservatively have assumed that BellSouth will condition 25 per conditioning activity for both loops that are under 17,500 ft. and loops over 17,500 ft.

IV. Time Intervals for Loop Conditioning Activities

Q. You stated earlier that BellSouth also has overstated the times involved in conditioning pairs, leading to over-inflated rates for conditioning. Were BellSouth's time inputs supported?

A. I found no support in BellSouth's testimony to support the time intervals it has proposed.

Q. Would you please provide a break down of the times that BellSouth has used in determining the costs for loop conditioning activities.

A. BellSouth has broken down the activity categories as follows:

FUNTCTION	JFC/PAYBAND	DESCRIPTION
Service Inquiry	SDWC	Systems Designer w/Sales Com
Service Inquiry	230x	Customer Point of Contact – ICSC/LCSC
Engineering	JG57	Job Grade 57
Engineering	WS10	Wage Scale 10
Engineering	4M1X	Network
Connect & Turn-Up and Test	420x	Outside Plant Constr (OSPC)
Connect & Turn-Up and Test	420x	Outside Plant Constr (OSPC)
Travel	420x	OSPC

Q. Please provide a detailed description of the activities performed for each conditioning function category and the amount of time BellSouth has included in its cost study for each activity.

A. Cost Element A.17.1, A.17.2, A.17.3

a. Service Inquiry – CRSC/Acct. Team receives Service Inquiry (SI) from CLEC; forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), follows up w/OSPE until job is complete. (Time assumed in BellSouth Cost Study = 30 minutes.)

b. Service Inquiry – LCSG receives SI, validates for accuracy & processes for billing. (Time assumed in BellSouth Cost Study = 60 minutes)

c. Engineering – OSPE receives an SI from CRSG, verifies load coil/equipment locations in plats. (Time assumed in BellSouth Cost Study = 2 hours)

d. Engineering – AFIG receives job from OSPE and posts records. (Time assumed in BellSouth Cost Study = 3 hours)

e. Engineering – OSPE Codes, assigns job number and returns SI to CRSG. (Time assumed in BellSouth Cost Study = 1hour)

f. Connect & Turn-Up Test – (Underground) OSP Construction sets up manholes, opens/closes splices, deloads pairs (Time assumed in BellSouth Cost Study = 4.5 hours)

g. Connect & Turn-Up Test- (Buried/Aerial) OSP Constructions set-up, open closes splices, deload spares. (Time assumed in BellSouth Cost Study = 3.5 hours)

h. Travel – OSP Construction travels to load coil sites. (Time assumed in BellSouth Cost Study = 30 minutes)

Q. Please provide a table comparing the BELLSOUTH activity times in its cost study to the appropriate times you used to recalculate the loop conditioning costs.

A.

FUNCTION	JFC/PAYBAND	BellSouth Activity Time	Proper Activity Time
Service Inquiry	SDWC	30 minutes	15 minutes
Service Inquiry	230x	60 minutes	15 minutes
Engineering	JG57	2 hours	30 minutes
Engineering	WS10	3 hours	30 minutes
Engineering	4M1X	1 hour	30 minutes
Connect & Turn-Up and Test	420x	4.5 hours	1.5 hours
Connect & Turn-Up	420x	3.5 hours	42 minutes
Travel	420x	30 minutes	15 minutes

Q. Please provide an explanation to support the reduction in the BellSouth activity times and the method used to derive the proper activity times.

A. **Service Inquiry** – BellSouth assumes that it takes 90 minutes to process and follow up on an order to establish the proper billing to the customer. Generally, most all service order activity is processed in electronic format, and I believe that my colleague Mark Stacy has testified to the fact that in fact BellSouth is required under federal law and by this Commission to provide electronic ordering and provisioning. The customer service representative accesses the electronic database, enters the appropriate information in electronic format and then processes the appropriate billing information. Since this whole process can be done electronically, the only real time assumed is the time for entering the information into the computer. Therefore, I have adjusted the activity time to 30 minutes for the total Service Inquiry process.

B. **Engineering** – BellSouth assumes that all engineering activities take 6 hours. When an Engineer receives an order from customer service (which can usually be transferred electronically), he reviews the order for the pertinent information. He then starts to review the outside plant records to see where the inhibitors lie within the loop. Since many companies have transferred outside plant records into Computer Aided Design Systems, the Engineer has the ability to electronically review the records. After locating the inhibitors within the loop, the engineer simply processes the information electronically and sends it to Customer Service so that a technician may be dispatched. Once again, since the Engineer has the ability to process the majority of the information electronically, the proper time for the activity is 90 minutes.

C. **Connect & Turn-Up and Test** – BellSouth assumes that it takes 4.5 hours to perform conditioning activities in underground plant facilities and 3.5 hours in buried or aerial plant. I have performed these activities myself, however, and based on my actual experience I know that these times are drastically overstated. First, BellSouth assumes that it takes 2 hours to set up a manhole. Manhole and worksite preparation, however, can easily be done in less than 30 minutes. BellSouth then assumes that it takes 1 hour to open and close a splice closure. This task can be performed in less than 15 minutes. BellSouth assumes that it takes 1.5 hours to condition the pairs. This can easily be done in less than 15 minutes. As you can see, BellSouth drastically overstates the work times for all of the activities. Similar overstatements appear in BellSouth's proposed time for buried and aerial conditioning.

D. **Travel** – BellSouth assumes 30 minutes for travel time. Each technician is assigned to a designated geographic work area. The areas are typically arranged close to a central office or reporting location. This allows dispatchers to dispatch technicians in an efficient manner, thereby minimizing travel time from one work location to another. Almost all technicians today are equipped with lap top computers or some type of electronic hand held device that allows them to receive dispatches and detailed information from remote locations about their next job. With this technology available travel time is significantly decreased for the technician. Loop conditioning activities almost always take place within 18,000 ft. from the central office. Since "inhibitors" are typically spaced approximately 6,000 ft. apart, the average distance from one conditioning location in the loop to the next is just a little more than one-mile, making driving time very minimal for the associated activities. The appropriate time for travel should be 15 minutes.

Q. You stated previously that you spent a significant amount of time working as an Outside Plant Technician for an ILEC. Are your time revisions based on your experience in actually performing the loop conditioning activities you have addressed

A. Yes they are.

Q. BellSouth includes costs for additional activity times in its cost study. Do you agree with the application of these additional costs?

A. No I do not. BellSouth states that when removing bridge taps, 20% of the time it will be required to remove additional bridge taps. It is equally as likely, however, that only one bridge tap would have to be removed on a loop less than 18,000 feet. I have assumed that on average three bridge taps will have to be removed per loop. This accounts for the fact more or less than three bridge taps could have to be removed from a given loop. Simply, BellSouth should not be entitled to assess additional charges based on invalid assumptions that "additional" bridge taps hypothetically may need to be removed.

V. CONDITIONING ACTIVITY BASED ON TYPE OF PLANT

Q, You stated previously that BellSouth's cost model is based on the presumption that 90% of conditioning for load coils will be done in underground plant facilities and 10% will be done in aerial or buried plant facilities. Do you agree with that assumption?

A. No I do not. If 90% of all conditioning takes place in underground plant facilities, this assumes that most loops are contained in underground facilities nearly 18,000 ft. from the Wire Center. This is a drastic overstatement of the presence of underground facilities within the network. Typically as a cable extends from the Wire Center it transitions from Underground Plant to Aerial Plant and then to Buried Plant.

Q. In fact, BellSouth's own cost model seems to contradict its assumption that 90% of conditioning occurs in Underground facilities, does it not?

A. Yes. While BellSouth assumes for the purpose of load coil removal that 90% of such conditioning will occur in underground facilities, BellSouth inexplicably assumes that bridge tap removal will occur equally in underground, aerial and buried facilities.

Q. Is there any explanation for BellSouth's contention that somehow the network architecture is different when removing load coils versus removing bridge taps.

A. No there is not. The same assumption that conditioning occurs equally in each of the types of facilities should be applied not just for bridge tap removal, but also for the removal of load coils and repeaters alike.

Q. Please Define Underground Plant and the process required to remove Load Coils, Repeaters and Bridge Taps from Underground Plant.

A. Underground plant consists of cable that is installed in underground conduit which passes through a manhole system. There are several steps necessary to de-load or remove a load coil from a manhole where the splice closure exists in the underground network.

1) Travel Time - The splicing technician must first travel to the site where the work is to be performed. Each technician is assigned to a designated geographic work area. The areas are typically arranged close to a central office or reporting location. This allows dispatchers to dispatch technicians in a efficient manner minimizing travel time from one work location to another. Almost all technicians today are equipped with lap top computers or some type of electronic hand held device that allows them to receive dispatches and detailed information from remote locations about their next job. With this technology,

available travel time is significantly decreased for the technician. Since "disturbers" are typically spaced approximately 6,000 feet apart, the average distance from one conditioning location in the loop to the next is a little more than one mile, making driving time very minimal for the associated activities.

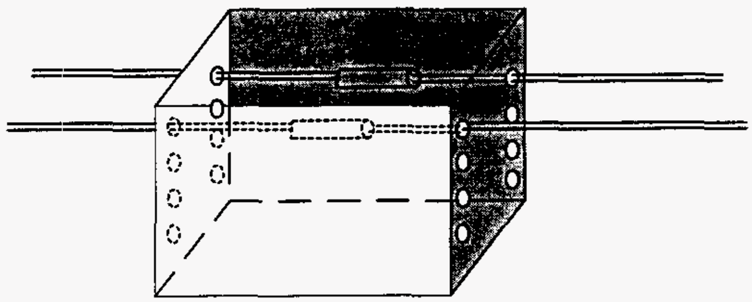
2) Prepare work site with safety equipment – Some manholes are located in the middle of roadways or streets. In order to comply with safety regulations, the technician must properly prepare the work location with traffic signs and cones.

3) Open and prepare manhole – The technician must remove the lid from the manhole and pump any water from the manhole. He must also test the manhole for oxygen levels and purge the manhole with fresh air to ensure safe working conditions. Pumping water from the manhole and purging the manhole with air can be performed simultaneously.

4) Enter manhole, locate and open splice case – Cables in manholes are racked horizontally along the walls of the manhole. Typically, cables are racked on two (2) of the four (4) walls of the manhole. Depending on the size of the manhole, there are one (1) to four (4) cables racked in the manhole per cable entry side (see Manhole Diagram, below). The splice closures are typically marked with a combination of numbers and letters that identify the cable contained within the closure. Splice closures are typically large stainless steel cylinders sealed with

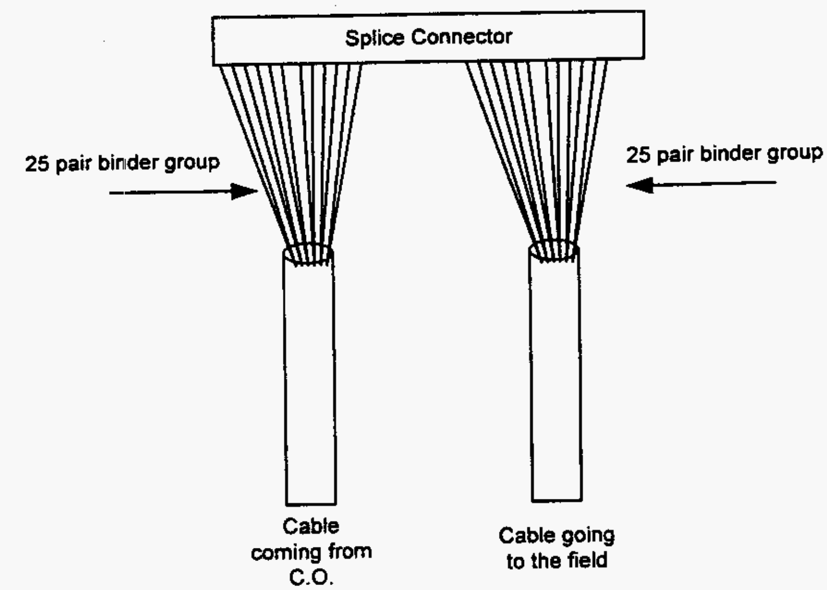
bolts at the top and bottom of the closure. Most closures will have six (6) to eight (8) bolts that will need to be removed. Technicians carry ratcheting tools that can remove the bolts easily and quickly.

Manhole Diagram

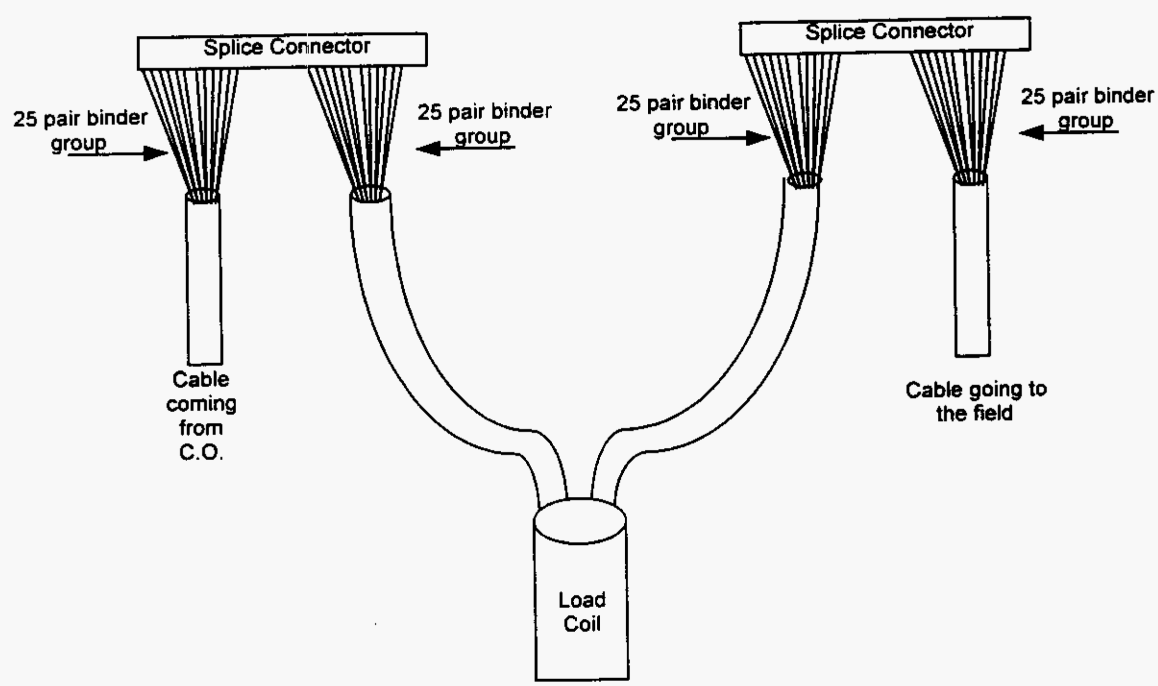


(5) Cut cable pair from "disturber" stub and re-splice pair – Cables are divided up into twenty-five (25) pair binder groups. Within the binder groups, the individual pairs are color coded for identification purposes. This enables the technician to easily locate the pair or binder group to be conditioned. In most cases, the twenty-five pair binder groups are spliced using splicing connectors that actually connect twenty-five pair at one time. An example of this type of splice is the MS^2 splice connector, as shown in Diagrams 1 and 2, below. Also see Exhibit_EM_8.

Splicing Example 1 - Straight Splice



Splicing Example 2 - Load Coil



To remove the "disturber" pair from the splice connector, you simply pull the pair from the splicing connector. You can pull one pair at a time or several pairs at once if you wish. You then need to reconnect the feeder side of the pair to the field side of the pair to complete connectivity through the splice. Once again, this can be performed one pair at a time or all twenty-five at once if so desired. After the splicing activities have been performed, the technician then closes and seals the splice closure by installing the closure sealing bolts.

5) Remove splicing and safety equipment and load on truck – This consists of removing the traffic safety equipment, test equipment and purging equipment and placing it back on the truck.

Q. Please Define Aerial Plant and Discuss the Process required to remove Load Coils, Bridge Taps and Repeaters from Aerial Plant.

A. Aerial plant is cable that is installed and attached to poles which support the cable in the air. The closures used to house splices vary in size and architecture. Some aerial splice closures are stainless steel and have the same architecture as those used in underground plant. These are typically used on very large cables where multiple splice connectors will need to be housed. There are also polyurethane splice closures which are much easier to access and make up the majority of closures used in aerial plant. Many of the steps to condition aerial plant are very similar to those used to condition underground plant.

1) *Travel Time* – This is the identical activity as described in the underground explanation located in this testimony.

2) Prepare work site with safety equipment – The conditioning of aerial cable will most likely involve the technician working out of a bucket truck. The technician will have to put cones around the truck to mark the work area and will need to place traffic safety signs in the proper locations. Cable routes typically follow roads and utility right-of-way corridors. Utility right-of-way corridors most often are located in areas where there is no public access or traffic flow. When conditioning is done in these locations, there is no need for the placement of traffic signs.

3) Approach aerial terminal and open terminal - At this point, the technician will enter the bucket and approach the aerial terminal. He will open the terminal and either remove a few bolts from a stainless steel type closure or slip some simple fastening clips from the poly style closure.

4) Locate and remove pair from "disturber" – As mentioned previously, the pairs will be color coded for easy identification. The technician simply locates the pair to be conditioned and removes the pair from the "disturber" (load coil, bridge tap, repeater). This is accomplished by the same method as describe previously. Additional pairs can be

conditioned simultaneously very quickly and easily as described previously in this testimony

5) Store pairs, close spice closure, and descend pole – This consists of arranging the splice connectors back in the splice case and closing the case. After the technician has closed the splice closure he will descend the pole

6) Store tools and remove safety cones and traffic equipment.

Q. Please Define Buried Plant and Discuss the Methods of Conditioning Pairs in Buried Plant.

A. Buried plant consists of cable that is directly buried in the ground. It is not housed in a protective conduit like underground plant. The types of splice closures used for buried plant are normally metal boxes that stick out of the ground. To enter the splice closure you simply loosen one or possibly two bolts and remove the lid. Some larger splice closures actually have doors that conveniently swing open. The conditioning times and activities for buried plant are very similar to aerial plant. The only basic difference is that the technician has slightly less time involved in approaching the splice closure since it is located on the ground. In most instances it also takes a little less time to open the splice closure due because there is only one or possibly two bolts to loosen to enter the closure.

Q. Based on your descriptions above, is it your testimony that conditioning becomes less expensive as the network moves from underground to aerial to buried facilities?

A. Yes it is.

Q. What effect then, does overstating the percentage of conditioning activity that occurs in underground facilities have on BellSouth's proposed costs?

A. BellSouth's assumption with regard to load coils that 90% of conditioning activities occur in underground facilities simply over-inflates its costs.

Q. Please describe in detail the method you used to recalculate the proper rates based on the correct activity times.

A. I actually used the Excel Workbooks included with BellSouth's TELRIC costs calculator to produce the inputs into BellSouth's TELRIC Cost Calculator Version 2.3. I then ran BellSouth's TELRIC Cost Calculator to produce new Economic Costs.

Q. Please Summarize your thoughts on BellSouth's conditioning practices from a viewpoint of costing and efficiency.

A. As indicated in my testimony, the conditioning practices described by BELLSOUTH are not based on actual field work experience. BellSouth's assumption that only 10 loops should be conditioned per activity where hundreds of additional loops are available for conditioning simply promotes inefficiency and raises costs to competitors. Moreover, BellSouth's proposed cost model significantly overestimates the work times necessary for most of the conditioning tasks. I have conducted these tasks personally on many occasions and can testify unreservedly that not only has BellSouth significantly overstated the times involved to complete certain activities, but also has assigned times to activities that simply may not need to be performed.

VI. Recommended Rates

Q. What rates do you recommend the Commission approve for BELLSOUTH for loop conditioning in this proceeding?

A.

Cost Element	Description	Non-Recurring Cost	Reference
A.17.1	Unbundled Loop Modification Load Coil/Equip. Removal Short	$9.76	Exhibit EM_1
A.17.2	Unbundled Loop Mod. Load Coil Removal - Long	$31.92	Exhibit EM_2
A.17.3	Unbundled Loop Mod. *Bridge Tap Removal*	$7.811	Exhibit EM_3
A.17.4	Unbundled Loop Mod. Additive	$16.71	Exhibit EM_4

Q. Recently, the United States Court of Appeals for the Eighth Circuited vacated and remanded the FCC Rule 51.505(b)(1) regarding efficient network configuration. Does the decision of the Eighth Circuit affect your analysis and the rates you have proposed?

A. No it does not. While I am not a lawyer, my understanding is that the Eighth Circuit found that forward looking, incremental costs are still proper, but should be based upon the costs incurred by an ILEC in providing access to its existing network, not a hypothetical, technologically superior network. In vacating the FCC Rule 51.505(b)(1), however, it is highly unlikely that the Eighth Circuit intended to remove any efficiency requirement placed on ILECs. Rather, while arguably now ILECs may recover those costs associated with providing access to their existing networks, they still are required to provide competitive providers with access to those networks in an efficient manner.

Q. In the context of loop conditioning, what results could occur if BellSouth was no longer required to provide conditioned loops in an efficient manner.

A. Simply, BellSouth would have the ability to stifle competition in Florida. As I have described above, BellSouth already is overstating much of its time estimates, leading to over-inflated rates that I understand are cost prohibitive for those companies for whom I am testifying. Without an efficiency requirement, BellSouth could opt to fly its engineers to China prior to conditioning a loop, and pass through those charges to competitive providers. Clearly, this is not what the Eighth Circuit intended.

Q. Does this conclude your testimony?

A. Yes it does.

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 1
A.17.1 UNBUNDLED LOOP MODIFICATION

Florida

A.17.1 Unbundled Loop Modification - Load Coil / Equipment Removal - short

Exhibit EM_1

Description	Direct Cost	Shared Cost		TELRIC
	Nonrecurring Cost - Disconnect			
Nonrecurring Cost Development Reports	$0.0000	$0.0000		$0.0000
OTHER EXPENSES:				
Total Cost	$0.0000	$0.0000		$0.0000
Gross Receipts Tax Factor			X	1.009566
Cost (Including Gross Recepts Tax)				$0.0000
Common Cost Factor			X	1.0624
Economic Cost				$0.0000

Florida
A.17.1 Unbundled Loop Modification - Load Coil / Equipment Removal - short
Exhibit EM_1

Function	JFC/ Payband	JFC/Payband Description	A Installation Worktime	B Disconnect Worktime	C Direct Labor Rate	D=AxC Installation Cost	E=BxC Disconnect Cost	F Disconnect Discount Factor	G=ExF Discounted Disconnect Cost
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.0250	0.0000	$51.17	$1.2793	$0.0000	1.0000	$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.0250	0.0000	$31.17	$0.7793	$0.0000	1.0000	$0.0000
ENGINEERING	JG57	Job Grade 57	0.0500	0.0000	$40.538	$2.0269	$0.0000	1.0000	$0.0000
ENGINEERING	WS10	Wage Scale 10	0.0200	0.0000	$24.1422	$0.4828	$0.0000	1.0000	$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0.0200	0.0000	$34.31	$0.6862	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0416	0.0000	$42.55	$1.7692	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0388	0.0000	$42.55	$1.6513	$0.0000	1.0000	$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	0.0100	0.0000	$42.55	$0.4255	$0.0000	1.0000	$0.0000
						$9.1005			$0.0000

Florida
A.17.1 Unbundled Loop Modification - Load Coil / Equipment Removal - short
Exhibit EM_1

Function	JFC/ Payband	JFC/Payband Description	A Installation Worktime	B Disconnect Worktime	C TELRIC Labor Rate	D=AxC Installation Cost	E=BxC Disconnect Cost	F Disconnect Discount Factor	G=ExF Discounted Disconnect Cost
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.0250	0.0000	$51.17	$1.2793	$0.0000	1.0000	$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.0250	0.0000	$31.17	$0.7793	$0.0000	1.0000	$0.0000
ENGINEERING	JG57	Job Grade 57	0.0500	0.0000	$40.538	$2.0269	$0.0000	1.0000	$0.0000
ENGINEERING	WS10	Wage Scale 10	0.0200	0.0000	$24.1422	$0.4828	$0.0000	1.0000	$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0.0200	0.0000	$34.31	$0.6862	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0416	0.0000	$42.55	$1.7692	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0388	0.0000	$42.55	$1.6513	$0.0000	1.0000	$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	0.0100	0.0000	$42.55	$0.4255	$0.0000	1.0000	$0.0000
						$9.1005			$0.0000

DOCKET NO. 990649-TP
Eric MCPEAK EXHIBIT NO. 2
A.17.2 UNBUNDLED LOOP MODIFICATION

Florida

A.17.2 Unbundled Loop Modification - Load Coil / Equipment Removal - long - First and Additional

Exhibit EM_2

	Nonrecurring Cost					
	Disconnect - First			Disconnect - Additional		
Description	Direct Cost	Shared Cost	TELRIC	Direct Cost	Shared Cost	TELRIC
Nonrecurring Cost Development Reports	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000
OTHER EXPENSES:						
Total Cost	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000
Gross Receipts Tax Factor			X 1.009566			X 1.009566
Cost (Including Gross Recepts Tax)			$0.0000			$0.0000
Common Cost Factor			X 1.0624			X 1.0624
Economic Cost			$0.0000			$0.0000

Florida
A.17.2 Unbundled Loop Modification - Load Coil / Equipment Removal - long - First and Additional

Exhibit EM_2

Function	JFC/ Payband	JFC/Payband Description	NRC Type	A Installation Worktimes	B Disconnect Worktimes	C Direct Labor Rate	D=AxC Installation Cost	E=BxC Disconnect Cost	F Disconnect Discount Factor	G=ExF Discounted Disconnect Cost
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	First	0.2500	0.0000	$51.17	$12.7925	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	First	0.2500	0.0000	$31.17	$7.7925	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	JG57	Job Grade 57	First	0.0200	0.0000	$40.538	$0.8108	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	WS10	Wage Scale 10	First	0.0200	0.0000	$24.1422	$0.4828	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	First	0.0100	0.0000	$34.31	$0.3431	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.1455	0.0000	$42.55	$6.1923	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0216	0.0000	$42.55	$0.9174	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	First	0.0100	0.0000	$42.55	$0.4255	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
						Total First	$29.7569		**Total First**	$0.0000
						Total Add'l	$0.0000		**Total Add'l**	$0.0000

Florida

A.17.2 Unbundled Loop Modification - Load Coil / Equipment Removal - long - First and Additional

Exhibit EM_2

				A	B	C	D=AxC	E=BxC	F	G=ExF
Function	**JFC/ Payband**	**JFC/Payband Description**	**NRC Type**	**Installation Worktimes**	**Disconnect Worktimes**	**TELRIC Labor Rate**	**Installation Cost**	**Disconnect Cost**	**Disconnect Discount Factor**	**Discounted Disconnect Cost**
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	First	0.2500	0.0000	$51.17	$12.7925	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	First	0.2500	0.0000	$31.17	$7.7925	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	JG57	Job Grade 57	First	0.0200	0.0000	$40.538	$0.8108	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	WS10	Wage Scale 10	First	0.0200	0.0000	$24.1422	$0.4828	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	First	0.0100	0.0000	$34.31	$0.3431	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.1455	0.0000	$42.55	$6.1923	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0216	0.0000	$42.55	$0.9174	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	First	0.0100	0.0000	$42.55	$0.4255	$0.0000	1.0000	$0.0000
			Add'l	0.0000	0.0000		$0.0000	$0.0000		$0.0000
						Total First	$29.7569		**Total First**	$0.0000
						Total Add'l	$0.0000		**Total Add'l**	$0.0000

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 3
A.17.3 UNBUNDLED LOOP MODIFICATION

Florida

A.17.3 Unbundled Loop Modification - Bridged Tap Removal

Exhibit_EM3

Description	Nonrecurring Cost - Disconnect: Direct Cost	Shared Cost		TELRIC
Nonrecurring Cost Development Reports	$0.0000	$0.0000		$0.0000
OTHER EXPENSES:				
Total Cost	$0.0000	$0.0000		$0.0000
Gross Receipts Tax Factor			X	1.009566
Cost (Including Gross Recepts Tax)				$0.0000
Common Cost Factor			X	1.0624
Economic Cost				$0.0000

Source: BellSouth Cost Calculator 2.3

Florida
A.17.3 Unbundled Loop Modification - Bridged Tap Removal

Exhibit_EM3

			A	B	C	D=AxC	E=BxC	F	G=ExF
Function	**JFC/ Payband**	**JFC/Payband Description**	**Installation Worktime**	**Disconnect Worktime**	**Direct Labor Rate**	**Installation Cost**	**Disconnect Cost**	**Disconnect Discount Factor**	**Discounted Disconnect Cost**
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.0250	0.0000	$51.17	$1.2793	$0.0000	1.0000	$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.0250	0.0000	$31.17	$0.7793	$0.0000	1.0000	$0.0000
ENGINEERING	JG57	Job Grade 57	0.0200	0.0000	$40.538	$0.8108	$0.0000	1.0000	$0.0000
ENGINEERING	WS10	Wage Scale 10	0.0100	0.0000	$24.1422	$0.2414	$0.0000	1.0000	$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0.0100	0.0000	$34.31	$0.3431	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0500	0.0000	$42.55	$2.1275	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0380	0.0000	$42.55	$1.6169	$0.0000	1.0000	$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	0.0020	0.0000	$42.55	$0.0851	$0.0000	1.0000	$0.0000
						$7.2833			$0.0000

Florida
A.17.3 Unbundled Loop Modification - Bridged Tap Removal

Exhibit_EM3

			A	B	C	D=AxC	E=BxC	F	G=ExF
Function	**JFC/ Payband**	**JFC/Payband Description**	**Installation Worktime**	**Disconnect Worktime**	**TELRIC Labor Rate**	**Installation Cost**	**Disconnect Cost**	***Disconnect* Discount Factor**	***Discounted* Disconnect Cost**
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	0.0250	0.0000	$51.17	$1.2793	$0.0000	1.0000	$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	0.0250	0.0000	$31.17	$0.7793	$0.0000	1.0000	$0.0000
ENGINEERING	JG57	*Job Grade 57*	0.0200	0.0000	$40.538	$0.8108	$0.0000	1.0000	$0.0000
ENGINEERING	WS10	Wage Scale 10	0.0100	0.0000	$24.1422	$0.2414	$0.0000	1.0000	$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	0.0100	0.0000	$34.31	$0.3431	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0500	0.0000	$42.55	$2.1275	$0.0000	1.0000	$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	0.0380	0.0000	$42.55	$1.6169	$0.0000	1.0000	$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	0.0020	0.0000	$42.55	$0.0851	$0.0000	1.0000	$0.0000
						$7.2833			$0.0000

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 4
A.17.4 UNBUNDLED LOOP MODIFICATION

Nonrecurring Cost Summary

Florida
A.17.4 Unbundled Loop Modification - Additive
Exhibt EM_4

Description	Disconnect - First: Direct Cost	Disconnect - First: Shared Cost	Disconnect - First: TELRIC	Disconnect - Additional: Direct Cost	Disconnect - Additional: Shared Cost	Disconnect - Additional: TELRIC
Nonrecurring Cost Development Reports	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000
OTHER EXPENSES:						
Total Cost	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000	$0.0000
Gross Receipts Tax Factor			X 1.009566			X 1.009566
Cost (Including Gross Recepts Tax)			$0.0000			$0.0000
Common Cost Factor			X 1.0624			X 1.0624
Economic Cost			$0.0000			$0.0000

Source: BellSouth Cost Calculator 2.3

Florida
A.17.4 Unbundled Loop Modification - Additive

Exhibit EM_4

Function	JFC/ Payband	JFC/Payband Description	NRC Type	A Installation Worktimes	B Disconnect Worktimes	C Direct Labor Rate	D=AxC Installation Cost	E=BxC Disconnect Cost	F Disconnect Discount Factor	G=ExF Discounted Disconnect Cost
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	First	0.0428	0.0000	$51.17	$2.1895	$0.0000	1.0000	$0.0000
			Add'l	0.0856	0.0000		$4.3790	$0.0000		$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	First	0.0428	0.0000	$31.17	$1.3337	$0.0000	1.0000	$0.0000
			Add'l	0.1712	0.0000		$5.3349	$0.0000		$0.0000
ENGINEERING	JG57	Job Grade 57	First	0.0856	0.0000	$40.538	$3.4691	$0.0000	1.0000	$0.0000
			Add'l	0.3423	0.0000		$13.8765	$0.0000		$0.0000
ENGINEERING	WS10	Wage Scale 10	First	0.0342	0.0000	$24.1422	$0.8264	$0.0000	1.0000	$0.0000
			Add'l	0.5135	0.0000		$12.3961	$0.0000		$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	First	0.0342	0.0000	$34.31	$1.1745	$0.0000	1.0000	$0.0000
			Add'l	0.1712	0.0000		$5.8723	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0712	0.0000	$42.55	$3.0281	$0.0000	1.0000	$0.0000
			Add'l	1.4557	0.0000		$61.9388	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0664	0.0000	$42.55	$2.8262	$0.0000	1.0000	$0.0000
			Add'l	0.1258	0.0000		$5.3527	$0.0000		$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	First	0.0171	0.0000	$42.55	$0.7283	$0.0000	1.0000	$0.0000
			Add'l	0.0856	0.0000		$3.6413	$0.0000		$0.0000
						Total First	$15.5758		Total First	$0.0000
						Total Add'l	$112.7917		Total Add'l	$0.0000

Florida
A.17.4 Unbundled Loop Modification - Additive

Exhibt EM_4

Function	JFC/ Payband	JFC/Payband Description	NRC Type	Installation Worktimes (A)	Disconnect Worktimes (B)	TELRIC Labor Rate (C)	Installation Cost (D=AxC)	Disconnect Cost (E=BxC)	Disconnect Discount Factor (F)	Discounted Disconnect Cost (G=ExF)
SERVICE INQUIRY	SDWC	Systems Designer w/Sales Com	First	0.0428	0.0000	$51.17	$2.1895	$0.0000	1.0000	$0.0000
			Add'l	0.0856	0.0000		$4.3790	$0.0000		$0.0000
SERVICE INQUIRY	230X	Customer Point Of Contact - ICSC/LCSC	First	0.0428	0.0000	$31.17	$1.3337	$0.0000	1.0000	$0.0000
			Add'l	0.1712	0.0000		$5.3349	$0.0000		$0.0000
ENGINEERING	JG57	Job Grade 57	First	0.0856	0.0000	$40.538	$3.4691	$0.0000	1.0000	$0.0000
			Add'l	0.3423	0.0000		$13.8765	$0.0000		$0.0000
ENGINEERING	WS10	Wage Scale 10	First	0.0342	0.0000	$24.1422	$0.8264	$0.0000	1.0000	$0.0000
			Add'l	0.5135	0.0000		$12.3961	$0.0000		$0.0000
ENGINEERING	4M1X	Address & Facility Inventory (AFIG)	First	0.0342	0.0000	$34.31	$1.1745	$0.0000	1.0000	$0.0000
			Add'l	0.1712	0.0000		$5.8723	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0712	0.0000	$42.55	$3.0281	$0.0000	1.0000	$0.0000
			Add'l	1.4557	0.0000		$61.9388	$0.0000		$0.0000
CONNECT & TURN-UP TEST	420X	Outside Plant Constr (OSPC)	First	0.0664	0.0000	$42.55	$2.8262	$0.0000	1.0000	$0.0000
			Add'l	0.1258	0.0000		$5.3527	$0.0000		$0.0000
TRAVEL	420X	Outside Plant Constr (OSPC)	First	0.0171	0.0000	$42.55	$0.7283	$0.0000	1.0000	$0.0000
			Add'l	0.0856	0.0000		$3.6413	$0.0000		$0.0000
						Total First	$15.5758		**Total First**	$0.0000
						Total Add'l	$0.0000		**Total Add'l**	$0.0000

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 5
UNBUNDLED LOOP MODIFICATION
INDEX
STUDY DATE: 03/2000

	A	B	C	D	E	F	G	H	I	J	K
1											
2	Index Sheet										
3	Study Period: 2000-2002										
4											
5											
6											
7											
8											
9			**Sheet Name:**		**Description:**						
10			Index		Unbundled Loop Modification						
11			Nonrecurring Labor		CALCULATOR INPUT FORM - NONRECURRING LABOR TIMES						
12			WP100		UNBUNDLED LOOP MODIFICATION						
13			WP200		UNBUNDLED LOOP MODIFICATION-RECOVERY						
14											
15											
16											
17											
18											
19											

1 CALCULATOR INPUT FORM - NONRECURRING LABOR TIMES

3 Instructions:
4 1. Use this worksheet to record nonrecurring labor times to be input into the Calculator calculations.
5 2. All amounts shown are per unit (e.g., per call, per loop, per MOU).
6 3. Input data, by Cost Element, leaving no blank lines. On next row
7 after last line of data, type END in Cost Element Column.
8 4. All data on this form should be cell-referenced to study workpapers.
9 5. Do NOT change columns, headings, sheet name.
10 6. Use columns F & G when cost element has a single nonrecurring cost; use columns H, I, J, & K for elements with a first
11 and additional nonrecurring cost; use columns L, M, N & O for elements with an initial and subsequent nonrecurring cost.
12 7. Input Cost Element Life (in months) on first row of data for each cost element. It is not necessary to repeat on each line.

15 Study Mid-Point Date (Mos.) 6/1/01

Row	A: State	B: Cost Element #	C: Cost Element Life (Mo)	D: Labor Expense Description (Limited to 25 characters)	E: JFC/ Payband	F: (For use w/ one NR) Installation Time (Hours)	G: Disconnect Time Hours	H: First Installation Time (Hours)	I: First Disconnect Time Hours	J: Additional Installation Time (Hours)	K: Additional Disconnect Time Hours	L: Initial Installation Time (Hours)	M: Initial Disconnect Time Hours	N: Subsequent Installation Time (Hours)	O: Subsequent Disconnect Time Hours
21	FL	A 17 1		SERVICE INQUIRY	SDWC	0.0500									
22	FL	A 17 1		SERVICE INQUIRY	230X	0 1000									
23	FL	A 17 1		ENGINEERING	JG57	0 2000									
24	FL	A 17 1		ENGINEERING	WS10	0 3000									
25	FL	A 17 1		ENGINEERING	4M1X	0 1000									
26	FL	A 17 1		CONNECT & TURN-UP TEST	420X	0 6505									
27	FL	A 17 1		CONNECT & TURN-UP TEST	420X	0 0735									
28	FL	A 17 1		TRAVEL	420X	0 0500									
29	FL	A 17 2		SERVICE INQUIRY	SDWC			0 5000							
30	FL	A 17 2		SERVICE INQUIRY	230X			1.0000							
31	FL	A 17 2		ENGINEERING	JG57			2 0000							
32	FL	A 17 2		ENGINEERING	WS10			3 0000							
33	FL	A 17 2		ENGINEERING	4M1X			1 0000							
34	FL	A 17 2		CONNECT & TURN-UP TEST	420X			9.9225		0.4725					
35	FL	A 17.2		CONNECT & TURN-UP TEST	420X			0.7525		0 0525					
36	FL	A 17 2		TRAVEL	420X			0 5000							
37	FL	A 17 3		SERVICE INQUIRY	SDWC	0 0600									
38	FL	A 17.3		SERVICE INQUIRY	230X	0.1200									
39	FL	A 17 3		ENGINEERING	JG57	0.2400									
40	FL	A 17 3		ENGINEERING	WS10	0.3600									
41	FL	A 17 3		ENGINEERING	4M1X	0.1200									
42	FL	A 17.3		CONNECT & TURN-UP TEST	420X	0 3750									
43	FL	A 17 3		CONNECT & TURN-UP TEST	420X	0 5500									
44	FL	A 17 3		CONNECT & TURN-UP TEST	420X	0 0603									
45	FL	A 17 3		CONNECT & TURN-UP TEST	420X	0.0732									
46	FL	A 17.3		TRAVEL	420X	0 0600									
47	FL	A 17.4		SERVICE INQUIRY	SDWC			0 0856		0 0856					
48	FL	A 17 4		SERVICE INQUIRY	230X			0 1712		0 1712					
49	FL	A 17.4		ENGINEERING	JG57			0 3423		0.3423					
50	FL	A 17 4		ENGINEERING	WS10			0 5135		0.5135					
51	FL	A 17 4		ENGINEERING	4M1X			0 1712		0 1712					
52	FL	A 17 4		CONNECT & TURN-UP TEST	420X			1 4557		1.4557					
53	FL	A 17 4		CONNECT & TURN-UP TEST	420X			0.1258		0 1258					
54	FL	A 17 4		TRAVEL	420X			0 0856		0 0856					
55															
56															
57															
58															
59															
60															
61		END													
62															
63				Maximum of 25 entries per Cost Element #											

	A	B	C	D	E	F	G
1	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
2	UNBUNDLED LOOP MODIFICATION	LOAD COIL/EQUIPMENT REMOVAL PER PAIR (designed circuit) - LOOPS UP TO 18KFT.					
3	Study Period: 2000-2002						
4	DISCONNECT LOCATION LIFE (MOS.):	N/A					
5							
6	STATE:	FL					
7	COST ELEMENT #:	A.17.1		WORKTIMES SHOWN ARE IN HOURS			
8							
9							
10	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDTL INSTALL
11	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC, forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed.	Interconn Svcs.	SDWC	0.0500		
12	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs	230X	0.1000		
13	ENGINEERING	OSPE receives SI from CRSG, verifies load coil/equipment locations in plats (Engineering)	Network	JG57	0.2000		
14	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	0.3000		
15	ENGINEERING	AFIG receives job from OSPE and posts records	Network	4M1X	0.1000		
16		Underground Application (90%) - Load Coil/Equipment Removal					
17	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs ea.); opens/closes splices (1 hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.8505		
18		Buried/Aerial (10%) - Load Coil/Equipment Removal					
19	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr); opens/closes splices (1hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0735		
20	TRAVEL	OSP Construction travels to load coil/equipment sites	OSPC	420X	0.0500		
21							
22							
23	ASSUMPTIONS:						
24	1) Loops less than 18Kft. contain an average of 2.1 load coils/equipment.						
25	2) Connect & Turn-Up Test worktimes are to modify ten pair.						
26							

	A	B	C	D	E	F	G
27	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
28	UNBUNDLED LOOP MODIFICATION	LOAD COIL/EQUIPMENT REMOVAL PER PAIR (designed circuit) - LOOPS GREATER THAN 18KFT.					
29	Study Period: 2000-2002						
30	DISCONNECT LOCATION LIFE (MOS.):	N/A					
31	STATE:	FL		WORKTIMES SHOWN ARE IN HOURS			
32	COST ELEMENT #:	A.17.2					
33							
34	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDT'L INSTALL
35	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC, forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed. Upon completion of job, CRSG notifies CLEC that loop is conditioned and sends SI to LCSC for processing	Interconn Svcs	SDWC	0.5000		
36	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs	230X	1.0000		
37	ENGINEERING	OSPE receives SI from CRSG, researches load coil/equipment locations in plats. (Engineering)	Network	JG57	2.0000		
38	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	3.0000		
39	ENGINEERING	AFIG receives job from OSPE and posts records	Network	4M1X	1.0000		
40		Underground Application (90%) - Load Coil/Equipment Removal					
41	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs.); opens/closes splice (1 hr.); deloads one pair (9 min.)	OSPC	420X	9.9225		0.4725
42		Buried/Aerial (10%) - Load Coil/Equipment Removal					
43	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr), opens/closes splice (1 hr.); deloads one pair (9 min.)	OSPC	420X	0.7525		0.0525
44	TRAVEL	OSP Construction travels to load coil/equipment sites	OSPC	420X	0.5000		
45							
46							
47	ASSUMPTIONS:						
48	1) Loops greater than 18Kft. Contain an average of 3.5 load coils/equipment.						
49							

	A	B	C	D	E	F	G
50	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
51	UNBUNDLED LOOP MODIFICATION	BRIDGED TAP REMOVAL PER PAIR (designed circuit)					
52	DISCONNECT LOCATION LIFE (MOS.):	N/A					
53							
54	STATE:	FL					
55	COST ELEMENT #:	A.17.3		WORKTIMES SHOWN ARE IN HOURS			
56							
57	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	INITIAL VISIT	REVISIT	TOTAL WORK TIMES
58	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC, forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed. Upon completion of job, CRSG notifies CLEC that loop is conditioned and sends SI to LCSC for processing	Interconn Svcs	SDWC	0.0500	0.0100	0.0600
59	SERVICE INQUIRY	LCSC receives SI, validates for accuracy and processes order.	Interconn Svcs	230X	0.1000	0.0200	0.1200
60	ENGINEERING	OSPE receives SI from CRSG, verifies bridged tap locations in plats (Engineering)	Network	JG57	0.2000	0.0400	0.2400
61	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	0.3000	0.0600	0.3600
62	ENGINEERING	AFIG receives job from OSPE and posts records.	Network	4M1X	0.1000	0.0200	0.1200
63		INITIAL BT REMOVAL					
64		Underground Application - Bridged Tap Removal (1 Bridged Tap)					
65	CONNECT & TURN-UP TEST	OSP Construction removes bridged tap. (Setup-2 hrs; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X	0.3750		0.3750
66		Buried/Aerial - Bridged Tap Removal (2 Bridged Taps)					
67	CONNECT & TURN-UP TEST	OSP Construction removes bridged taps (2) (Setup-1 hr; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X	0.5500		0.5500
68		20% ADDITIONAL BT REMOVAL					
69		Underground Application - Bridged Tap Removal (.67 Bridged Tap)					
70	CONNECT & TURN-UP TEST	OSP Construction removes bridged tap (Setup-2 hrs; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X		0.0503	0.0503
71		Buried/Aerial - Bridged Tap Removal (1.33 Bridged Taps)					
72	CONNECT & TURN-UP TEST	OSP Construction removes bridged taps (2) (Setup-1 hr, open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X		0.0732	0.0732
73	TRAVEL	OSP Construction travels to bridged tap sites	OSPC	420X	0.0500	0.0100	0.0600
74							
75	ASSUMPTIONS:						
76	1) 3 bridged taps will be removed initially; removal of 2 additional bridged taps may be necessary (20%)						
77	2) OSP Construction spends 45 minutes to remove each bridged tap.						
78	3) One-third of all bridged taps are underground; two-thirds are either buried or aerial.						
79	4) Worktimes are divided by ten, assuming times are for bridged tap removal on ten pairs.						

	A	B	C	D	E	F	G
1	NONRECURRING COST STUDY INPUT - VERSION 2.0						
2	UNBUNDLED LOOP MODIFICATION-RECOVERY						
3	Study Period: 2000-2002						
4	DISCONNECT LOCATION LIFE (MOS.):	N/A					
5							
6	STATE:	FL					
7	COST ELEMENT #:	A.17.4					
8				WORKTIMES SHOWN ARE IN HOURS			
9							
10	DESCRIPTION of A.17.1	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDTL INSTALL
11	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC; forwards to OSPE for handling Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed	Interconn Svcs	SDWC	0.0500		
12	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs	230X	0.1000		
13	ENGINEERING	OSPE receives SI from CRSG, verifies load coil/equipment locations in plats. (Engineering)	Network	JG57	0.2000		
14	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	0.3000		
15	ENGINEERING	AFIG receives job from OSPE and posts reco	Network	4M1X	0.1000		
16		Underground Application (90%) - Load Coil/Equipment Removal					
17	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs ea.); opens/closes splices (1 hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.8505		
18		Buried/Aerial (10%) - Load Coil/Equipment Removal					
19	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr), opens/closes splices (1hr), deloads pairs (1 1/2 hr) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0735		
20	TRAVEL	OSP Construction travels to load coil/equipment sites	OSPC	420X	0.0500		
21							
22	DEMAND FOR CONDITIONING	Source	2000	2001	2002		
23							
24	FL - Incoming xDSL Capable Loops-2000	Interconnection	9,018	4,743	3,552		
25	Cumulative Incoming Loops==>	=SUM(C24:E24)	17,313				
26							
27	FL - Incoming Loops Requiring Conditioning	Interconnection	3,949	1,978	1,481		
28	Cumulative Incoming Conditioned Loops==>	=SUM(C27:E27)	7,408				
29							
30	# Loops Conditioned Not Recovered Elsewhere	See Assumption 1	4				
31							
32	WorkTimes for One Conditioning:						
33	SERVICE INQUIRY	=+E11	0.0500				
34	SERVICE INQUIRY	=+E12	0.1000				
35	ENGINEERING	=+E13	0.2000				
36	ENGINEERING	=+E14	0.3000				
37	ENGINEERING	=+E15	0.1000				
38	CONNECT & TURN-UP TEST	=+E17	0.8505				
39	CONNECT & TURN-UP TEST	=+E19	0.0735				
40	TRAVEL	=+E20	0.0500				
41							
42	Amount To Be Recovered from xDSL Loops:						
43	SERVICE INQUIRY	=((C33*$C$30)*$C$28)/$C$25	0.0856				
44	SERVICE INQUIRY	=((C34*$C$30)*$C$28)/$C$25	0.1712				
45	ENGINEERING	=((C35*$C$30)*$C$28)/$C$25	0.3423				
46	ENGINEERING	=((C36*$C$30)*$C$28)/$C$25	0.5135				
47	ENGINEERING	=((C37*$C$30)*$C$28)/$C$25	0.1712				
48	CONNECT & TURN-UP TEST	=((C38*$C$30)*$C$28)/$C$25	1.4557				
49	CONNECT & TURN-UP TEST	=((C39*$C$30)*$C$28)/$C$25	0.1258				
50	TRAVEL	=((C40*$C$30)*$C$28)/$C$25	0.0856				
51							
53							
54	Assumptions:						
55	1) Of the 10 lines being conditioned on a field visit; 2 will be recovered through UNE applications, 4 from BST; and 4 leftover						
56	2) Demand of xDSL capable loops includes ADSL, HDSL, and UCL						

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 6
UNBUNDLED LOOP MODIFICATION
INDEX
STUDY DATE: 03/2000

Index

Study Date: 03/2000

	A	B	C	D	E	F	G	H	I	J	K
1											
2	Index Sheet										
3	Study Period: 2000-2002										
4											
5											
6											
7											
8											
9			**Sheet Name:**		**Description:**						
10			Index		Unbundled Loop Modification						
11			Nonrecurring Labor		CALCULATOR INPUT FORM - NONRECURRING LABOR TIMES						
12			WP100		UNBUNDLED LOOP MODIFICATION						
13			WP200		UNBUNDLED LOOP MODIFICATION-RECOVERY						
14											
15											
16											
17											
18											
19											

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		CALCULATOR INPUT FORM - NONRECURRING LABOR TIMES													
2															
3		Instructions:													
4		1. Use this worksheet to record nonrecurring labor times to be input into the Calculator calculations.													
5		2. All amounts shown are per unit (e.g., per call, per loop, per MOU).													
6		3. Input data, by Cost Element, leaving no blank lines. On next row													
7		after last line of data, type END in Cost Element Column.													
8		4. All data on this form should be cell-referenced to study workpapers.													
9		5. Do NOT change columns, headings, sheet name.													
10		6. Use columns F & G when cost element has a single nonrecurring cost; use columns H, I, J, & K for elements with a first													
11		and additional nonrecurring cost; use columns L, M, N & O for elements with an initial and subsequent nonrecurring cost.													
12		7. Input Cost Element Life (in months) on first row of data for each cost element. It is not necessary to repeat on each line.													
13															
14															
15	Study Mid-Point Date (Mos.)			6/1/01											
16															
17						(For use w/ one NR)		First	First	Additional	Additional	Initial	Initial	Subsequent	Subsequent
18			Cost			Installation	Disconnect	Installation	Disconnect	Installation	Disconnect	Installation	Disconnect	Installation	Disconnect
19		Cost	Element	Labor Expense Description	JFC/	Time	Time	Time	Time	Time	Time	Time	Time	Time	Time
20	State	Element #	Life (Mo)	(Limited to 25 characters)	Payband	(Hours)	Hours	(Hours)	Hours	(Hours)	Hours	(Hours)	Hours	(Hours)	Hours
21	FL	A.17.1		SERVICE INQUIRY	SDWC	0.0250									
22	FL	A.17.1		SERVICE INQUIRY	230X	0.0250									
23	FL	A.17.1		ENGINEERING	JG57	0.0500									
24	FL	A.17.1		ENGINEERING	WS10	0.0200									
25	FL	A.17.1		ENGINEERING	4M1X	0.0200									
26	FL	A.17.1		CONNECT & TURN-UP TEST	420X	0.0416									
27	FL	A.17.1		CONNECT & TURN-UP TEST	420X	0.0388									
28	FL	A.17.1		TRAVEL	420X	0.0100									
29	FL	A.17.2		SERVICE INQUIRY	SDWC			0.2500							
30	FL	A.17.2		SERVICE INQUIRY	230X			0.2500							
31	FL	A.17.2		ENGINEERING	JG57			0.0200							
32	FL	A.17.2		ENGINEERING	WS10			0.0200							
33	FL	A.17.2		ENGINEERING	4M1X			0.0100							
34	FL	A.17.2		CONNECT & TURN-UP TEST	420X			0.1455		0					
35	FL	A.17.2		CONNECT & TURN-UP TEST	420X			0.0216		0					
36	FL	A.17.2		TRAVEL	420X			0.0100							
37	FL	A.17.3		SERVICE INQUIRY	SDWC	0.0250									
38	FL	A.17.3		SERVICE INQUIRY	230X	0.0250									
39	FL	A.17.3		ENGINEERING	JG57	0.0200									
40	FL	A.17.3		ENGINEERING	WS10	0.0100									
41	FL	A.17.3		ENGINEERING	4M1X	0.0100									
42	FL	A.17.3		CONNECT & TURN-UP TEST	420X	0.0500									
43	FL	A.17.3		CONNECT & TURN-UP TEST	420X	0.0380									
44	FL	A.17.3		CONNECT & TURN-UP TEST	420X	0.0000									
45	FL	A.17.3		CONNECT & TURN-UP TEST	420X	0.0000									
46	FL	A.17.3		TRAVEL	420X	0.0020									
47	FL	A.17.4		SERVICE INQUIRY	SDWC			0.0428		0.0856					
48	FL	A.17.4		SERVICE INQUIRY	230X			0.0428		0.1712					
49	FL	A.17.4		ENGINEERING	JG57			0.0856		0.3423					
50	FL	A.17.4		ENGINEERING	WS10			0.0342		0.5135					
51	FL	A.17.4		ENGINEERING	4M1X			0.0342		0.1712					
52	FL	A.17.4		CONNECT & TURN-UP TEST	420X			0.0712		1.4557					
53	FL	A.17.4		CONNECT & TURN-UP TEST	420X			0.0664		0.1258					
54	FL	A.17.4		TRAVEL	420X			0.0171		0.0856					
55															
56															
57															
58															
59															
60															
61		END													
62															
63				Maximum of 25 entries per Cost Element #											

	A	B	C	D	E	F	G
1	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
2	UNBUNDLED LOOP MODIFICATION	LOAD COIL/EQUIPMENT REMOVAL PER PAIR (designed circuit) - LOOPS UP TO 18KFT.					
3	Study Period: 2000-2002						
4	DISCONNECT LOCATION LIFE (MOS.):	N/A					
5							
6	STATE:	FL					
7	COST ELEMENT #:	A.17.1					
8				WORKTIMES SHOWN ARE IN HOURS			
9							
10	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDTL INSTALL
11	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC; forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed.	Interconn Svcs.	SDWC	0.0250		
12	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs.	230X	0.0250		
13	ENGINEERING	OSPE receives SI from CRSG, verifies load coil/equipment locations in plats. (Engineering)	Network	JG57	0.0500		
14	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG. (Clerical)	Network	WS10	0.0200		
15	ENGINEERING	AFIG receives job from OSPE and posts records	Network	4M1X	0.0200		
16		Underground Application (90%) - Load Coil/Equipment Removal					
17	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs ea.); opens/closes splices (1 hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0416		
18		Buried/Aerial (10%) - Load Coil/Equipment Removal					
19	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr); opens/closes splices (1hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0388		
20	TRAVEL	OSP Construction travels to load coil/equipment sites	OSPC	420X	0.0100		
21							
22							
23	ASSUMPTIONS;						
24	1) Loops less than 18Kft. contain an average of 2.1 load coils/equipment.						
25	2) Connect & Turn-Up Test worktimes are to modify ten pair.						
26							

	A	B	C	D	E	F	G
27	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
28	UNBUNDLED LOOP MODIFICATION	LOAD COIL/EQUIPMENT REMOVAL PER PAIR (designed circuit) - LOOPS GREATER THAN 18KFT.					
29	Study Period: 2000-2002						
30	DISCONNECT LOCATION LIFE (MOS.):	N/A					
31	STATE:	FL					
32	COST ELEMENT #:	A.17.2		WORKTIMES SHOWN ARE IN HOURS			
33							
34	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDTL INSTALL
35	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC, forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed. Upon completion of job, CRSG notifies CLEC that loop is conditioned and sends SI to LCSC for processing.	Interconn Svcs	SDWC	0.2500		
36	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs	230X	0.2500		
37	ENGINEERING	OSPE receives SI from CRSG, researches load coil/equipment locations in plats. (Engineering)	Network	JG57	0.0200		
38	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	0.0200		
39	ENGINEERING	AFIG receives job from OSPE and posts records.	Network	4M1X	0.0100		
40		Underground Application (90%) - Load Coil/Equipment Removal					
41	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs.); opens/closes splice (1 hr.); deloads one pair (9 min.)	OSPC	420X	0.1455		
42		Buried/Aerial (10%) - Load Coil/Equipment Removal					
43	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr); opens/closes splice (1 hr.); deloads one pair (9 min.)	OSPC	420X	0.0216		
44	TRAVEL	OSP Construction travels to load coil/equipment sites.	OSPC	420X	0.0100		
45							
46							
47	ASSUMPTIONS:						
48	1) Loops greater than 18Kft. Contain an average of 3.5 load coils/equipment.						
49							

	A	B	C	D	E	F	G
50	NONRECURRING COST STUDY INPUT - VERSION 2.0			ASSUMES MANUAL SERVICE INQUIRY PROCESS			
51	UNBUNDLED LOOP MODIFICATION	BRIDGED TAP REMOVAL PER PAIR (designed circuit)					
52	DISCONNECT LOCATION LIFE (MOS.):	N/A					
53							
54	STATE:	FL					
55	COST ELEMENT #:	A.17.3		WORKTIMES SHOWN ARE IN HOURS			
56							
57	DESCRIPTION	WORK CENTERS / WORK ACTIVITIES	SME	JFC	INITIAL VISIT	REVISIT	TOTAL WORK TIMES
58	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC; forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed. Upon completion of job, CRSG notifies CLEC that loop is conditioned and sends SI to LCSC for processing.	Interconn Svcs.	SDWC	0.0250	0.0000	0.0250
59	SERVICE INQUIRY	LCSC receives SI, validates for accuracy and processes order.	Interconn Svcs.	230X	0.0250	0.0000	0.0250
60	ENGINEERING	OSPE receives SI from CRSG, verifies bridged tap locations in plats. (Engineering)	Network	JG57	0.0200	0.0000	0.0200
61	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG (Clerical)	Network	WS10	0.0100	0.0000	0.0100
62	ENGINEERING	AFIG receives job from OSPE and posts records.	Network	4M1X	0.0100	0.0000	0.0100
63		INITIAL BT REMOVAL					
64		Underground Application - Bridged Tap Removal (1 Bridged Tap)					
65	CONNECT & TURN-UP TEST	OSP Construction removes bridged tap. (Setup-2 hrs; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X	0.0500		0.0500
66		Buried/Aerial - Bridged Tap Removal (2 Bridged Taps)					
67	CONNECT & TURN-UP TEST	OSP Construction removes bridged taps (2). (Setup-1 hr; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X	0.0380		0.0380
68		20% ADDITIONAL BT REMOVAL					
69		Underground Application - Bridged Tap Removal (.67 Bridged Tap)					
70	CONNECT & TURN-UP TEST	OSP Construction removes bridged tap. (Setup-2 hrs; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X		0.0000	0.0000
71		Buried/Aerial - Bridged Tap Removal (1.33 Bridged Taps)					
72	CONNECT & TURN-UP TEST	OSP Construction removes bridged taps (2). (Setup-1 hr; open/close splice-1 hr.; remove bridged tap-.75 hr.)	OSPC	420X		0.0000	0.0000
73	TRAVEL	OSP Construction travels to bridged tap sites.	OSPC	420X	0.0020	0.0000	0.0020
74							
75	ASSUMPTIONS:						
76	1) 3 bridged taps will be removed initially; removal of 2 additional bridged taps may be necessary (20%)						
77	2) OSP Construction spends 45 minutes to remove each bridged tap.						
78	3) One-third of all bridged taps are underground; two-thirds are either buried or aerial.						
79	4) Worktimes are divided by ten, assuming times are for bridged tap removal on ten pairs.						

	A	B	C	D	E	F	G
1	NONRECURRING COST STUDY INPUT - VERSION 2.0						
2	UNBUNDLED LOOP MODIFICATION-RECOVERY						
3	Study Period: 2000-2002						
4	DISCONNECT LOCATION LIFE (MOS.):	N/A					
5							
6	STATE:	FL					
7	COST ELEMENT #:	A.17.4		WORKTIMES SHOWN ARE IN HOURS			
8							
9							
10	DESCRIPTION of A.17.1	WORK CENTERS / WORK ACTIVITIES	SME	JFC	FIRST INSTALL	FIRST DISCONNECT	ADDTL INSTALL
11	SERVICE INQUIRY	CRSG/Acct Team receives Service Inquiry (SI) from CLEC; forwards to OSPE for handling. Once OSPE responds with Estimated Completion Date (ECD), CRSG follows up w/OSPE until job is completed.	Interconn Svcs.	SDWC	0.0250		
12	SERVICE INQUIRY	LCSC receives SI, validates for accuracy & processes for billing	Interconn Svcs.	230X	0.0250		
13	ENGINEERING	OSPE receives SI from CRSG, verifies load coil/equipment locations in plats. (Engineering)	Network	JG57	0.0500		
14	ENGINEERING	OSPE codes, assigns job number and returns SI to CRSG. (Clerical)	Network	WS10	0.0200		
15	ENGINEERING	AFIG receives job from OSPE and posts records	Network	4M1X	0.0200		
16		Underground Application (90%) - Load Coil/Equipment Removal					
17	CONNECT & TURN-UP TEST	OSP Construction sets up manholes (2 hrs ea.); opens/closes splices (1 hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0416		
18		Buried/Aerial (10%) - Load Coil/Equipment Removal					
19	CONNECT & TURN-UP TEST	OSP Construction set-up (1 hr); opens/closes splices (1hr.); deloads pairs (1 1/2 hr.) (Assumes 2.1 load coils removed.)	OSPC	420X	0.0388		
20	TRAVEL	OSP Construction travels to load coil/equipment sites	OSPC	420X	0.0100		
21			2000	2001	2002		
22	DEMAND FOR CONDITIONING	Source					
23							
24	FL - Incoming xDSL Capable Loops-2000	Interconnection	9,018	4,743	3,552		
25	Cumulative Incoming Loops==>	=SUM(C24:E24)	17,313				
26							
27	FL - Incoming Loops Requiring Conditioning	Interconnection	9,949	1,978	1,481		
28	Cumulative Incoming Conditioned Loops==>	=SUM(C27:E27)	7,406				
29							
30	# Loops Conditioned Not Recovered Elsewhere	See Assumption 1	4				
31							
32	WorkTimes for One Conditioning:						
33	SERVICE INQUIRY	=+E11	0.0250				
34	SERVICE INQUIRY	=+E12	0.0250				
35	ENGINEERING	=+E13	0.0500				
36	ENGINEERING	=+E14	0.0200				
37	ENGINEERING	=+E15	0.0200				
38	CONNECT & TURN-UP TEST	=+E17	0.0416				
39	CONNECT & TURN-UP TEST	=+E19	0.0388				
40	TRAVEL	=+E20	0.0100				
41							
42	Amount To Be Recovered from xDSL Loops:						
43	SERVICE INQUIRY	=((C33*$C$30)*$C$28)/$C$25	0.0428				
44	SERVICE INQUIRY	=((C34*$C$30)*$C$28)/$C$25	0.0428				
45	ENGINEERING	=((C35*$C$30)*$C$28)/$C$25	0.0856				
46	ENGINEERING	=((C36*$C$30)*$C$28)/$C$25	0.0342				
47	ENGINEERING	=((C37*$C$30)*$C$28)/$C$25	0.0342				
48	CONNECT & TURN-UP TEST	=((C38*$C$30)*$C$28)/$C$25	0.0712				
49	CONNECT & TURN-UP TEST	=((C39*$C$30)*$C$28)/$C$25	0.0664				
50	TRAVEL	=((C40*$C$30)*$C$28)/$C$25	0.0171				
51							
53							
54	Assumptions:						
55	1) Of the 10 lines being conditioned on a field visit; 2 will be recovered through UNE applications, 4 from BST; and 4 leftover						
56	2) Demand of xDSL capable loops includes ADSL, HDSL, and UCL						

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 7
BELLSOUTH LOOPS AVAILABLE FOR CONDITIONING

Docket No. 990649-TP
Eric McPeak Exhibit No. 7
BellSouth Loops Available
for Conditioning

BELLSOUTH LOOPS AVAILABLE FOR CONDITIONING

Assumptions	
Average Cable Size	
[CS] Loops < 18kft	600
[CS] Loops > 18kft	200
Number of Cables/Location	
[#C] Loops < 18kft	1
[#C] Loops > 18kft	1
Fill Factor	
[FF]	58%
Voice Growth	
[VG]	5.60%
Penetration	
[PEN]	99%
Additional Line Multiplier	
[AL]	1.50

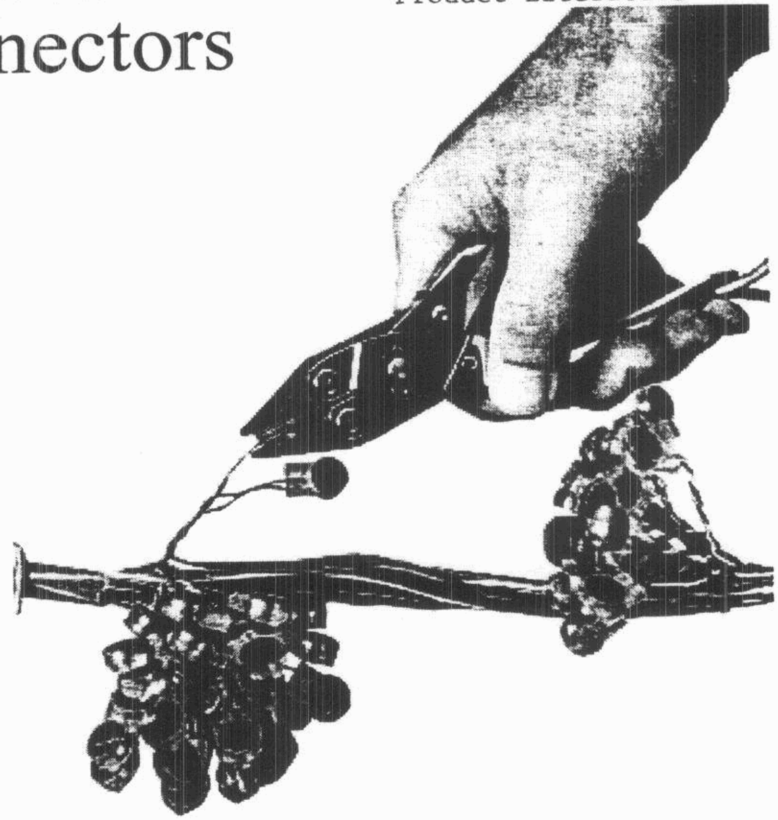
Calculations			
Spare Pairs			
[SP]	Loops < 17.5kft	[CS * (1-FF)]	253
[SP]	Loops > 17.5kft	[CS * (1-FF)]	84
Filled Pairs			
[FP]	Loops < 17.5kft	[CS * FF]	347
[FP]	Loops > 17.5kft	[CS * FF]	116
Reserve Pairs			
[RP]	Loops < 17.5kft	[FP * (VG*PEN)]	19
[RP]	Loops > 17.5kft	[FP * (VG*PEN)]	6
Set Aside Pairs			
[SAP]	Loops < 17.5kft	[RP*AL]	29
[SAP]	Loops > 17.5kft	[RP*AL]	10
Pairs Available For Conditioning/Cable			
[PAC]	Loops < 17.5kft	SP-SAP	224
[PAC]	Loops > 17.5kft	SP-SAP	75
Pairs Available For Conditioning/Location			
[PAL]	Loops < 17.5kft	[PAC*#C]	224
[PAL]	Loops > 17.5kft	[PAC*#C]	75

DOCKET NO. 990649-TP
ERIC MCPEAK EXHIBIT NO. 8
PRODUCT LITERATURE

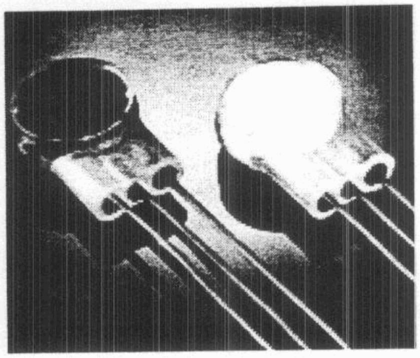
Docket No. 990649-TP
Eric McPeak Exhibit No. 8
Product Literature

3M Fax 800/626 0329 Phone 800/426 8688

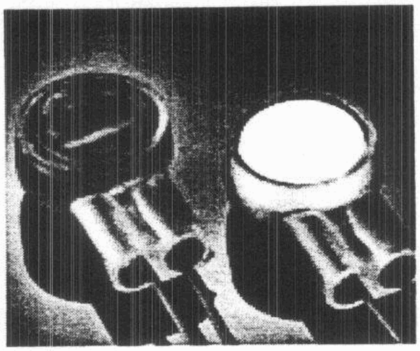
Scotchlok Connectors and Tools



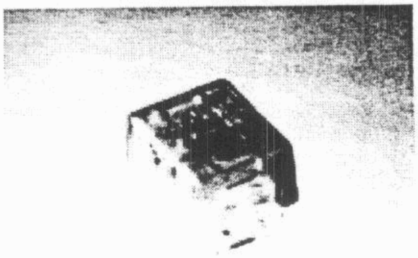
UR2/UR2-D Butt Connectors



UY2/UY2-D Butt Connectors



UB2A/UB2A-D Tap Connectors



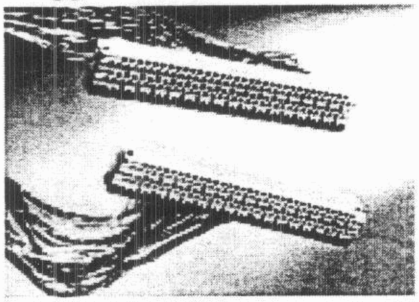
Product Referral Generator

3M Phone 800/426 8688 Fax 800/626 0329

MS Splicing Modules and Accessories

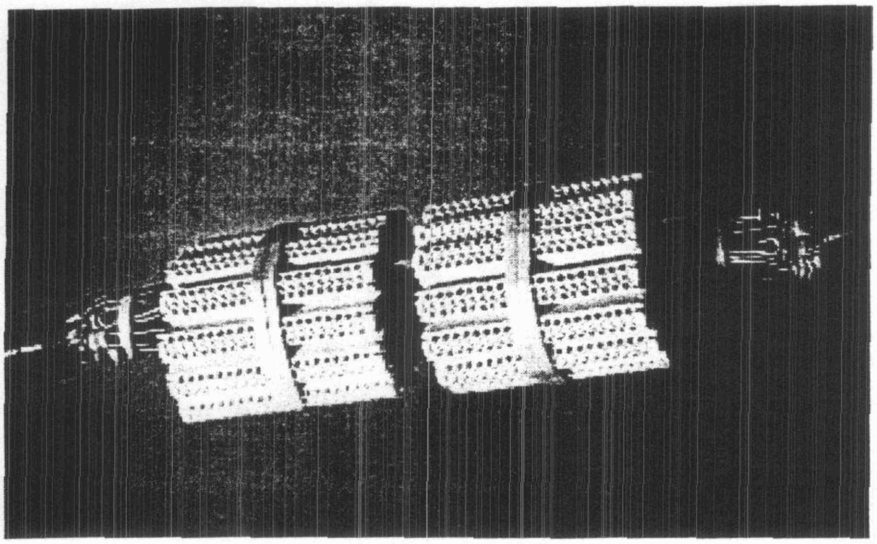
U-shaped contacts enable solder-equivalent connections

4005-DPM/16 16-Pair Pluggable Module



Pair testing is easy

3M Phone 800/426 8688 Fax 800/626 0329



9708-10/TR Module for half-tap splicing i

9700-DWP/TR Module for water resistant* splicing i

9700-10/TR Module for two-wire straight splicing i

9700-C/TR Super Mini Module i

Description	Pkg. kg (lbs.)/ctn.	Min. order