

ORIGINAL

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**In Re: Petition for Arbitration of BlueStar
Networks, Inc. with BellSouth
Telecommunications, Inc. Pursuant to the
Telecommunications Act of 1996.**

Docket No. 981838-TP

Filed: January 25, 2000

DIRECT TESTIMONY AND EXHIBITS

OF

MICHAEL STARKEY

ON BEHALF OF

BLUESTAR NETWORKS, INC.

DOCUMENT NUMBER - DATE

~~011932~~ JAN 25 8

FPSC-RECORDS/REPORTING

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

**In Re: Petition for Arbitration of BlueStar
Networks, Inc. with BellSouth
Telecommunications, Inc. Pursuant to the
Telecommunications Act of 1996.**

) Docket No. 981838-TP

) Filed: January 25, 2000

DIRECT TESTIMONY AND EXHIBITS

OF

MICHAEL STARKEY

ON BEHALF OF

BLUESTAR NETWORKS, INC.

1 **BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

2 **DIRECT TESTIMONY AND EXHIBITS**

3 **OF**

4 **MICHAEL STARKEY**

5 **ON BEHALF OF BLUESTAR NETWORKS, INC.**

6 **DOCKET NO. 991838-TP**

7 **I. INTRODUCTION**

8 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE**
9 **RECORD.**

10 A. My name is Michael Starkey. My business address is: QSI Consulting, Inc., 6401
11 Tracton Court, Austin, Texas 78739.

12 **Q. BY WHOM ARE YOU EMPLOYED?**

13 A. I am employed by QSI Consulting, Inc. (QSI).

14 **Q. PLEASE DESCRIBE QSI AND IDENTIFY YOUR POSITION WITH THE**
15 **FIRM.**

16 A. QSI is a consulting firm specializing in the areas of telecommunications policy,
17 econometric analysis and computer aided modeling. I currently serve as the firm's
18 President.

19 **Q. PLEASE DESCRIBE YOUR EXPERIENCE WITH**
20 **TELECOMMUNICATIONS POLICY ISSUES AND YOUR RELEVANT**
21 **WORK HISTORY.**

22 A. Prior to founding QSI, I was a founding partner and Senior Vice President of

1 Telecommunications Services at Competitive Strategies Group, Ltd. (CSG) in
2 Chicago, Illinois. Like QSI, CSG is a consulting firm providing consulting
3 services to international telecommunications carriers, consumer advocates and
4 policy makers. During my tenure at CSG, I represented a number of clients in
5 regulatory proceedings across the country including numerous arbitrations held
6 pursuant to Section 252 of the Federal Telecommunications Act of 1996 (TA96).

7 Prior to joining CSG, I was most recently employed by the Maryland
8 Public Service Commission as Director of the Commission's Telecommunications
9 Division. In my role as the Commission's Telecommunications Director, I was
10 responsible for managing the Commission's Telecommunications staff. My staff
11 and I were responsible for providing the Commission with a wide range of
12 telecommunications policy, economic, and technical expertise.

13 Prior to joining the Maryland Commission Staff, I was employed by the
14 Illinois Commerce Commission as Senior Telecommunications Policy Analyst
15 within the Commission's Office of Policy and Planning (OPP). As a member of
16 the Commission's OPP Staff, I was a primary witness in the Commission's
17 "Customers First" proceedings wherein I authored revisions to Commission Code
18 Part 790 to incorporate "Line Side Interconnection" allowing, for the first time,
19 interconnection to unbundled network elements (UNEs). I also represented the
20 Commission Staff at the Ameritech Regional Regulatory Conference (ARRC).
21 I participated with the ARRC staff in preparing a report submitted to the FCC and
22 the U.S. Department of Justice detailing Ameritech's proposal to participate in a

1 trial waiver from the Modified Final Judgment for purposes of offering in-region,
2 inter-LATA services.

3 Before joining the Illinois Commerce Commission Staff, I began my career
4 as an Economist III with the Missouri Public Service Commission within the
5 Commission's Utility Operations Division.

6 A more complete description of my relevant experience is included as
7 Exhibit No. _____(MS-1).

8 **Q. DO YOU HAVE DIRECT EXPERIENCE WITH THE ISSUES IN THIS**
9 **CASE?**

10 A. Yes, I do. I have represented a number of clients and participated in many
11 proceedings dealing with the proper application of the Federal Communications
12 Commission's (FCC's) local competition rules and the proper implementation of
13 TA96. Likewise, not only have I been involved in many contested cases involving
14 the FCC's Total Element Long Run Incremental Cost (TELRIC) methodology,
15 QSI, under my direction, also develops and builds cost models for the
16 telecommunications industry. I have analyzed and reviewed the underlying
17 incremental cost estimates of Ameritech, Bell Atlantic, Southwestern Bell
18 Telephone, Sprint, U.S. West, GTE, NYNEX, BellSouth, Pacific Bell and
19 Cincinnati Bell Telephone. In addition to reviewing those cost estimates, QSI has
20 on occasion been asked to "replicate" the cost models underlying those cost
21 estimates so that more reasonable inputs and assumptions can be used to arrive
22 at reasonable TELRIC-based UNE rates. As a result of this experience, I am very

1 familiar with the FCC's TELRIC rules and how they should be implemented to
2 develop a TELRIC-compliant cost model and related cost-based rates.

3 **Q. HAVE YOU PROVIDED TESTIMONY BEFORE STATE UTILITY**
4 **COMMISSIONS IN THE PAST?**

5 **A.** Yes. I have over the past eight (8) years provided testimony before the FCC and
6 state utility commissions in the following states: Alabama, Florida, Georgia,
7 Hawaii, Idaho, Illinois, Indiana, Louisiana, Maryland, Massachusetts, Michigan,
8 Mississippi, Missouri, New Jersey, New Mexico, New York, North Carolina,
9 Ohio, Oklahoma, Oregon, Pennsylvania, South Carolina, Tennessee, Wisconsin
10 and Wyoming.

11 **II. OVERVIEW**

12 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
13 **PROCEEDING?**

14 **A.** My testimony addresses the following issues as identified in the *Procedural*
15 *Order*:

16 **Issue 2** Should BellSouth be required to:

17 a. conduct a trial of line sharing with Blue Star, and if so,
18 when?

19 b. conduct a trial of electronic ordering and provisioning of
20 line sharing with BlueStar, and if so, when?

21 **Issue 6a** For xDSL orders, should BellSouth be required to provide real
22 time access to OSS for loop makeup information qualification? If

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

so, when?

- Issue 10 What are the TELRIC-based rates for the following:
- a. 2-wire ADSL compatible loops, both recurring and nonrecurring;
 - b. 2-wire HDSL compatible loops, both recurring and nonrecurring;
 - c. "UCL" loops, both recurring and nonrecurring;
 - d. loop conditioning for each of the loops listed above, as well as the 4-wire HDSL loop

Issue 11 What are the TELRIC-based recurring and nonrecurring rates for the high frequency portion of a shared loop?

Issue 16 What is the appropriate method for BlueStar to gain access to BellSouth's riser cables, allowing BlueStar to provision its digital subscriber line access multiplexer (DSLAM)?

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The issues in this Arbitration involve the deployment of "advanced services" in the State of Florida. The FCC has defined advanced services as "high-speed, switched, broadband, wireline telecommunications capability that enables users to originate and receive high-quality voice, data, graphics or video telecommunications using any technology." (Advanced Services, *First Report and Order*, CC Docket No. 98-147, footnote 2). The terms "broadband" or "bandwidth" are generally used to describe the capacity necessary to transport the

1 large quantities of information required to support advanced services. (Id.) In
2 three Orders over the past two years, the FCC has aggressively sought to promote
3 competition in the provision of advanced services as required by Section 706 of
4 TA96. My testimony describes a number of issues that remain in dispute between
5 BlueStar Networks, Inc. (BlueStar) and BellSouth regarding the interconnection
6 agreement between them that will allow BlueStar to provision advanced services
7 in Florida, primarily through the use of Digital Subscriber Line (DSL) technology.

8 Before addressing the specific areas of dispute that still exist between the
9 parties, however, my testimony includes a brief description of DSL technology.
10 I also describe how the characteristics of BellSouth's outside plant network can
11 impact the deployment of this advanced services technology. I also describe the
12 ways in which the BellSouth network may need to be upgraded to accommodate
13 DSL services. Finally, I recommend interim rates for BlueStar's access to DSL-
14 capable unbundled loops and other BellSouth facilities and activities that will be
15 required to support DSL services. I recommend that these rates be adopted on
16 an interim basis until the Commission undertakes a comprehensive review of the
17 rates of UNEs and related services required to permit competitive advanced
18 services in Florida. The following provides a brief overview of my
19 recommendations regarding the rates that the Commission should adopt in this
20 proceeding:

- 21 1. **Unbundled Copper Loop**: As an interim recurring rate, I recommend that the
22 Commission adopt the recurring rate agreed to by BellSouth and Alternative

1 Local Exchange Carriers (ALECs) in the *Joint Stipulation Regarding Interim*
2 *Deaveraging* in Docket No. 990649-TP (the Joint Stipulation). As interim non-
3 recurring rates, I recommend that the Commission adopt the non-recurring rates
4 recently approved by the Commission for a 2-wire ADSL loop in
5 ITC^DeltaCom's arbitration with BellSouth. (Docket No. 990750-TP, adopted
6 by the Commission on January 11, 2000) (the DeltaCom Arbitration).

7 2. **2-wire ADSL compatible loops and 2-wire HDSL compatible loops:** As
8 interim recurring rates for these loops, I recommend that the Commission adopt
9 the recurring rates agreed to by BellSouth in the *Joint Stipulation*. As interim
10 non-recurring rates for these loops, I recommend that the Commission adopt the
11 non-recurring rates recently approved by the Commission in the ITC^DeltaCom
12 arbitration.

13 3. **High Frequency Portion of the Loop (Line Sharing) Rate:** As an interim
14 measure, until BellSouth provides data specific to the amount of loop cost it
15 attributed to its interstate ADSL offering, I recommend the Commission adopt a
16 rate of \$1 for BlueStar's access to the high frequency portion of a loop already
17 providing voice grade service to a BellSouth local customer.

18 4. **Line Conditioning -- Non-Recurring Rate:** I recommend that the Commission
19 adopt rates for line conditioning (i.e., load coil removal, repeater removal and
20 bridged tap removal) not to exceed those adopted by the Texas Commission in its
21 Arbitration Award in Docket Nos. 20272 and 20226.

22 In addition to recommending that the Commission in this proceeding adopt the

1 interim rates above, I also recommend that the interim rates be subject to true-up
2 consistent with the permanent rates ultimately adopted by the Commission in
3 Docket No. 990649-TP.

4 **III. DIGITAL SUBSCRIBER LINE (DSL) TECHNOLOGY**

5 **Q. BEFORE YOU DESCRIBE THE ISSUES THAT REMAIN IN DISPUTE**
6 **BETWEEN BLUESTAR AND BELL SOUTH, PLEASE DESCRIBE WHAT**
7 **DSL SERVICES ARE AND HOW THEY WORK.**

8 **A.** DSL is a term used to describe a "family" of technologies that utilize existing
9 copper telephone lines to provide "high-speed" (more accurately larger
10 bandwidth) access primarily to packet switched networks. The family of DSL
11 services is often referred to as "xDSL" services wherein the "x" is generally used
12 as a placeholder for purposes of identifying more specific derivations of the DSL
13 technology (e.g., ADSL -asynchronous DSL, HDSL -high speed DSL, VDSL -
14 very high speed DSL, IDSL - ISDN DSL and RDSL - rate adaptive DSL).

15 As a general matter, xDSL technologies use a system of digital modems placed
16 on each end of a transmission medium (generally two or four copper wires) to
17 transmit digital information within the high frequency portion of a loop at rates
18 far exceeding those typically achieved by other types of copper loop transmission.
19 xDSL technologies support a number of consumer data applications including
20 wide area networking for purposes of telecommuting as well as high-speed
21 Internet access that dwarfs the speed achieved by a standard 56Kbs modem.

22 **Q. HOW DO XDSL SERVICES WORK?**

1 A. Generally speaking, the two xDSL modems use a copper loop to transmit a digital
2 data stream between the customer's premises (where a customer terminal is
3 placed) and a packet switched network node that generally resides in the local
4 exchange carrier's central office. This piece of equipment is generally referred to
5 as a Digital Subscriber Line Access Multiplexer - "DSLAM". Using complex
6 digital compression techniques, xDSL technologies, generally by using the high
7 frequency portion of the copper loop, achieve bandwidth substantially greater than
8 that available on today's typical 56 kilobits computer modem. The FCC's *Line*
9 *Sharing Order* describes this phenomenon as follows:

10 The local loop can support transmissions on a wide range of
11 frequencies. Analog voice service occurs on the lower
12 "voiceband" frequency range, at least between 300 Hertz and
13 3,000 Hertz, and possibly up to 3,400 Hertz depending on
14 equipment and facilities. Some forms of xDSL, such as ADSL use
15 a higher frequency range, generally above 20,000 Hertz, that does
16 not interfere with voice band transmission. (*Third Report and*
17 *Order in CC Docket No. 98-147 Fourth Report and Order in CC*
18 *Docket No. 96-98, Released December 9, 1999).*

19 Q. CAN XDSL SERVICE BE PROVIDED OVER ANY TYPE OF COPPER
20 LOOP?

21 A. No. The loop has to be free of devices which interrupt or interfere with the digital
22 signal which is transmitted over the loop. I will describe these devices below.

1 Copper loops that meet these criteria are often referred to as "clean" copper
2 loops.

3 **Q. DO THE CHARACTERISTICS OF THE COPPER PAIRS USED AS A**
4 **TRANSMISSION MEDIUM FOR XDSL TECHNOLOGIES IMPACT THE**
5 **EFFICIENCY OF THE SYSTEM?**

6 **A.** Yes, they do. However, the transmission "quality" of the underlying copper loop
7 effects different types of xDSL technologies differently. For example, some xDSL
8 technologies (especially the highest bandwidth capabilities of ADSL) are limited
9 in the extent to which they can effectively utilize existing copper loops that exceed
10 a particular length. However, HDSL technology and IDSL technologies can use
11 repeater devices that allow these services to use longer loops. Hence, while the
12 length of a given copper loop may "disqualify" a particular xDSL technology, the
13 same copper loop may support another form of xDSL technology that can provide
14 the customer the benefits of high-speed, digital transmission.

15 In addition, individual characteristics beyond the simple length of the loop
16 can impact the quality of the xDSL transmission. For example, an excessive
17 deployment of "disturbers" resident on the loop (generally bridged tap, load coils
18 or repeaters) can render a loop unusable for xDSL transmission (or, more
19 generally, transmission not only for xDSL technology but also for ISDN and other
20 types of digital technology).

21 **Q. WHY DO THE PRESENCE OF LOAD COILS, BRIDGED TAP AND/OR**
22 **REPEATERS DEGRADE THE QUALITY OF THE DSL**

1 **TRANSMISSION?**

2 A. Generally speaking these devices, or "disturbers", interfere with the ability of the
3 two DSL modems to communicate effectively. This inability to communicate
4 effectively can rob the system of potential data transmission speed. Speed dictates
5 how quickly files can be downloaded to the subscriber's computer or uploaded
6 from the subscriber through the network. Interference can also degrade the
7 quality of transmission. Quality is affected when the ratio of legitimate "bits" of
8 data received by the device at either end compared to erroneous "bits" is so high
9 that the transmission is rendered unusable. I will describe how each individual
10 "disturber" affects the xDSL transmission in greater detail below.

11 **Q. WHAT IS BRIDGED TAP?**

12 A. Bridged tap is a term used to describe a circuit that "appears" at two different
13 points in the network. Said another way, a single copper pair (i.e. a "tap") is
14 spliced to two downstream pairs (i.e., "bridged") that serve two different
15 locations. This somewhat outdated network architecture was intended to
16 maximize the flexibility inherent within a local carrier's distribution network.

17 **Q. WHAT IS A "DISTRIBUTION NETWORK" AND HOW DID BRIDGED
18 TAP HELP TO MAXIMIZE THE EFFICIENCY ASSOCIATED WITH
19 SUCH A NETWORK?**

20 A. In today's outside plant environment, local exchange carriers generally provision
21 loop facilities in three fairly discrete segments: (1) *feeder* or F1, (2) *distribution*
22 or F2 and (3) *drop*. Copper-based *feeder* facilities are generally characterized by

1 larger cables that extend from the central office to a defined point within the
2 exchange where they are cross-connected to the *distribution* portion of the
3 network (usually via a feeder distribution interface "FDI" or a serving area cross-
4 connect "SACC"). It is the *distribution* portion of the network that then spreads
5 out across a given defined area of the exchange to extend a given loop to a
6 particular neighborhood or group of customer premises. The *drop* portion of the
7 network then extends the *distribution* cable (generally terminated at a drop
8 pedestal or an aerial equivalent within a neighborhood) to a given customer
9 premises. Diagram 1, included on Exhibit No. _____(MS-2) provides a simplified
10 look at these three distinct loop components.

11 **Q. HOW DOES AN UNDERSTANDING OF THESE THREE MAJOR**
12 **NETWORK COMPONENTS HELP UNDERSTAND BRIDGED TAP?**

13 **A.** To better understand the use of bridged tap, we must look closer at the
14 distribution portion of the network. Each distinct distribution route from the FDI
15 is generally referred to as a "tap." A given tap is used to connect a number of
16 active customers to the feeder network for purposes of completing a circuit from
17 the customers' premises to the central office. Each tap may incorporate a number
18 of different splice points wherein the distribution cable is tapered to smaller cables
19 that branch out to different neighborhoods.

20 Though distribution cables generally grow smaller as we move from the
21 FDI to the customer premise (i.e., generally ranging in size from 600 copper pairs
22 to 25 copper pairs), the network is engineered to accommodate a larger number

1 of distribution cables than feeder cables. Because of the cost of reinforcing
2 distribution cable, as many as 2-3 distribution cables are originally placed for
3 every 1 feeder cable at any given feeder/distribution interface. Carriers generally
4 avoid regularly supplementing the distribution network because of the need to
5 transverse neighborhoods and the resultant costs associated with placing
6 distribution cables under sidewalks, streets, personal property, etc. For this
7 reason, distribution cables sufficient to address "ultimate demand" are generally
8 deployed at one time, thereby avoiding the need for substantial further additions.
9 This design allows outside plant engineers to supplement the network in two
10 phases: *feeder* (which supports multiple neighborhoods/communities and is far
11 cheaper to supplement than is distribution), and *distribution* (which is more
12 specific to a given neighborhood or community). This is accomplished primarily
13 by two methods. First, in more recent plant design (i.e., the 1980s to the present),
14 the cross-connect capability of the FDI (i.e. the ability to cross-connect a single
15 feeder pair with any number of distribution pairs) was deployed and is utilized for
16 this purpose. Second, older outside plant architectures, where an FDI cross-
17 connect facility (or its equivalent) is not available, used bridged taps to minimize
18 the need for a dedicated feeder/distribution combination (i.e., the inability to use
19 a given feeder pair to support more than one distribution pair).

20 **Q. HOW DOES BRIDGED TAP ALLOW THE FEEDER NETWORK TO**
21 **SUPPORT MORE THAN A SINGLE DISTRIBUTION PATH?**

22 **A.** Bridged tap is a strategy wherein a single distribution pair is actually connected

1 to at least two downstream distribution pairs that may branch in two different
2 directions. In other words, the tap is "bridged" such that it can provision service
3 in either of two geographic areas (generally it is "bridged" to provision either an
4 east or west circuit). This is accomplished generally within a cross-connect
5 pedestal wherein a single distribution pair is simply cross-connected to two
6 downstream pairs. Of course, a drop is attached to only one of these bridged
7 pairs so as to provide service to an individual customer (i.e., a "connected through
8 pair"), but, the "bridge" remains in place so that if the customer leaves, that same
9 distribution pair could be used in another geographic area to meet future demand
10 (without the need to send a splicer to the pedestal to "reroute" the distribution
11 pair). In the past, before FDIs were widely deployed, this "bridged tap"
12 architecture allowed the local exchange carrier to maximize the flexibility of its
13 network without the expense that would be required to engineer direct circuits
14 (i.e. a single pair reaching from the C.O. to each customer premises). Diagram
15 2 included as Exhibit No. _____ (MS-3) depicts a cable pair that "appears" at
16 two different locations using the "bridged" architecture as described above.

17 In Diagram 2, included as Exhibit No. _____ (MS-3), Cable Pair 112 is
18 "bridged" such that it could be used to provision service to either Customer A or
19 Customer B. In this example, the pair is connected to a drop that serves
20 Customer A, however, the fact that it is "bridged" allows it to be used just as
21 easily to provide service to Customer B (though it can provide service to only one
22 of those customers at any one time).

1 **Q. WHY DOES BRIDGED TAP DEGRADE THE QUALITY OF AN XDSL**
2 **TRANSMISSION?**

3 **A.** Simply put, bridged tap increases the "electrical loop length" of the circuit in
4 question thereby diminishing the signal that is ultimately received at the
5 customer's premises. Where a distribution tap is bridged, for example in Diagram
6 2, an electrical signal traversing cable pair 112 will actually travel the entire
7 distance of the pair extending to both customer A and customer B thus increasing
8 the resistance and loss associated with the entire loop. This extended electrical
9 loop length resulting from the presence of bridged tap can significantly reduce the
10 efficiency of the xDSL transmission. In addition, a DSL signal can "reflect" off
11 of the end of a bridged tap, thereby creating an electronic "echo" or even an
12 "inversion" whereby the signal reflected from the end of the bridged tap can, upon
13 colliding with the legitimate signal, "cancel" the legitimate signal such that the
14 receiving modem is unable to retrieve any useable signal. In the case of an
15 "electronic echo," extraneous digital "noise" is introduced into the system
16 resulting in lower transmission speeds. [*Interoperability and Testing - Loop*
17 *Qualification*, Broadband Design and Engineering, page 2, Telecordia
18 Technologies, Inc., © 2000]. Both speed and quality of transmission are thus
19 affected.

20 **Q. WHAT IS A LOAD COIL?**

21 **A.** Load coils are electrical inductance coils used for purposes of improving the
22 transmission performance of the voice band channel, thus increasing the allowed

1 loop length for acceptable voice transmission. In real terms, a load coil is indeed
2 a tightly wound coil of wire that serves to increase the electrical inductance of the
3 copper wire circuit that constitutes a telephone line. Generally speaking, a load
4 coil on a loop "amplifies" the entirety of the analog signal by boosting the entire
5 voice band channel such that it can be "heard" on loops extending farther from the
6 original point of analog transmission. Because load coils are included in the
7 network to enhance voice grade transmission on loops of longer length, telephone
8 companies generally deploy load coils only on cables (or binder groups – a group
9 of 25, 50 or 100 cables) that serve customers residing further from the central
10 office. Pursuant to industry standard guidelines, loops are generally "loaded" only
11 if they are intended to serve customers located greater than 18,000 feet from their
12 serving central office (in compliance with the industry standard "H88 loading
13 strategy") (*Macmillan Technology Series DSL Simulation Techniques and*
14 *Standard, Development for Digital Subscriber Line Systems. By: Walter Y.*
15 *Chen*).

16 **Q. CAN A "LOADED" LOOP EFFECTIVELY ACCOMMODATE AN XDSL**
17 **SIGNAL?**

18 **A.** No, it cannot. Load coil inductance alters the rate at which data is transmitted
19 through the loop creating unacceptable fluctuations in digital transmission quality.
20 Said another way, the load coil's generally required purpose of "amplifying" an
21 analog signal isn't conducive to the digital communication that occurs between
22 the two xDSL modems. In effect the load coil's inductance, by electronically

1 amplifying the digital signal, alters the digital signal in such a way that it isn't
2 recognized by the xDSL modem at the other end of the communication pathway.

3 **Q. WHAT IS A REPEATER AND WHAT IS IT USED FOR?**

4 **A.** Repeaters are used in a number of different scenarios in the provisioning of
5 outside loop plant. Repeaters can be found generally in the form of Voice
6 Frequency Repeaters (VFRs) or digital repeaters. Both types of repeaters extend
7 the range of the service in question. Voice frequency repeaters extend the range
8 (i.e., the distance allowable between the end user customer and his/her serving
9 central office) of services using the voice frequency band of the loop. Likewise,
10 digital repeaters extend the range of digital services (used mainly to this point for
11 ISDN services).

12 **Q. HOW DOES A REPEATER DEGRADE THE QUALITY OF AN XDSL**
13 **TRANSMISSION?**

14 **A.** There are multiple types of repeaters that might be found in the local exchange
15 network. Each of these repeater types can affect a DSL signal differently. For
16 example, voice grade repeaters are designed to operate under voice frequency
17 standards only. Keeping in mind that xDSL technology optimizes high frequency
18 applications using digital transmission, voice grade repeaters, like load coils, can
19 significantly distort the data stream of most DSL products resulting in high bit-
20 rate error ratios that would ultimately result in unacceptable transmission levels.
21 On the other hand, some digital repeaters may very well support the use of some
22 xDSL technologies (for example, IDSL and HDSL) by allowing those

1 technologies to work on longer loops than would otherwise be possible without
2 the repeaters. As a general rule, voice grade repeaters are not compatible with
3 xDSL service. Digital repeaters may be helpful or may simply be tolerable for
4 some DSL services. The effect of digital repeaters depends upon the particular
5 xDSL technology being deployed and the parameters of the service in general.

6 **Q. HOW CAN A COPPER LOOP WITH LOAD COILS, BRIDGED TAP**
7 **AND REPEATERS BE MADE USABLE FOR ADVANCED SERVICES**
8 **USING XDSL TECHNOLOGY?**

9 **A.** Loops with these disturbers can be made usable for advanced services through a
10 process known as conditioning. Line conditioning is a general term used to
11 describe any activity undertaken to change the characteristics of a loop for
12 purposes of supporting a particular service. In the case of DSL services, line
13 conditioning generally requires removing any "disturbers" that are currently
14 included on the line for purposes of supporting analog voice grade service. The
15 disturbers most generally at issue with respect to DSL services are the load coils,
16 bridged tap and repeaters discussed above.

17 **IV. DSL PUBLIC POLICY CONSIDERATIONS**

18 **Q. ARE THERE OVERRIDING PRINCIPLES THE COMMISSION**
19 **SHOULD CONSIDER WHEN EVALUATING THE SPECIFIC ISSUES**
20 **RELEVANT TO THIS ARBITRATION?**

21 **A.** Yes, there are. First, it is important to note that the FCC has recently (December
22 9, 1999) released its *Line Sharing Order* that I mentioned earlier (*Third Report*

1 *and Order in CC Docket No. 9-147, Fourth Report and Order in CC Docket No.*
2 *96-98).* I think it is fair to say that the FCC's *Line Sharing Order*, as well as its
3 original *Advanced Services Order (First Report and Order and Further Notice*
4 *of Proposed Rulemaking, CC Docket No. 98-147, Released March 31, 1999)*, is
5 intended to guard against discriminatory behavior on the part of the incumbent
6 LECs (including BellSouth). BellSouth provides xDSL (primarily ADSL)
7 services to its retail customers. (See, BellSouth's FastAccesssm Service at
8 <http://consumer.bellsouth.net/adsl/index.asp>). In doing so, BellSouth must
9 undertake the same activities that BlueStar will be required to undertake to
10 provide DSL-based services. These activities will include evaluating its outside
11 plant for acceptable facilities by accessing its loop plant records, ensuring loops
12 to be used for its DSL product meet specific requirements, removing load coils,
13 bridged tap and repeaters where necessary, and providing the means by which to
14 "share" a voice service access line with high-frequency DSL service. What the
15 FCC recognizes in both of its advanced services orders, and what I would
16 encourage the Florida Commission to keep in mind in this case, is that BlueStar
17 will in many circumstances be forced to rely upon BellSouth to perform many of
18 these functions on its behalf.

19 It goes without saying that BellSouth will have an incentive to provide
20 DSL related facilities and services to BlueStar on a less timely basis and at a level
21 of quality below that it affords itself in the provision of its retail DSL services
22 (indeed, BellSouth and BlueStar will be competing for the same customers and

1 by providing less timely and lower quality service to BlueStar, BellSouth can
2 better position its own retail DSL service in the marketplace). As such, BlueStar
3 is required, within its interconnection agreement, to include language specifically
4 protecting it against BellSouth's over-riding incentive to provide services at levels
5 below that BellSouth would provide to itself.

6 **Q. WHY IS THIS POINT IMPORTANT TO REMEMBER WHEN**
7 **REVIEWING THE SPECIFIC ISSUES IN THIS ARBITRATION?**

8 **A.** It is important that the Commission uphold the FCC's standard of "parity" for
9 purposes of ensuring that BellSouth cannot discriminate against BlueStar in the
10 provision of DSL-related services and facilities either in terms of (1) timeliness,
11 (2) quality, or (3) price. Every issue in this arbitration can be tied to terms and
12 conditions in an interconnection agreement aimed at protecting BlueStar against
13 BellSouth's overriding incentive to discriminate against it in one of these three
14 areas. For this reason, if there is a single standard that the Commission should
15 keep in its mind when deciding the issues in this case, I would recommend that it
16 always return to the principle of parity and nondiscrimination. If BlueStar seeks
17 a particular function, facility or price (cost) from BellSouth as a means of
18 providing its DSL services, I would encourage the Commission to ask itself the
19 following question before deciding the issue: *Is this something BellSouth has*
20 *available to itself in the provision of its own retail DSL services?* If the answer
21 to that question is yes, then I would suggest that good public policy requires the
22 Commission to ensure BellSouth provide the same function, facility or price (cost)

1 to BlueStar. Only by ensuring that BellSouth treats BlueStar (and other DSL
2 carriers) exactly as it treats itself (i.e., parity), can the Commission be assured that
3 competition for advanced services will prosper at a rate consistent with its
4 potential as a powerful technology capable of significantly changing the way
5 people communicate and interact in an ever increasingly information-rich society.

6 **V. DSL RELATED RATES AND CHARGES**

7 **Q. PLEASE IDENTIFY THE SPECIFIC UNE RATE ELEMENTS FOR**
8 **WHICH BLUESTAR IS ASKING THIS COMMISSION TO ESTABLISH**
9 **A TELRIC BASED-RATE.**

10 **A.** BlueStar is requesting that the Florida Commission, within this proceeding,
11 establish TELRIC-based rates for the following rate elements:
12
13
14
15
16
17
18
19
20
21
22

1	ELEMENT	RECURRING	NON- RECURRING (FIRST)	NON- RECURRING (ADD'L)
2				
3	I. Unbundled Copper Loop	X	X	X
4	II. ADSL 2-wire	X	X	X
5	III. High Frequency Portion of Loop			
6	(a) When BlueStar provides the splitter:	X	X	X
7	(b) When BellSouth provides the splitter:	X	X	X
8	IV. Removal of Load Coils			
9	- Loop < 12,000 kft.		X	X
10	- 12,000 kft. < Loop < 18,000 kft.		X	X
11	- 18,000 kft. < Loop		X	X
12	V. Removal of Bridged Tap			
13	- Loop < 12,000 kft.		X	X
14	- 12,000 kft. < Loop < 18,000 kft.		X	X
15	- 18,000 kft. < Loop		X	X
16	VI. Removal of Repeaters			
17	- Loop < 12,000 kft.		X	X
18	- 12,000 kft. < Loop < 18,000 kft.		X	X
19	- 18,000 kft. < Loop		X	X
20	Q. HOW DOES BLUESTAR RECOMMEND THE COMMISSION			
21	ESTABLISH RATES FOR THE ELEMENTS LISTED ABOVE?			
22	A. Without the ability to review the studies BellSouth intends to use in support of its			

1 proposed rates for the listed elements, BlueStar cannot offer rates based on such
2 studies. In such a situation, BlueStar recommends rates for many of these
3 elements that are derived from other cases before the Florida Public Service
4 Commission as well as from proceedings in other jurisdictions. BlueStar reserves
5 the right to address, in its Rebuttal Testimony, BellSouth's cost information, to
6 the extent it is provided, to propose alternative rates to those included in this
7 direct testimony. Using currently available data, BlueStar believes that the rates
8 it is proposing in this proceeding are reasonable.

9 **Q. IS BLUESTAR IN FAVOR OF A "TRUE-UP" PROVISION THAT**
10 **WOULD APPLY TO ANY RATES ADOPTED IN THIS PROCEEDING?**

11 **A.** Yes, BlueStar is very much in favor of such a provision and its inclusion in the
12 interconnection agreement. Many of the elements for which prices will be set in
13 this proceeding are relatively new as they have resulted from the FCC's advanced
14 services orders. It is obvious from BellSouth's *Response* that cost studies have
15 not even been performed for many of the elements and for many others, the cost
16 studies that are available have not undergone the level of scrutiny that will be
17 available to the Commission in its pending generic UNE docket, Docket No.
18 990649-TP. It is BlueStar's understanding that Docket No. 990649-TP is a
19 docket aimed at reviewing the majority of BellSouth's UNE costs in a generic
20 environment where all parties can scrutinize the underlying methodology,
21 assumptions and inputs that are used to arrive at TELRIC-based rates. BlueStar
22 recommends that the rates set by the Commission in this proceeding should be

1 established subject to a "true-up." Under BlueStar's "true-up" proposal, when the
2 Commission in Docket No. 990649-TP approves final rates, those rates will
3 supplant the interim rates included in the agreement pursuant to this proceeding.
4 Likewise, to the extent BlueStar has either "underpaid" or "overpaid" for access
5 to BellSouth's UNEs (established by comparing the rates approved in this
6 proceeding with those ultimately approved in Docket No. 990649-TP), BlueStar
7 would either provide additional compensation to BellSouth or expect BellSouth
8 to return some of the payment originally provided, based upon the number of
9 UNEs BlueStar had purchased from BellSouth in the interim time period.

10 **Q. IS IT ANTICIPATED THAT COSTS AND RATES ASSOCIATED WITH**
11 **ALL OF THE ELEMENTS YOU'VE IDENTIFIED ABOVE WILL BE**
12 **CONSIDERED IN DOCKET NO. 990649-TP?**

13 **A.** Yes, with one exception. According to the *Stipulation of Certain Issues and*
14 *Schedule of Events* that was agreed to by the parties in Case No. 990649-TP, it
15 appears that all of the rates I listed above with the exception of the high frequency
16 portion of a loop being used for voice grade service (i.e., Line Sharing) are
17 scheduled to be addressed in Docket No. 990649-TP. Likewise, according to the
18 aforementioned *Stipulation*, it appears to be the intention of the parties that line
19 sharing rates will be addressed in some other, yet to be named docket. BlueStar
20 would recommend that rates for line sharing be "trued-up" pursuant to the results
21 of whatever docket is ultimately opened to address that issue on a generic basis.

22 **Q. WHAT RATES SHOULD THE COMMISSION ADOPT FOR THE**

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

**ELEMENTS YOU'VE IDENTIFIED ABOVE IN THE INTERIM (I.E.,
BETWEEN THE END OF THIS PROCEEDING AND THE TIME FRAME
WITHIN WHICH THE FINAL RATES IN DOCKET NO. 990649-TP ARE
ULTIMATELY APPROVED)?**

A. I would recommend that the Commission adopt the following rates:

		RECURRING		
	ELEMENT	<u>ZONE 1</u>	<u>ZONE 2</u>	<u>ZONE 3</u>
1				
2				
3	I. Unbundled Copper Loop	\$18.60	\$27.23	\$60.07
4	II. ADSL 2-wire	\$12.78	\$18.72	\$41.29
5	III. High Frequency Portion of Loop			
6	(a) When BlueStar provides the splitter:	\$1.00	\$1.00	\$1.00
7	(b) When BellSouth provides the splitter:	\$1.00	\$1.00	\$1.00
8				
9				
10	I. Unbundled Copper Loop	\$113.85		\$99.61
11	II. ADSL 2-wire	\$113.85		\$99.61
12	III. High Frequency Portion of Loop			
13	(a) When BlueStar provides the splitter:	\$0.00		\$0.00
14	(b) When BellSouth provides the splitter:	\$0.00		\$0.00
15	IV. Removal of Load Coils			
16	- Loop < 12,000 kft.	\$0.00		\$0.00
17	- 12,000 kft. < Loop < 18,000 kft.	\$25.66		\$22.83
18	- 18,000 kft. < Loop	\$40.55		\$34.89
19	V. Removal of Bridged Tap			
20	- Loop < 12,000 kft.	\$0.00		\$0.00
21	- 12,000 kft. < Loop < 18,000 kft.	\$17.62		\$14.79
22				

1	- 18,000 kft. < Loop	\$24.46	\$18.81
2	VI. Removal of Repeaters		
3	- Loop < 12,000 kft.	\$0.00	\$0.00
4	- 12,000 kft. < Loop < 18,000 kft.	\$10.82	\$9.41
5	- 18,000 kft. < Loop	\$16.25	\$13.42

6 **Q. PLEASE IDENTIFY THE ORIGIN OF THE RECURRING RATES FOR AN**
7 **UNBUNDLED COPPER LOOP.**

8 **A.** The rates included in the table above for an unbundled copper loop (recurring), are
9 taken from Attachment A, page 23, of the *Joint Stipulation Regarding Interim*
10 *Deaveraging (Deaveraging Stipulation)* that was signed by a number of carriers
11 (including BellSouth) and filed with the Commission on December 7, 1999 in
12 Docket No. 990649-TP. Attachment A, page 23, of the *Deaveraging Stipulation*
13 details the monthly recurring rates which BellSouth has agreed to charge for access
14 to a 2-wire unbundled copper loop until final rates are approved in Case No.
15 990649-TP. Because BellSouth has already agreed to these rates, it is reasonable
16 to assume that at a minimum, these rates cover BellSouth's underlying costs. As
17 such, these rates are a reasonable basis upon which to set interim rates for purposes
18 of the Interconnection Agreement between BellSouth and BlueStar.

19 **Q. PLEASE DESCRIBE THE ORIGIN OF YOUR RECOMMENDATION FOR**
20 **THE NON-RECURRING RATES ASSOCIATED WITH AN UNBUNDLED**
21 **COPPER LOOP.**

22 **A.** The nonrecurring rates included in the table above for an unbundled copper loop

1 match those adopted by the Commission in Docket No. 990750-TP
2 (ITC^DeltaCom Arbitration) for a 2-wire ADSL loop.

3 **Q. WHY IS THE ITC^DELTACOM ARBITRATION APPROPRIATE TO**
4 **RELY UPON IN SETTING RATES FOR BLUESTAR'S AGREEMENT?**

5 **A.** To my knowledge, the ITC^DeltaCom arbitration is the most recent proceeding
6 within which the Commission addressed many of these issues. Hence, the rates
7 adopted in that proceeding incorporate the most up to date analysis available on
8 BellSouth's underlying costs. Because of their timeliness, the rates adopted in the
9 ITC^DeltaCom arbitration are likely to constitute the most reasonable interim rates.

10 **Q. YOUR RECOMMENDATION WOULD APPLY THE SAME NON-**
11 **RECURRING RATES TO BOTH THE ADSL COMPATIBLE LOOP AND**
12 **THE UNBUNDLED COPPER LOOP. PLEASE DESCRIBE THE**
13 **DIFFERENCE BETWEEN A 2-WIRE UNBUNDLED COPPER LOOP AND**
14 **AN UNBUNDLED 2-WIRE ADSL LOOP.**

15 **A.** It is my understanding that the only difference between an unbundled copper loop
16 and an ADSL loop (as BellSouth defines those individual loop types) is the amount
17 of testing that BellSouth must undertake to ensure that the loop can perform as
18 promised and the length of the loop. It is my understanding that BellSouth provides
19 additional testing when provisioning an unbundled ADSL loop when compared to
20 provisioning an unbundled copper loop. For the ADSL loop, BellSouth tests
21 capacitance and other factors necessary to ensure that ADSL equipment will
22 function properly on the loop. For the UCL , BellSouth only tests the electrical

1 continuity of the circuit. Loop length has no documented effect on non-recurring
2 charges, particularly when BellSouth charges separately for line conditioning. As
3 such, my suggestion to use the Commission-approved ADSL non-recurring charges
4 for purposes of the unbundled copper loop, will undoubtedly result in BlueStar
5 paying more for an unbundled copper loop than necessary. However, given that
6 BellSouth has provided no cost support for these rates that can be evaluated to
7 estimate a more reasonable rate, and that BlueStar is recommending that all rates
8 approved in this arbitration be subject to true-up, the 2-wire ADSL compatible loop
9 should suffice as a reasonable interim non-recurring rate for the unbundled copper
10 loop as well.

11 **Q. PLEASE DESCRIBE IN MORE DETAIL YOUR RECOMMENDATION**
12 **REGARDING RECURRING AND NON-RECURRING RATES FOR A 2-**
13 **WIRE ADSL COMPATIBLE LOOP.**

14 **A.** Similar to the rates for the unbundled copper loop, my recommended monthly
15 recurring rates for a 2-wire ADSL compatible loop are taken from Attachment A,
16 page 23, of the *Deaveraging Stipulation* mentioned earlier. Again, the monthly
17 recurring rates for a 2-wire ADSL compatible loop detailed above represent rates
18 that BellSouth has agreed to adopt on May 1, 2000. via the *Deaveraging*
19 *Stipulation*. The non-recurring rates identified above for a 2-wire ADSL loop are
20 taken from the Commission's Order in Case No. 990750-TP (ITC^DeltaCom).

21 **Q. WHY DIDN'T YOU BASE YOUR RECOMMENDATION REGARDING**
22 **BOTH RECURRING AND NON-RECURRING 2-WIRE ADSL**

1 In this Order we adopt measures to promote the availability of
2 competitive broadband xDSL-based services, especially to
3 residential and small business customers. We amend our unbundling
4 rules to require incumbent LECs to provide unbundled access to a
5 new network element, the high frequency portion of the local loop.
6 This will enable competitive LECs to compete with incumbent LECs
7 to provide to consumers xDSL-based services through telephone
8 lines that the competitive LECs can share with incumbent LECs.
9 The provision of xDSL based service by a competitive LEC and
10 voiceband service by an incumbent LEC on the same loop is
11 frequently called 'line sharing.' (*Line Sharing Order*, paragraph 4).

12 **Q. DID THE FCC PROVIDE ANY OTHER RATIONALE FOR REQUIRING**
13 **INCUMBENT LECS TO ALLOW "LINE SHARING" WITH**
14 **COMPETITIVE LECS?**

15 **A.** Yes, it did. Throughout the its *Line Sharing Order*, the FCC makes an important
16 point. That is, Line Sharing is required for purposes of ensuring competitive
17 carriers nondiscriminatory access to the ILEC's network:

18 There is no question that incumbent LECs are offering xDSL on the
19 same line as their voice service, and competitive LECs are at a
20 significant disadvantage in offering xDSL-based services over the
21 same line that is used to provide voice service. Incumbent LECs
22 generally deploy forms of xDSL-based services that can coexist with

1 voice service on a single line. This enables incumbent LECs to
2 utilize the full capacity of the copper local loop to efficiently provide
3 both voice and data service to a customer. As discussed below,
4 [absent line sharing] competitive LECs seeking to deploy xDSL-
5 based service to customers subscribing to the incumbent LEC's
6 voice telephone service cannot deploy their xDSL with the same
7 efficiency or at the same cost. (*Line Sharing Order*, paragraph 33).

8 **Q. DOES THE FCC'S DECISION REGARDING LINE SHARING**
9 **CONSTITUTE GOOD PUBLIC POLICY?**

10 **A.** Yes, it does. Primarily, line sharing allows carriers with business plans focused on
11 providing advanced services a critical tool to use in competing with the incumbent
12 local exchange carriers who are already tying voice and data services together into
13 powerful marketing packages. The capability of ADSL to use an existing copper
14 loop to continue providing voice grade service, while at the same time,
15 accommodate another, high-speed data service, is a tremendous marketing tool.
16 This marketing advantage is substantially augmented if you are a carrier who has a
17 broad base of existing voice grade customers. Carriers with a broad base of voice
18 customers (e.g., the incumbent LECs) can transition their existing voice telephony
19 customer base to a combination of DSL and voice services, thereby significantly
20 increasing revenues, without substantial capital investment (i.e., the loop plant
21 required to accommodate the data service is already being paid for by the voice
22 grade service). Line sharing allows the more focused DSL oriented ALEC to take

1 advantage of these same economies (i.e., economies associated with using the
2 already embedded loop network currently being used to serve voice customers) as
3 the ILECs enjoy, without the need to also deploy a comparable voice network. In
4 essence, line sharing allows a DSL oriented ALEC to provide a competitive service
5 in the DSL marketplace without also having to undertake the major initiative
6 associated with providing a competing voice service.

7 Absent line sharing, xDSL based carriers like BlueStar would be forced to
8 purchase an entire unbundled loop to provide DSL-based data services. Yet, their
9 primary competitor, BellSouth, would be able to provision competing DSL service
10 over a loop for which it was already recovering its costs via a voice grade service.
11 In other words, BlueStar would be required to pay upwards of \$20 per month for
12 a loop to provide only DSL service, wherein BellSouth would be able to offer the
13 same service at a loop cost of \$0 because the loop it would use is already being
14 purchased for voice grade service from the BellSouth local customer. This type of
15 market structure, absent line sharing, leaves BlueStar with the choice to either
16 compete in the data market against an incumbent with at least a \$20 per month cost
17 advantage (on a service which can sell as low as \$40 per month), or, become a
18 voice-based service provider as well. The FCC recognized that such a Hobson's
19 choice (i.e., precluding carriers from being able to enter the market solely to provide
20 data based xDSL services) would undoubtedly slow the development of xDSL
21 based technology deployment, unnecessarily raise the economic barriers to entering
22 the market, and retard the growth of competing advanced services.

1 **Q. HOW CAN INCUMBENTS BE PREVENTED FROM DISCRIMINATING**
2 **AGAINST DSL COMPETITORS IN TERMS OF PRICE FOR THE HIGH**
3 **FREQUENCY PORTION OF THE LOOP?**

4 **A. As stated by the FCC:**

5 The impetus behind ordering line sharing is the need to expedite the
6 deployment of xDSL-based advanced services while simultaneously
7 fostering meaningful competition in the provision of those services.
8 In the current environment, competitive LECs must purchase access
9 to additional lines in order to offer xDSL-based services, while the
10 incumbent LECs use their own voice loops to offer these same
11 services. The incumbent LECs' xDSL services are, in fact, sharing
12 the local loop facility with their voice services. In setting prices for
13 interstate xDSL services, moreover, incumbent LECs currently
14 attribute little or no loop cost to those services. The competitive
15 LECs, on the other hand, are forced to purchase access to a second
16 line, and pay the related unbundled network element rates for an
17 entire loop. This puts competitive LECs at a severe competitive
18 disadvantage when they offer xDSL-based services to the public. In
19 some cases, the unbundled network element rate for a loop is so
20 close to the rate the incumbent LEC charges for its xDSL-based
21 services that it is not possible for the competitive LEC to offer
22 service at a competitive price. Even if line sharing is made available

1 to competitive LECs, however, it will not promote competition
2 unless it is priced in a way that permits competitive LECs to enjoy
3 the same economies of scale and scope as the incumbent LECs.
4 (*Line Sharing Order*, paragraph 133).

5 The intended result of line sharing is to put competing xDSL providers on an even
6 playing field with incumbent products capable of providing both voice and xDSL based data
7 services over the same local loop. Thus, the FCC set the following price standard:

8 We find it reasonable to presume that the costs attributed by LECs
9 in the interstate tariff filings to the high-frequency portion of the
10 loop cover the incremental costs of providing xDSL on a loop
11 already in use for voice services. Under the price cap rules for new
12 access services, the recurring charges for such services may not be
13 set below the direct costs of providing the service, which are
14 comparable to incremental costs. The rates the incumbent LECs set
15 for their special access xDSL services should cover those costs.
16 The incumbent LECs filed their cost support for their own special
17 access DSL services before we issued the notice giving rise to this
18 Order compelling line sharing, and they have defended their cost
19 support when challenged in petitions to reject or suspend their tariff
20 filings. Since the incremental loop cost of the high-frequency
21 portion of the loop should be similar to the incremental loop cost of
22 the incumbent LEC's xDSL special access service, this approach

1 should result in the recovery of the incremental loop cost of the
2 high-frequency portion of the loop. (*Line Sharing Order*, paragraph
3 140).

4 **Q. WHAT IS THE PROPER STANDARD THAT THE FLORIDA**
5 **COMMISSION SHOULD USE TO ESTABLISH A RATE FOR THE HIGH**
6 **FREQUENCY PORTION OF A LOOP TO BE USED WITH COMPATIBLE**
7 **XDSL TECHNOLOGIES?**

8 **A.** The FCC recognized in its *Line Sharing Order* that the high frequency portion of
9 the loop and the remainder of the loop are in fact two network elements sharing the
10 same facility. The FCC indicated that most of the incumbent LECs had already
11 allocated a portion of the loop associated with a shared xDSL arrangement when
12 they filed their ADSL special access tariffs at the FCC. When filing ADSL tariffs
13 at the FCC, incumbent LECs (including BellSouth) were required to attribute some
14 amount of cost associated with the loop supporting the ADSL service to their
15 ADSL rates. As the FCC points out above, the current interstate price cap rules
16 governing rates for new access services require that rates for new access services
17 cover at least their direct costs (so as to avoid any predatory pricing strategies an
18 incumbent LEC may be positioned to entertain). As such, it can be assumed that
19 the amount of loop cost attributed by an incumbent LEC to its interstate ADSL
20 access services, must recover the direct loop costs associated with providing ADSL
21 over an existing loop currently servicing a voice customer. Hence, that same
22 amount of loop cost should serve as a reasonable allocation of costs between the

1 high frequency portion of a loop and the remaining voice band of the loop. In short,
2 the FCC has determined that the appropriate amount of cost to be attributed to the
3 high frequency portion of a loop is an amount not to exceed that loop cost
4 attributed to the incumbent's own ADSL service when it filed those services in its
5 interstate tariffs.

6 **Q. HAVE ANY OTHER STATE COMMISSIONS ADOPTED THIS**
7 **APPROACH?**

8 **A.** Yes. In an order predating the FCC's *Line Sharing Order*, the Minnesota Public
9 Utilities Commission required US West to charge ALECs a line sharing rate not to
10 exceed the amount of loop cost US West attributed to its own ADSL services.
11 (*Order Requiring Technical Trials, Good Faith Resolution of Operational Issues,*
12 *and a Resulting Report*, issued October 8, 1999 in Docket No. P-999/CI 99-678).
13 The following excerpt (page 5) is helpful in understanding the Minnesota
14 Commission's rationale:

15 The Commission is not presently concerned with how USWC
16 resolves the pricing issue, so long as the Company charges data
17 CLECs the same rate loop that the Company presently imputes to
18 its own DSL services. To insure nondiscriminatory treatment of
19 data competitors, CLECs must be charged the same costs USWC
20 imputes to itself for the data portion of the loop. Not only is this a
21 statutory necessity, but it is also sound policy. If USWC were
22 permitted to impose rates for loop sharing that are above

1 incremental cost, their compensation for a loop would constitute
2 double recovery. If data CLECs were forced to pay an additional
3 cost for the data portion of the same loop, USWC would receive a
4 windfall and the consumers would overpay for their services. If,
5 however, USWC imputes some non-zero cost to the data portion of
6 the loop, then the CLEC can also be charged that amount for the
7 data portion.

8 **Q. WITHOUT THE COST STUDY FILED IN SUPPORT OF BELLSOUTH'S**
9 **INTERSTATE ADSL SERVICE, HOW WOULD YOU RECOMMEND THE**
10 **COMMISSION GO ABOUT SETTING AN INTERIM RATE FOR THE**
11 **HIGH FREQUENCY PORTION OF THE LOOP IN THIS PROCEEDING?**

12 **A.** I would recommend that the Commission establish an interim rate of \$1.00 for
13 access to the high frequency portion of a BellSouth loop that is also being used to
14 provide voice services to a BellSouth customer.

15 **Q. WHY WOULD A RATE OF \$1.00 BE APPROPRIATE AS AN INTERIM**
16 **CHARGE FOR ACCESS TO THE HIGH FREQUENCY PORTION OF THE**
17 **LOOP?**

18 **A.** The "additional cost" generated by a DSL-related service, included on top of the
19 voice band service, is likely to be less than \$1.00. The loop won't depreciate any
20 faster just because DSL is also being provided over it nor will it cost BellSouth any
21 more for the copper or any other facility necessary to provision the loop. As I
22 described above, the most important question in setting a rate for the high frequency

1 portion of the loop is how much cost to "allocate" to the high frequency portion of
2 the loop.

3 The FCC requires BellSouth to charge no more for access to the high
4 frequency portion of the loop than the amount of loop cost BellSouth allocated to
5 its interstate ADSL service filed with the FCC. This ensures that both BlueStar and
6 BellSouth can compete for DSL customers on equal footing. Hence, absent
7 production of its cost study filed in support of its interstate ADSL service, it seems
8 clear that BellSouth has failed to prove it allocated any amount of loop cost to its
9 interstate ADSL service. Without proving that it allocated some amount of loop
10 costs to its interstate ADSL service, only a rate of \$0.00 for access to the high
11 frequency portion of the loop will ensure that BellSouth's rate does not exceed the
12 amount it "charges" itself. As such, I would recommend that until BellSouth
13 supplies its interstate ADSL cost study, the Commission adopt a rate of \$1.00 to
14 ensure that BellSouth complies with the FCC's standard established above in
15 paragraph 139. When/if BellSouth does finally supply its interstate ADSL study,
16 the Commission should, in compliance with the FCC's mandate above, establish a
17 rate that does not exceed the amount of loop cost BellSouth allocated to its
18 interstate ADSL service.

19 **Q. PLEASE DESCRIBE WHAT A SPLITTER IS AND WHAT IT IS USED**
20 **FOR IN THE PROVISION OF SIMULTANEOUS DATA AND VOICE**
21 **APPLICATIONS.**

22 **A.** For lack of a better word, a spitter "splits" the two signals being simultaneously

1 transmitted on the same copper facility (i.e., the xDSL, high frequency data signal
2 and the lower frequency voice band signal) into two discrete channels that can be
3 terminated into two different pieces of equipment. Generally, the voice band
4 transmission is terminated into the incumbent's circuit based, end office switch
5 where it is treated as any other "line side connection" for purposes of providing
6 voice grade local exchange service. Alternatively, the high frequency, xDSL-based
7 data transmission is likely to be terminated into a DSLAM for purposes of
8 ultimately accessing a packet switching network. While a splitter may either be
9 included within a DSLAM or as a stand alone piece of equipment, if both voice
10 grade services and xDSL based data services are to be provided over the same loop,
11 each using a different frequency within the copper facility and ultimately terminated
12 to two different carriers, some type of splitter is required to separate the two
13 transmissions.

14 **Q. PLEASE DESCRIBE YOUR RATIONALE IN RECOMMENDING A RATE**
15 **OF \$1 FOR ACCESS TO THE HIGH FREQUENCY PORTION OF THE**
16 **LOOP WHEN THE INCUMBENT PROVIDES THE SPLITTER.**

17 **A.** Obviously, the most reasonable manner by which to establish a rate for the high
18 frequency portion of the loop (including a splitter deployed by BellSouth) would be
19 to follow the FCC's direction and review the cost study BellSouth provided to the
20 FCC in support of its interstate ADSL services. Undoubtedly, within that study,
21 BellSouth attributed some amount of cost associated with "splitting" its customers'
22 voice and data traffic. Absent some unlikely difference in costs associated with

1 splitting its own customers' traffic and the traffic of its competitors, it is reasonable
2 to assume that the amount of cost associated with "splitting" included in BellSouth's
3 interstate ADSL service cost study would suffice as a reasonable estimate of
4 "splitting" costs associated with splitting BlueStar's traffic.

5 However, BellSouth has not provided BlueStar a copy of its interstate
6 ADSL cost support.

7 **Q. ABSENT BELLSOUTH INTERSTATE ADSL STUDY, HOW WOULD YOU**
8 **RECOMMEND THAT THE COMMISSION SET AN INTERIM RATE FOR**
9 **ACCESS TO THE HIGH FREQUENCY PORTION OF THE LOOP**
10 **WHEREIN BELLSOUTH PROVIDES THE SPLITTING EQUIPMENT?**

11 **A.** For the same reasons described above with respect to rates for line sharing, I would
12 recommend that until BellSouth produces its interstate ADSL study the Commission
13 establish an interim rate of \$1.00 for access to both the high frequency portion of
14 the loop regardless of who provides the splitter.

15 **Q. IS YOUR RECOMMENDATION LIKELY TO CHANGE IN THIS**
16 **RESPECT WHEN/IF BELLSOUTH DOES PRODUCE ITS COST STUDY?**

17 **A.** While it is unclear whether my recommendation will change with respect to the rate
18 that should be applied for accessing the high frequency portion of the loop (because
19 it is possible, even logical to assume that BellSouth attributed \$0 of loop costs to
20 its interstate ADSL service and therefore, compliance with the FCC's *Line Sharing*
21 *Order* - paragraph 139 - would require that no more than \$0 be charged for access
22 to the high frequency portion of the loop), it is likely that some amount of cost

1 should be attributed to the splitter and that BellSouth should be allowed to establish
2 a rate that recovers the TELRIC costs applicable to splitting an ALEC's traffic.
3 Hence, it is unlikely that a rate of \$0 will effectively recover BellSouth's splitting
4 costs. However, consistent with the FCC's TELRIC rules, BellSouth maintains the
5 burden to support, with cost studies, any rates it wishes to charge for access to
6 UNEs. Absent its willingness to provide such information, the only reasonable rate
7 I can recommend is \$1.

8 VI. LINE CONDITIONING

9 **Q. PLEASE DESCRIBE THE TERM 'LINE CONDITIONING.'**

10 **A.** As described earlier, line conditioning is a general term used to describe a process
11 whereby modifications (adding equipment, removing equipment, etc.) are made to
12 an average, voice grade POTS (Plain Old Telephone Service) loop for purposes of
13 altering its characteristics in a way that will better support a given service. More
14 specifically to this proceeding, however, line conditioning is a general term used
15 primarily to describe the process of removing known "disturbers" (load coils,
16 repeaters, bridged tap, etc.) from a copper loop so as to ready that loop for DSL or
17 other digital services.

18 **Q. PLEASE DESCRIBE IN GREATER DETAIL YOUR RECOMMENDATION**
19 **REGARDING RATES FOR LOAD COIL, REPEATER AND BRIDGED**
20 **TAP REMOVAL.**

21 **A.** The non-recurring rates included in the table above for load coil, repeater and
22 bridged tap removal are taken directly from the Public Utility Commission of

1 Texas' Arbitration Award in Docket Nos. 20272 and 20226. Texas Docket Nos.
2 20272 and 20226 were arbitrations between Southwestern Bell Telephone Company
3 (SWBT) and Rhythms Links, Inc. and Covad Communications Company
4 respectively. The Texas Commission, via its Arbitration Award in these two
5 dockets, provided what is probably the nation's most thorough examination of
6 xDSL-related conditioning issues to date. In doing so, the Texas Commission
7 established rates for a myriad of xDSL related functions, including load coil,
8 repeater and bridged tap removal.

9 **Q. IS IT NECESSARY THAT THE FLORIDA COMMISSION ESTABLISH**
10 **RATES FOR LOAD COIL, BRIDGED TAP AND REPEATER REMOVAL?**

11 **A.** While it is necessary to ensure that BellSouth will remove these particular disturbers
12 from its outside plant at BlueStar's request, the most economically efficient rate for
13 removing these disturbers is likely to be a rate of \$0. This results from the fact that
14 (1) costs incurred for the removal of load coils, bridged tap and repeaters are short
15 run marginal costs (i.e., "out of pocket costs"), not TELRIC costs, and (2) bridged
16 tap, load coils and to some extent repeaters are not forward looking technology
17 (i.e., they were not assumed to be included in the forward looking cost studies used
18 to establish TELRIC rates for an unbundled loop). Hence, the costs associated with
19 removing these "disturbers" are not consistent with a long run incremental cost
20 methodology (the basis upon which TELRIC is founded). Answering the following
21 question is most readily instructive in understanding this issue: *What is the forward*
22 *looking cost of removing a load coil from a forward looking loop which includes*

1 *no load coils?* Obviously, the answer to this question is \$0.

2 **Q. WOULD A RATE IN EXCESS OF \$0 FOR REMOVING LOAD COILS,**
3 **BRIDGED TAP AND REPEATERS REQUIRE CARRIERS TO PAY MORE**
4 **THAN TELRIC RATES FOR ACCESS TO AN UNBUNDLED LOOP?**

5 **A.** Yes, it would. A carrier who is required to pay a TELRIC-based rate for an
6 unbundled loop (based upon an assumption of the least-cost, most efficient
7 technology available), pays for a loop that would not contain these disturbers.
8 However, pursuant to BellSouth's proposal, that same carrier would be required to
9 pay an additional charge (conditioning), if it wanted to actually be provided a loop
10 with characteristics consistent with that for which it paid the TELRIC rate (i.e., a
11 loop without disturbers). BellSouth's proposal could actually be noted as a
12 **TELRIC PLUS** approach. The carrier pays the forward-looking TELRIC rate,
13 **PLUS** it pays a rate based upon the short run marginal cost incurred to retrofit the
14 embedded network in an effort to provision a loop consistent with a forward-
15 looking network. Either way you look at it, under BellSouth's line conditioning
16 approach, a carrier is required to pay more than the TELRIC rate for a loop
17 provisioned using the latest technology. Such an approach is inconsistent with the
18 FCC's rules that require that rates for UNEs not exceed their underlying TELRIC
19 cost plus a reasonable allocation of common overhead.

20 **Q. ARE YOU RECOMMENDING THAT THE FLORIDA COMMISSION**
21 **ADOPT A LINE CONDITIONING RATE OF \$0?**

22 **A.** Yes, I am. However, in the table below I am also providing the Commission with

1 alternative rates that should be charged, if it does not accept a rate of \$0.

2 **Q. WHY ARE YOU RECOMMENDING ALTERNATIVE RATES TO BE**
3 **USED IF THE COMMISSION DOES NOT ACCEPT A RATE OF \$0?**

4 **A.** It has been my experience that even though state commissions and the FCC alike
5 have embraced TELRIC, they are uncomfortable enforcing that standard when
6 activities that generate short run marginal costs (i.e., "out of pocket expenses") yet
7 do not generate long run incremental costs require a rate of \$0. Hence, I have
8 provided an alternative that recognizes the long run incremental cost standard while
9 allowing BellSouth to recover some amount of its "out of pocket expense"
10 associated with line conditioning.

11 **Q. HOW DO YOUR ALTERNATIVE RATE RECOMMENDATIONS**
12 **RECOGNIZE THE LONG RUN INCREMENTAL COST STANDARD YET**
13 **ALLOW BELLSOUTH TO RECOVER SOME AMOUNT OF "OUT OF**
14 **POCKET EXPENSE?"**

15 **A.** My alternative recommendations included in the table above are taken from the
16 Texas Commission's review of SWBT's cost studies. The rates result from
17 modifications made to SWBT's studies by the Texas Commission intended to
18 recognize that the existing (i.e., embedded) outside plant network will require some
19 modification to allow widespread deployment of xDSL technologies. Load coils,
20 repeaters and bridged tap do indeed exist in the network as it is deployed today and
21 will need to be removed. However, these disturbers will not be removed to the sole
22 benefit of competitors, they will need to be removed to allow SWBT and BellSouth

1 to provide xDSL services as well and as such, these carriers should share in the
2 costs of removing these devices. Likewise, these devices will not (or at least should
3 not) be removed on a very expensive "onsey twoseys" basis only on the lines
4 specifically identified by a competitor. BellSouth, recognizing that it must update
5 its network to support the latest technology, should deploy an upgrade strategy that
6 allows it to, among other things, "unload" multiple loops when it must dispatch a
7 technician. In this way, BellSouth can minimize the overall cost associated with
8 readying its network to provision a wider array of digital services (and in doing so,
9 consistent with the TELRIC methodology, it will incur costs associated with
10 providing the entire demand of the service in question). This practice is already
11 underway in most major incumbent LEC operations wherein "unloading" or
12 otherwise manipulating the outside plant network for purposes of providing digital
13 services is done for a specific binder group (i.e., 25 copper pairs) or larger
14 compliments of cable each time a technician is required to make a field trip to
15 condition a single loop. This process negates the need for a technician to visit this
16 neighborhood or distribution area again to unload cables when the next carrier
17 requests a digital-friendly copper pair.

18 **Q. YOUR DISCUSSION ABOVE ALLUDES TO YOUR BELIEF THAT**
19 **BELLSOUTH DID NOT ESTABLISH CONDITIONING RATES BASED**
20 **UPON THE ABOVE PRINCIPLES. HOW CAN YOU KNOW THAT**
21 **BELLSOUTH DID NOT EMPLOY SUCH PRINCIPLES IN ARRIVING AT**
22 **ITS CONDITIONING CHARGES?**

1 A. Again, BellSouth has not provided any cost documentation in support of its
2 proposed rates for load coil, repeater or bridged tap removal. Hence, there are no
3 BellSouth cost studies that BlueStar can review to evaluate the cost basis of
4 BellSouth's proposed rates. I can neither confirm nor deny that BellSouth
5 employed a reasonable method of estimating conditioning costs. However, the
6 sheer magnitude of BellSouth's proposed rates in comparison to the Texas rates
7 suggests that a significant disparity exists between the underlying methodology used
8 in the Texas studies and BellSouth's studies (a disparity far beyond any regional
9 differences):

10
11
12
13
14
15
16
17
18
19
20
21
22

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22

	TEXAS NON- RECURRING (FIRST)	BELLSOUTH NON- RECURRING (FIRST)	TEXAS NON- RECURRING (ADD'L)	BELLSOUTH NON- RECURRING (ADD'L)
IV. Removal of Load Coils				
- Loop < 12,000 kft.	\$0.00	\$485.00	\$0.00	\$25.00
- 12,000 kft.<Loop<18,000 kft.	\$25.66	\$485.00	\$22.83	\$25.00
- 18,000 kft.<Loop	\$40.55	\$775.00	\$34.89	\$25.00
V. Removal of Bridged Tap				
- Loop < 12,000 kft.	\$0.00	\$485.00	\$0.00	\$20.00
- 12,000 kft.< Loop<18,000 kft	\$17.62	\$485.00	\$14.79	\$20.00
- 18,000 kft.< Loop	\$24.46	\$485.00	\$18.81	\$20.00
VI. Removal of Repeaters				
- Loop < 12,000 kft.	\$0.00	\$485.00	\$0.00	\$25.00
- 12,000 kft.< Loop<18,000 kft	\$10.82	\$485.00	\$9.41	\$25.00
- 18,000 kft.< Loop	\$16.25	\$775.00	\$13.42	\$25.00

As you can see from the table above, BellSouth's proposed costs for conditioning a loop exceed those adopted by the Texas Commission in some cases by as much as 5000%.

Q. WHY ARE THE TEXAS COSTS FOR LINE CONDITIONING RELEVANT FOR BELLSOUTH? AREN'T WE DISCUSSING TWO DIFFERENT NETWORKS IN TWO PARTS OF THE COUNTRY?

A. Though we are comparing costs associated with conditioning a line in two different

1 networks in two different parts of the country, it is important to note that the
2 activities associated with conditioning a loop are unlikely to differ to any real degree
3 between the BellSouth and SWBT networks. Load coils, repeaters and bridged tap
4 are generally included in the outside plant network consistent with industry standard
5 guidelines. Likewise, incumbent local exchange carriers today generally employ the
6 Carrier Serving Area (CSA) network architecture that attempts to minimize the
7 amount of bridged tap and load coils in the network. This network architecture has
8 been standard operating procedure in most major ILECs for many years (at least
9 since the late 1980s) and to some extent dictates when and how often these
10 disturbers are placed. Likewise, the procedure for removing a load coil or a voice
11 grade repeater is likely to be similar (if not exactly the same) for an outside plant
12 technician whether he/she is a SWBT or a BellSouth employee. While SWBT and
13 BellSouth may pay the same technician some disparate amount of money per hour
14 to perform the function, it is unlikely that a SWBT technician is capable of
15 unloading a loop in any significantly longer or shorter period of time than his/her
16 counterpart at BellSouth. As such, the costs associated with removing a load coil
17 in the SWBT network are likely to be highly similar to the costs of removing a
18 similar load coil in the BellSouth network.

19 **Q. IF THE COSTS ASSOCIATED WITH LINE CONDITIONING SHOULD BE**
20 **SIMILAR BETWEEN THE TWO NETWORKS, WHY IS IT THAT**
21 **BELLSOUTH'S RATES ARE AS MUCH AS 50 TIMES HIGHER THAN**
22 **THOSE ADOPTED FOR SOUTHWESTERN BELL?**

1 A. Without access to the BellSouth cost studies supporting its proposed line
2 conditioning charges it is difficult to speculate as to the basis for the vast cost
3 differences. However, I feel comfortable in suggesting that BellSouth (like SWBT
4 before being advised by the Commission) likely failed to account for the practice of
5 conditioning multiple loops at one time, failed to account for the shared expense
6 incurred for conditioning loops for its own retail operation and any number of other
7 methodological errors that ignore the comprehensive nature of transitioning the
8 embedded network to a digital ready network and estimate forward looking costs
9 accordingly.

10 **Q. WHY DOES YOUR TABLE ABOVE HAVE A RATE OF \$0 FOR LINE**
11 **CONDITIONING ON LOOP LESS THAN 12,000 FEET IN LENGTH?**

12 A. Consistent with the Carrier Serving Area network design and the H88 loading
13 strategy, it is highly unlikely that loops less than 12,000 feet in length will be
14 burdened with load coils, repeaters or bridged tap. It is for this reason that the
15 Texas Commission required a rate of \$0 for removing disturbers from loops of this
16 length. If the incumbent has disturbers on loops of this length it is likely either an
17 engineering oversight or a special arrangement meant to accommodate a single
18 customer (neither of which should be funded by conditioning charges). Simply put,
19 load coil, repeater and bridged tap removal on loops of this length are even more
20 inconsistent with forward looking costing methodologies than the removal of
21 disturbers in general. As such, rates to remove equipment that is either included by
22 mistake or for the use of a single customer is inappropriately recovered from

1 requesting carriers.

2 **Q. SHOULD THE COMMISSION ADOPT THE LINE CONDITIONING**
3 **RATES INCLUDED IN YOUR TABLE ABOVE?**

4 **A.** To be consistent with the FCC's TELRIC guidelines, the Commission should adopt
5 a rate of \$0 for removing equipment that would not be included on a loop
6 constructed using a least cost, forward looking design (i.e. load coils, repeaters and
7 bridged tap). However, if the Commission is uncomfortable adopting this
8 approach, regardless of the fact that it is consistent with the FCC's TELRIC
9 requirements, I would recommend the Commission establish conditioning rates not
10 to exceed those adopted by the Texas Commission and included in the table above.

11 **VII. LINE SHARING TRIAL**

12 **Q. SHOULD BELLSOUTH BE REQUIRED TO CONDUCT A TRIAL OF**
13 **LINE SHARING WITH BLUESTAR, AND, IF SO, WHEN?**

14 **A.** Yes, BellSouth should be required to conduct a line sharing trial with BlueStar.
15 BellSouth should be required to conduct such a trial within the earliest possible time
16 frame.

17 **Q. WHY SHOULD THIS COMMISSION REQUIRE BELLSOUTH TO**
18 **CONDUCT A LINE SHARING TRIAL?**

19 **A.** Undoubtedly, before offering its own, retail ADSL service, BellSouth took the
20 opportunity to test its systems and its processes to ensure that it could effectively
21 provide high-speed ADSL service over a line currently being used to provision
22 voice grade service. Also, in comments regarding the proposed line sharing rule,

1 BellSouth and other regional Bell Operating Companies stated that line sharing
2 carries numerous engineering risks and poses problems for their OSS systems. To
3 address these risks, BellSouth and others advocated a trial prior to implementation
4 of line sharing. This is standard operating procedure before undertaking to market
5 a new product, especially a product that may interact with a service (in this case,
6 voice grade service) that is already being purchased by your customers.

7 **Q. WHY CAN'T BLUESTAR SIMPLY TEST ITS OWN SYSTEMS SO AS TO**
8 **ENSURE ITS PRODUCT IS AVAILABLE AT A LEVEL OF QUALITY**
9 **EQUAL TO THAT OF BELL SOUTH'S PRODUCT? WHY DOES IT**
10 **REQUIRE BELL SOUTH'S PARTICIPATION?**

11 **A.** Because BlueStar will be buying the line sharing UNE from BellSouth, BlueStar will
12 in part be cooperating with BellSouth to provide DSL services. As such, BlueStar
13 will need to test not only its own processes, equipment and systems, it will also need
14 to test how those assets work in cooperation with BellSouth. For example,
15 BlueStar will need to access many of the same internal, BellSouth Operating
16 Support Systems (OSS) that BellSouth uses to provision a shared xDSL line. The
17 only way BlueStar can test its own processes in relation to those systems (much like
18 BellSouth was required to do before actively marketing DSL) is with BellSouth's
19 participation. Likewise, BlueStar and BellSouth will need to "split" the resultant
20 data and voice grade traffic between themselves pursuant to the line sharing
21 architecture. A trial of the processes involved in performing this splitting function,
22 deploying the equipment necessary to accommodate splitting and any testing

1 necessary to ensure that a customer's existing voice service goes unaffected will be
2 critical to deploying BlueStar's DSL-based service to the marketplace in a high
3 quality manner.

4 **Q. WHY MUST BELLSOUTH BE REQUIRED TO PARTICIPATE IN A LINE**
5 **SHARING TRIAL AS QUICKLY AS POSSIBLE?**

6 **A.** BellSouth's ADSL service is already on the market. If BellSouth can, by "dragging
7 its feet" with respect to a line sharing trial, retard the entry of its competitors into
8 the shared-line ADSL market, it can further extend its significant competitive
9 advantage associated with being "first to market." The more quickly a line sharing
10 trial can be effectuated, the more quickly competition for xDSL services can be
11 available to Florida's customers.

12 **VIII. REAL TIME ACCESS TO LOOP MAKEUP DATA**

13 **Q. FOR XDSL ORDERS, SHOULD BELLSOUTH BE REQUIRED TO**
14 **PROVIDE REAL TIME ACCESS TO OSS FOR LOOP MAKEUP**
15 **INFORMATION? IF SO, WHEN?**

16 **A.** Yes, BellSouth should be required to provide BlueStar real time access to loop
17 makeup information as quickly as possible but not to extend beyond June 5, 2000.

18 **Q. IN ITS RESPONSE TO BLUESTAR'S PETITION FOR ARBITRATION,**
19 **BELLSOUTH STATES THAT IT IS UNCLEAR AS TO "WHAT SPECIFIC**
20 **PRE-ORDERING FUNCTIONS BLUESTAR WISHES TO OBTAIN." CAN**
21 **YOU CLARIFY THE MATTER?**

22 **A.** BlueStar wishes to obtain access to the same information, databases and functions

1 that are available to BellSouth employees when they determine whether a given loop
2 will support a given xDSL technology. The *Line Sharing Order* at paragraphs 93-
3 109 requires BellSouth to provide exactly this information. Indeed, the *Line*
4 *Sharing Order* at paragraphs 103 through 105 names specific databases and systems
5 to which ALECs must, at a minimum, be given access. These are the same systems
6 to which BlueStar is requesting access (the FCC specifically identifies the Loop
7 Facilities and Assignment Control System – LFACS, the Computer System for
8 Mainframe Operations – COSMOS, and SWITCH). In addition to these systems,
9 BlueStar is requesting access to any BellSouth system or databases that uses these
10 systems, or others, to aggregate the loop qualification process.

11 **Q. WHY SHOULD THE FLORIDA COMMISSION REQUIRE THAT**
12 **BELLSOUTH PROVIDE BLUESTAR ACCESS TO THESE SYSTEMS?**

13 **A.** First, the FCC requires BellSouth to make these systems available to BlueStar and
14 other ALECs as unbundled network elements (i.e., OSS). (See, *UNE Remand*
15 *Order* at paragraph 426 and 427 as well as the *Line Sharing Order* at paragraph
16 107). Second, only by obtaining access to the systems identified above can
17 BlueStar hope to provision xDSL- based services in a time frame comparable to
18 BellSouth. If BlueStar remains at the mercy of BellSouth in terms of obtaining
19 information about loop characteristics and a given loop’s ability to support a given
20 xDSL technology, customers will always have to wait longer to receive service from
21 BlueStar than they will from BellSouth. In such a circumstance, BlueStar would be
22 required to undertake an additional step in order to provision DSL services (i.e.,

1 BellSouth must review the data on BlueStar's behalf, at whatever pace it can legally
2 sustain, and then provide that information to BlueStar, whereas, BellSouth has that
3 information available to itself without the need for another company's
4 participation).

5 **Q. WHY SHOULD BELLSOUTH BE REQUIRED TO PROVIDE BLUESTAR**
6 **REAL TIME ACCESS TO LOOP MAKEUP DATA NO LATER THAN**
7 **JUNE 5, 2000?**

8 **A.** The FCC in footnote 19, paragraph 13, of its *Line Sharing Order* states:

9 Although, in many areas, incumbent LECs are already providing
10 both voice and xDSL services on the same loop, we believe that
11 incumbent's require approximately 6 months [identified in paragraph
12 13 as 180 days after the issuance of the Order] to adapt their "back
13 office" systems to comply with the two-carrier line sharing
14 requirements set out in this order.

15 The FCC released its Line Sharing Order on December 9, 1999. 180 days
16 from December 9, 1999 is June 5, 2000.

17 **IX. CROSS CONNECTING TO RISER CABLE**

18 **Q. WHAT IS BLUESTAR'S POSITION WITH RESPECT TO THE MANNER**
19 **BY WHICH IT SHOULD BE ALLOWED TO GAIN ACCESS TO**
20 **BELLSOUTH'S RISER CABLE?**

21 **A.** It is my understanding that BlueStar would prefer to perform the cross-connect
22 function that must take place to connect its DSLAM equipment to BellSouth owned

1 riser cable in a given building. It is my understanding that BlueStar wishes to self-
2 perform the cross-connect function for two primary reasons: (1) self-providing the
3 cross-connect would reduce BlueStar's reliance on BellSouth to perform the
4 function, thereby reducing BlueStar's need to schedule its own customer service
5 initiatives around timeframes established by BellSouth's workforce, and (2) the rate
6 BellSouth has quoted to perform this function is excessive.

7 **Q. PLEASE DESCRIBE THE RATE BELLSOUTH HAS SUGGESTED**
8 **BLUESTAR MUST PAY IN ORDER FOR BELLSOUTH TO PERFORM**
9 **THE CROSS-CONNECT FUNCTION?**

10 **A.** It is my understanding that BellSouth has proposed to charge BlueStar a non-
11 recurring rate of approximately \$300 to cross connect BlueStar's network with
12 BellSouth riser cable included in a given building. BlueStar believes this rate is in
13 excess of BellSouth's cost of performing the cross connection. Based upon my
14 experience with cost studies for similar activities, I would agree that the rate seems
15 substantially out of line with underlying costs.

16 **Q. HAS BLUESTAR REQUESTED BELLSOUTH TO PROVIDE A COST**
17 **STUDY SUPPORTING ITS PROPOSED RATE?**

18 **A.** Yes, it has. BellSouth has not provided the study and has objected to the request
19 on the grounds that the requested information is not relevant.

20 **Q. DOES BLUESTAR INTEND TO PROPOSE A RATE FOR THIS TYPE OF**
21 **CROSS CONNECTION IN THIS PROCEEDING?**

22 **A.** Yes, it does. It is BlueStar's hope that BellSouth will provide the cost study

1 supporting its \$300 rate or that it will be compelled to do so. However, if by the
2 time rebuttal testimony is filed, BlueStar is still without BellSouth's cost study, I
3 intend to use another method for purposes of proposing a rate.

4 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

5 **A.** Yes, it does.

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

Contact Information

address: 6401 Tracton Court
Austin, Texas 78739-1400

phone: 512.301.6597
fax: 512.301.6598

e-mail: mstarkey@qsiconsulting.com

Current Position

President and Founding Partner, QSI Consulting, Inc.

Professional Experience

Competitive Strategies Group, Ltd.

Founding Partner
Senior Vice President and Managing Director of Telecommunications Services

Maryland Public Service Commission

Telecommunications Division
Director

Illinois Commerce Commission

Office of Policy and Planning
Senior Telecommunications Policy Analyst

Missouri Public Service Commission

Utility Operations Division
Telecommunications Department
Economist

Education

B.S. Economics / International Marketing

- Southwest Missouri State University, Springfield, Missouri
- *Cum Laude* Honor Graduate

Graduate Coursework, Finance

- Southwest Missouri State University, Springfield, Missouri
- Lincoln University, Jefferson City, Missouri

Professional Activities

- Former member of the Missouri Public Service Commission's Task Force on FCC Docket Nos. 91-141 and 91-213 regarding expanded interconnection, collocation, and access transport restructure
- Former member of the AT&T / Missouri Commission Staff, *Total Quality Management Forum* responsible for improving and streamlining the regulatory process for competitive carriers
- Former member of the Missouri, Oklahoma, Kansas, Texas, and Arkansas five state Southwestern Bell Open Network Architecture (ONA) Oversight Conference
- Former delegate to the Illinois, Michigan, Indiana, Ohio, and Wisconsin Ameritech Regional Regulatory Conference (ARRC) charged with the responsibility of analyzing Ameritech's "Customers First" local exchange competitive framework for formulation of recommendations to the FCC and the U.S. Department of Justice
- Former member of both the Illinois and Maryland Local Number Portability Industry Consortiums responsible for developing and implementing a permanent data-base number portability solution

Testimony Profile and Experience

Before the Public Utility Commission of Ohio

Case No. 99-1153-TP-ARB

In the Matter of ICG Telecom Group, Inc.'s Petition For Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with Ameritech Ohio

On behalf of ICG Telecom Group, Inc.

Before the Public Utility Commission of Oregon

ARB 154

Petition for Arbitration of GST Telecom Oregon, Inc. Against US West Communications, Inc. Under 47 U.S.C. §252(b)

On behalf of GST Telecom Oregon, Inc.

Before the Michigan Public Service Commission

Docket No. U-12072

In the matter of the application and complaint of WORLDCOM TECHNOLOGIES INC. (f/k/a MFS INTELENET OF MICHIGAN, INC., an MCI WORLDCOM company) against MICHIGAN BELL TELEPHONE COMPANY d/b/a AMERITEHC MICHIGAN, AMERITECH SERVICES, INC., AMERITECH INFORMATION INDUSTRY SERVICES, AND AMERITECH LONG DISTANCT INDUSTRY SERVICES relating to unbundled interoffice transport.

On behalf of WorldCom Technologies, Inc.

Before the Illinois Commerce Commission

Docket No. 99-0525

Ovation Communications, Inc. d/b/a McLeodUSA, Complaint Against Illinois Bell Telephone Company d/b/a Ameritech Illinois, Under Sections 13-514 and 13-515 of the Public Utilities Act Concerning the Imposition of Special Construction Charges and Seeking Emergency Relief Pursuant to Section 13-515(e)

On behalf of McLeodUSA

Before the Tennessee Regulatory Authority

Docket No. 1999-259-C

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996

On behalf of ICG Communications, Inc.

Before the New Mexico Public Regulation Commission

Case No. 3131

In the Matter of GST Telecom New Mexico, Inc.'s Petition for Arbitration Against US West Communications, Inc., Under 47 U.S.C. § 252(b).

On behalf of GST Telecom New Mexico, Inc.

Before the Georgia Public Service Commission

Docket No. 10767-U

Petition of ICG Telecom Group, Inc. for Arbitration with BellSouth Telecommunications, Inc. Pursuant to Section 252 of the Telecommunications Act of 1996.

On behalf of ICG Telecom Group, Inc.

Before the Public Service Commission of New York

Case No. 99-C-0529

Proceeding on Motion of the Commission to Re-examine Reciprocal Compensation

On behalf of Focal Communications, Inc.

Before the Florida Public Service Commission

Docket No. 990691-TP

Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996
On behalf of ICG Telecom Group, Inc.

Before the Louisiana Public Service Commission

Docket No. U-24206

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996
On behalf of ITC^DeltaCom, Inc.

Before the South Carolina Public Service Commission

Docket No. 199-259-C

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996
On behalf of ITC^DeltaCom, Inc.

Before the Alabama Public Service Commission

Docket No. 27069

Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996
On behalf of ICG Telecom Group, Inc.

Before the State of North Carolina Utilities Commission

Docket No. P-582, Sub 6

Petition by ICG Telecom Group, Inc. for Arbitration of Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996
On behalf of ICG Telecom Group, Inc.

Before the Missouri Public Service Commission

Case No. TO-99-370

Petition of BroadSpan Communications, Inc. for Arbitration of Unresolved Interconnection Issues Regarding ADSL with Southwestern Bell Telephone Company
On behalf of BroadSpan Communications, Inc.

Before the Michigan Public Service Commission

Case No. U-11831

In the Matter of the Commission's own motion, to consider the total service long run incremental costs for all access, toll, and local exchange services provided by Ameritech Michigan.
On behalf of MCIWorldCom, Inc.

Before the Illinois Commerce Commission

Docket Nos. 98-0770, 98-0771 *cons.*

Proposed Modifications to Terms and Conditions Governing the Provision of Special Construction Arrangements and, Investigation into Tariff Governing the Provision of Special Constructions Arrangements

On behalf of AT&T Communications of Illinois, Inc.

Before the Michigan Public Service Commission

Case No. U-11735

In the matter of the complaint of BRE Communications, L.L.C., d/b/a PHONE MICHIGAN, against Michigan Bell Telephone Company, d/b/a AMERITECH MICHIGAN, for violations of the Michigan Telecommunications Act

On behalf of BRE Communications, L.L.C.

Before the Indiana Utility Regulatory Commission

Cause No. 40830

In the Matter of the request of the Indiana Payphone Association for the Commission to Conduct an Investigation of Local Exchange Company Pay Telephone tariffs for Compliance with Federal Regulations, and to Hold Such Tariffs in Abeyance Pending Completion of Such Proceeding

On behalf of the Indiana Payphone Association

Before the Michigan Public Service Commission

Complaint Pursuant to Sections 203 and 318 of the Michigan Telecommunications Act to Compel Respondents to Comply with Section 276 of the Federal Telecommunications Act

On behalf of the Michigan Pay Telephone Association

Before the Missouri Public Service Commission

Case No. TO-98-278

In the Matter of the Petition of Birch Telecom of Missouri, Inc., for Arbitration of the Rates, Terms, Conditions, and Related Arrangements for Interconnection with Southwestern Bell Telephone Company

On behalf of Birch Telecom of Missouri, Inc.

Before the Public Service Commission of the Commonwealth of Kentucky

Administrative Case No. 361

Deregulation of Local Exchange Companies' Payphone Services

On behalf of the Kentucky Payphone Association

Before the Public Utilities Commission of Ohio

Case No. 96-899-TP-ALT

The Application of Cincinnati Bell Telephone Company for Approval of a Retail Pricing Plan Which May Result in Future Rate Increases

On behalf of the MCI Telecommunications Corporation

Before the Public Utilities Commission of the State of Hawaii

Docket No. 7702

Instituting a Proceeding on Communications, Including an Investigation of the Communications Infrastructure of the State of Hawaii

On behalf of GST Telecom Hawaii, Inc.

Before the Michigan Public Service Commission

Case No. U-11410

In the Matter of the Petition of the Michigan Pay Telephone Association to initiate an investigation to determine whether Michigan Bell Telephone Company d/b/a Ameritech Michigan and GTE North Incorporated are in compliance with the Michigan Telecommunications Act and Section 276 of The Communications Act of 1934, as amended

On behalf of the Michigan Pay Telephone Association

Before the Indiana Utility Regulatory Commission

Cause No. 40849

In the matter of Petition of Indiana Bell Telephone Company, Incorporated d/b/a Ameritech Indiana for the Commission to Decline to Exercise in Whole or in Part its Jurisdiction Over, and to Utilize Alternative Regulatory Procedures For, Ameritech Indiana's Provision of Retail and Carrier Access Services Pursuant to I.C. 8-1-2.6 Et Seq.

On behalf of AT&T Communications of Indiana, Inc.

Before the Federal Communication Commission

C.C. Docket No. 97-137

In the Matter of Application by Ameritech Michigan for Authorization under Section 271 of the Communications Act to Provide In-Region, InterLATA Service in the State of Michigan.

On behalf of the AT&T Corporation

Before the Indiana Utility Regulatory Commission

Cause No. 40611

In the Matter of the Commission Investigation and Generic Proceeding on Ameritech Indiana's Rates for Interconnection, Service, Unbundled Elements and Transport and Termination under the Telecommunications Act of 1996 and Related Indiana Statutes

On behalf of the MCI Telecommunications Corporation

Before the Public Utility Commission of Ohio

Case No. 97-152-TP-ARB

In the matter of the petition of MCI Telecommunications Corporation for arbitration pursuant to section 252(b) of the Telecommunications Act of 1996 to establish an interconnection agreement with Cincinnati Bell Telephone Company

On behalf of the MCI Telecommunications Corporation

Before the Michigan Public Service Commission

Case No. U-11280

In the matter, on the Commission's own motion to consider the total service long run incremental costs and to determine the prices of unbundled network elements, interconnection services, and basic local exchange services for AMERITECH MICHIGAN

On behalf of the MCI Telecommunications Corporation

Before the Illinois Commerce Commission

Docket No. 96-0486

Investigation into forward looking cost studies and rates of Ameritech Illinois for interconnection, network elements, transport and termination of traffic

On behalf of the MCI Telecommunications Corporation

Before the Public Utility Commission of Ohio

Case No. 96-922-TP-UNC

In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic

On behalf of the MCI Telecommunications Corporation

Before the New Jersey Board of Public Utilities

Docket No. TX95120631

In the Matter of the Investigation Regarding Local Exchange Competition for Telecommunications Services

On behalf of the MCI Telecommunications Corporation

Before the Michigan Public Service Commission

Case No. U-11104

In the matter, on the Commission's Own Motion, to Consider Ameritech Michigan's Compliance With the Competitive Checklist in Section 271 of the Telecommunications Act of 1996

On behalf of AT&T Communications of Indiana, Inc.

Before the Public Utility Commission of Ohio

Case Nos. 96-702-TP-COI, 96-922-TP-UNC, 96-973-TP-ATA, 96-974-TP-ATA,
Case No. 96-1057-TP-UNC

In the Matter of the Investigation Into Ameritech Ohio's Entry Into In-Region InterLATA Services Under Section 271 of the Telecommunications Act of 1996.

On behalf of AT&T Communications of Ohio, Inc.

Before the Illinois Commerce Commission

Docket No. 96-0404

*Investigation Concerning Illinois Bell Telephone Company's Compliance With
Section 271(c) of the Telecommunications Act of 1996*
On behalf of AT&T Communications of Illinois, Inc.

Before the Commonwealth of Massachusetts Department of Public Utilities
*In the Matter of: D.P.U. 96-73/74, D.P.U. 96-75, D.P.U. 96-80/81, D.P.U. 96-83,
D.P.U. 96-94, NYNEX - Arbitrations*
On behalf of the MCI Telecommunications Corporation

Before the Pennsylvania Public Utility Commission
Docket No. A-31023670002
*In the Matter of the Application of MCI Metro Access Transmission Services, Inc.
For a Certificate of Public Convenience and Necessity to Provide and Resell
Local Exchange Telecommunications Services in Pennsylvania*
On behalf of MCImetro Access and Transmission Services, Inc.

Before the New Jersey Board of Public Utilities
Docket No. TO96080621
*In the Matter of MCI Telecommunications Corporation for Arbitration with Bell
Atlantic-New Jersey, Inc. Pursuant to Section 252 of the Telecommunications Act
of 1996*
On behalf of the MCI Telecommunications Corporation

Before the Wisconsin Utility Regulatory Commission
Cause No. 40571-INT-01
*Petition for Arbitration of Interconnection Rates, Terms and Conditions, and
Related Arrangements with Wisconsin Bell Telephone Company d/b/a Ameritech
Wisconsin*
On behalf of AT&T Communications of Wisconsin, Inc.

Before the Public Utility Commission of Ohio
Case No. 96-752-TP-ARB
*Petition for Arbitration of Interconnection Rates, Terms and Conditions, and
Related Arrangements with Ohio Bell Telephone Company d/b/a Ameritech Ohio*
On behalf of AT&T Communications of Ohio, Inc.

Before the Illinois Commerce Commission
Docket No. 96-AB-003
Docket No. 96-AB-004 *Consol.*
*Petition for Arbitration of Interconnection Rates, Terms and Conditions, and
Related Arrangements with Illinois Bell Telephone Company d/b/a Ameritech
Illinois*
On behalf of AT&T Communications of Illinois, Inc.

Before the Michigan Public Service Commission

Case No. U-11151

Petition for Arbitration of Interconnection Rates, Terms and Conditions, and Related Arrangements with Michigan Bell Telephone Company d/b/a Ameritech Michigan

On behalf of AT&T Communications of Michigan, Inc.

Before the Indiana Utility Regulatory Commission

Cause No. 40571-INT-01

In the Matter of the Petition of AT&T Communications of Indiana, Inc. Requesting Arbitration of Certain Terms and Conditions and Prices for Interconnection and Related Arrangements from Indiana Bell Telephone Company, Incorporated d/b/a Ameritech Indiana Pursuant to Section 252 (b) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996.

On behalf of AT&T Communications of Indiana, Inc.

Before the Missouri Public Service Commission

Case No. TT-96-268

Application of Southwestern Bell Telephone Company, Inc. to Revise P.S.C. Mo.-No. 26, Long Distance Message Telecommunications Service Tariff to Introduce the Designated Number Optional Calling Plan

On behalf of the MCI Telecommunications Corporation

Before the Corporation Commission of the State of Oklahoma

Cause No. PUD 950000411

Application of Southwestern Bell Telephone Company for an Order Approving Proposed Revisions in Applicant's Long Distance Message Telecommunications Service Tariff

Southwestern Bell Telephone Company's Introduction of 1+ Saver DirectSM

On behalf of the MCI Telecommunications Corporation

Before the Georgia Public Service Commission

Docket No. 6415-U and 6537-U *cons.*

Petition of MCImetro to Establish Nondiscriminatory Rates, Terms and Conditions for the Unbundling and Resale of Local Loops

On behalf of MCImetro Access Transmission Services

Before the Public Service Commission of the State of Mississippi

Docket No. 95-UA-358

Regarding a Docket to Consider Competition in the Provision of Local Telephone Service

On behalf of the Mississippi Cable Television Association

Before the Maryland Public Service Commission

Docket No. 8705

In the Matter of the Inquiry Into the Merits of Alternative Plans for New Telephone Area Codes in Maryland

On behalf of the Staff of the Maryland Public Service Commission

Before the Maryland Public Service Commission

Docket No. 8584, Phase II

In the Matter of the Application of MFS Intelenet of Maryland, Inc. for Authority to Provide and Resell Local Exchange and Inter-Exchange Telephone Service; and Requesting the Establishment of Policies and Requirements for the Interconnection of Competing Local Exchange Networks

In the Matter of the Investigation of the Commission on its Own Motion Into Policies Regarding Competitive Local Exchange Telephone Service

On behalf of the Staff of the Maryland Public Service Commission

Before the Illinois Commerce Commission

Docket No. 94-0400

Application of MCImetro Access and Transmission Services, Inc. For a Certificate of Exchange Service Authority Allowing it to Provide Facilities-Based Local Service in the Chicago LATA

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0315

Petition of Ameritech-Illinois for 708 NPA Relief by Establishing 630 Area Code

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0422

Complaints of MFS, TC Systems, and MCI against Ameritech-Illinois Regarding Failure to Interconnect

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket Nos. 94-0096, 94-0117, and 94-301

Proposed Introduction of a Trial of Ameritech's Customers First Plan in Illinois, et al.

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0049

Rulemaking on Line-Side and Reciprocal Interconnection

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 93-0409

MFS-Intelenet of Illinois, Inc. Application for an Amendment to its Certificate of Service Authority to Permit it to Operate as a Competitive Local Exchange Carrier of Business Services in Those Portions of MSA-1 Served by Illinois Bell Telephone and Central Telephone Company of Illinois

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0042, 94-0043, 94-0045, and 94-0046

Illinois Commerce Commission on its own motion. Investigation Regarding the Access Transport Rate Elements for Illinois Consolidated Telephone Company (ICTC), Ameritech-Illinois, GTE North, GTE South, and Central Telephone Company (Centel)

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 93-0301 and 94-0041

GTE North Incorporated. Proposed Filing to Restructure and Consolidate the Local Exchange, Toll, and Access Tariffs with the Former Centel of Illinois, Inc.

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Public Service Commission of the State of Missouri

Case No. TC-93-224 and TO-93-192

In the Matter of Proposals to Establish an Alternate Regulation Plan for Southwestern Bell Telephone Company

On behalf of the Telecommunications Department, Missouri Public Service Commission

Before the Public Service Commission of the State of Missouri

Case No. TO-93-116

In the Matter of Southwestern Bell Telephone Company's Application for Classification of Certain Services as Transitionally Competitive

On behalf of the Telecommunications Department, Missouri Public Service Commission

Selected Reports, Publications and Presentations

Telecommunications Pricing in Tomorrow's Competitive Local Market
Professional Pricing Societies 9th Annual Fall Conference
Pricing From A to Z
Chicago, Illinois, October 30, 1998

Recombining Unbundled Network Elements: An Alternative to Resale

ICM Conferences' Strategic Pricing Forum
January 27, 1998, New Orleans, Louisiana

MERGERS – Implications of Telecommunications Mergers for Local Subscribers
National Association of State Utility Consumer Advocates Mid-Year Meeting,
Chicago, Illinois, June 24 1996

Unbundling, Costing and Pricing Network Elements in a Co-Carrier World
Telecommunications Reports' Rethinking Access Charges & Inter-carrier
Compensation
Washington, D.C., April 17, 1996

Key Local Competition Issues Part I (novice)
Key Local Competition Issues Part II (advanced)
with Mark Long
National Cable Television Associations' 1995 State Telecommunications
Conference
Washington, D.C., November 2, 1995

Competition in the Local Loop
New York State Telephone Association and Telephone Association of New
England Issues Forum
Springfield, Massachusetts, October 18, 1995

Compensation in a Competitive Local Exchange
National Association of Regulatory Utility Commissioner Subcommittee on
Communications' Summer Meetings
San Francisco, California, July 21, 1995

*Fundamentals of Local Competition and Potential Dangers for Interexchange
Carriers*
COMPTEL 1995 Summer Business Conference
Seattle, Washington, June 12, 1995

Diagram 1

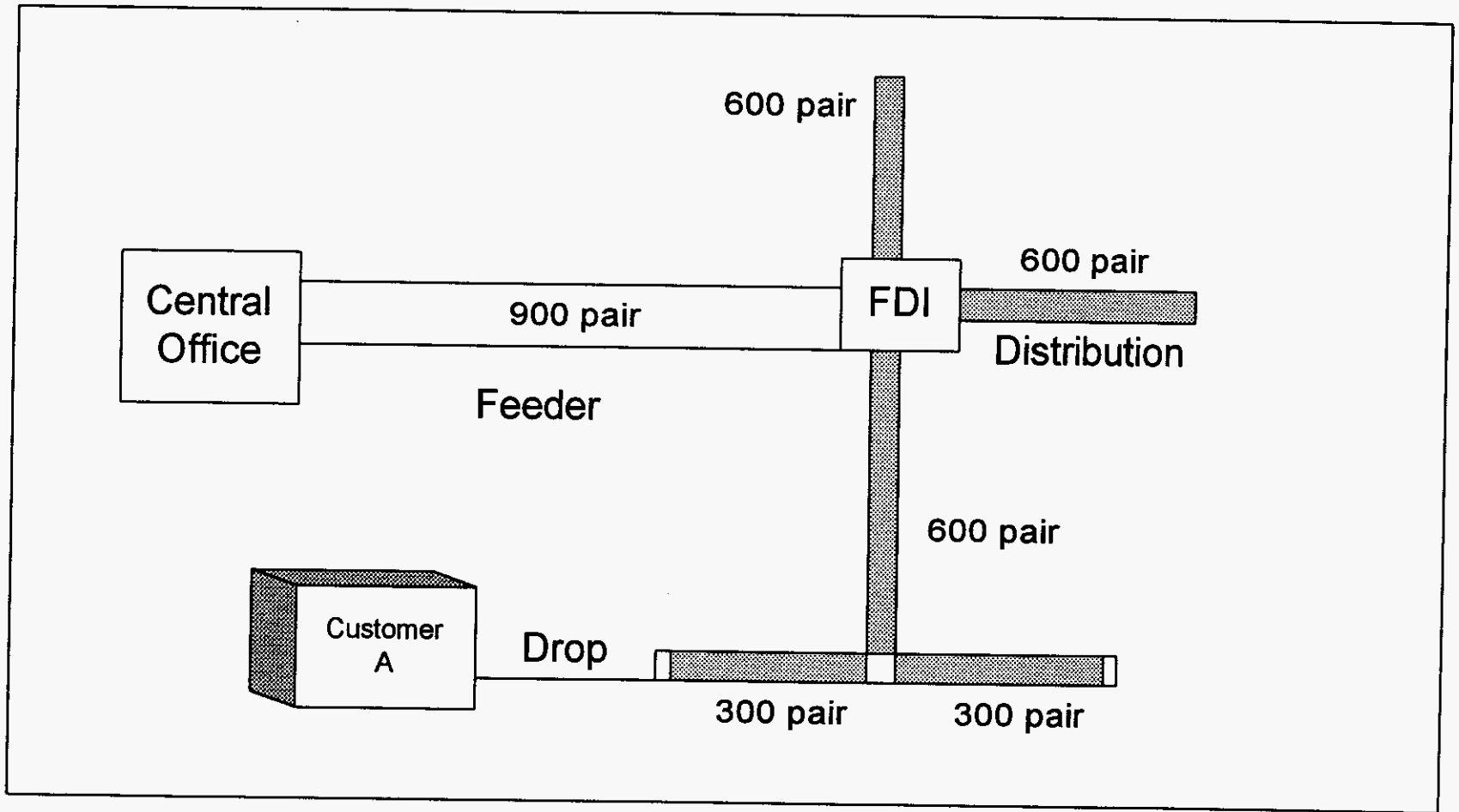
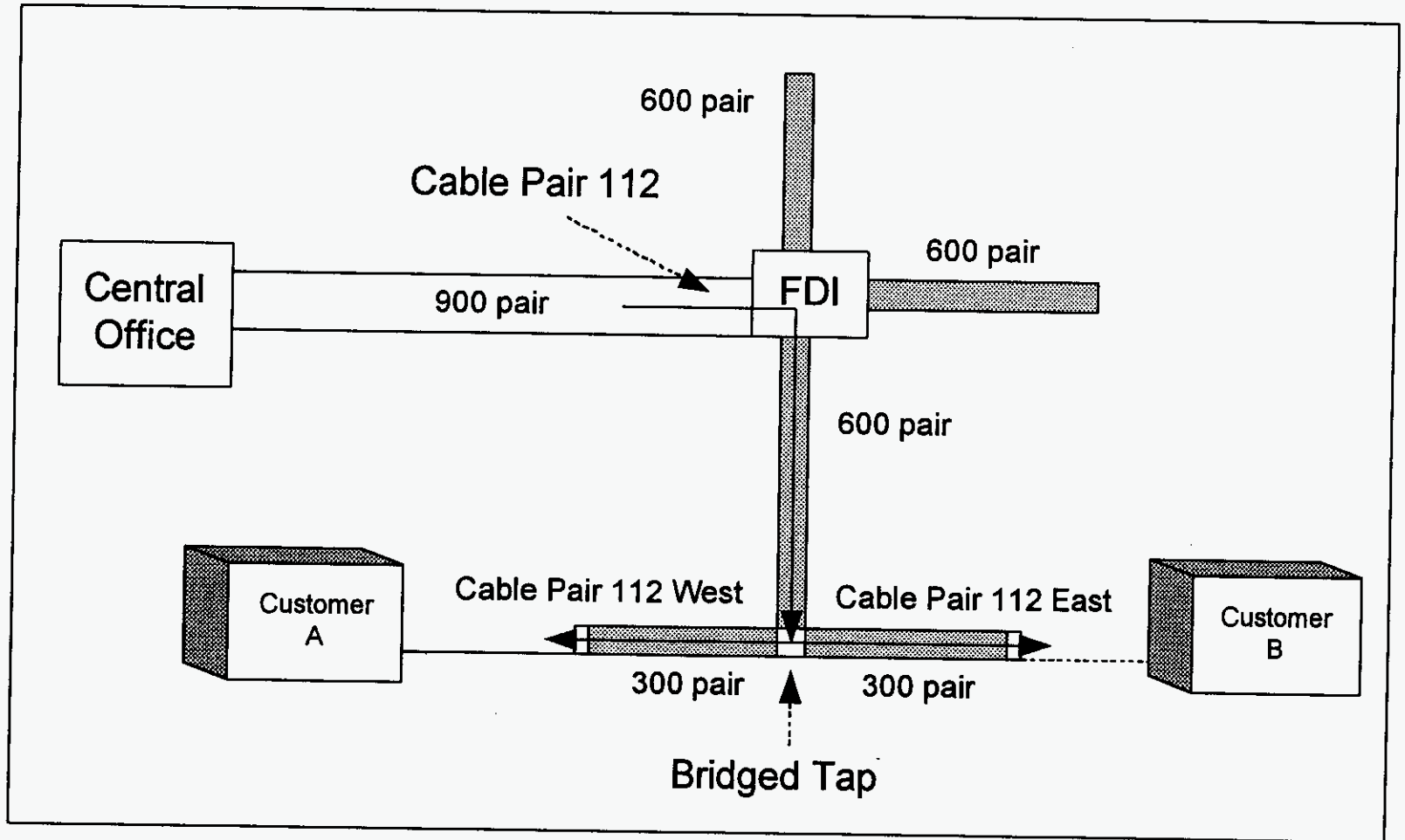


Diagram 2



CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a true and correct copy of BlueStar Networks, Inc.'s foregoing Direct Testimony and Exhibits of Michael Starkey has been furnished by (*) hand delivery this 25th day of January 2000, to the following:

(*)Donna Clemons
Florida Public Service Commission
Division of Legal Services
2540 Shumard Oak Boulevard
Gunter Building, room 370
Tallahassee, Florida 32399-0850

(*)Phil Carver
(*)Michael Goggin
c/o Nancy Sims
BellSouth Telecommunications, Inc.
150 South Monroe Street, #400
Tallahassee, Florida 32301-1556



Vicki Gordon Kaufman
McWhirter, Reeves, McGlothlin, Davidson,
Decker, Kaufman, Arnold & Steen, P.A.
117 South Gadsden Street
Tallahassee, Florida 32301
850-222-2525 (telephone)
850-222-5606 (facsimile)

Henry C. Campen
John A. Doyle
Parker, Poe, Adams & Bernstein, LLP
First Union Capitol Center
150 Fayetteville Street Mall, Suite 1400
Raleigh, North Carolina 27602
919-828-0564 (telephone)
919-834-4564 (facsimile)

Attorneys for BlueStar Networks, Inc.