Exhibit No.:
Issue(s): *Article XVIII (xDSL); Article XIII (OSS)*
Witness: *Michael Elford*
Type of Exhibit: *Direct Testimony*
Sponsoring Party: *CenturyTel of Missouri, LLC and Spectra Communications Group, LLC d/b/a CenturyTel*
Case No.: *TO-2006-0299*
Date Testimony Prepared:
March 21, 2006

DIRECT TESTIMONY

OF

MICHAEL L. ELFORD

ON BEHALF OF
CENTURYTEL OF MISSOURI, LLC AND SPECTRA COMMUNICATIONS GROUP, LLC d/b/a CENTURYTEL

CASE NO. TO-2006-0299

OF THE STATE OF MISSOURI

PETITION OF SOCKET TELECOM, LLC FOR COMPULSORY ARBITRATION OF INTERCONNECTION AGREEMENTS WITH CENTURYTEL OF MISSOURI, LLC AND SPECTRA COMMUNICATIONS, LLC PURSUANT TO SECTION 252(b)(1) OF THE TELECOMMUNICATIONS ACT OF 1996	)))))))	**CASE NO. TO-2006-0299**

STATE OF LOUISIANA

PARISH OF OUACHITA

AFFIDAVIT OF MICHAEL L. ELFORD

I, Michael L. Elford, of lawful age and being duly sworn, state:

1. My name is Michael L. Elford. I am presently a Director – Network Support Centers for CenturyTel Service Group, LLC.

2. Attached hereto and made a part hereof for all purposes is my Direct Testimony.

3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Michael L. Elford

Subscribed and sworn to before this 20th day of March, 2006.

Susan Putman
Notary Public

My Commission expires: upon death

Susan Putman
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DIRECT TESTIMONY OF MICHAEL L. ELFORD

ON BEHALF OF CENTURYTEL OF MISSOURI, LLC AND SPECTRA COMMUNICATIONS GROUP, LLC d/b/a CENTURYTEL

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Michael L. Elford. My business address is 100 CenturyTel Drive, Monroe, Louisiana 71203.

Q. ON WHOSE BEHALF ARE YOU SUBMITTING DIRECT TESTIMONY?

A. I am submitting direct testimony on behalf of CenturyTel of Missouri, LLC and Spectra Communications Group, LLC, collectively referred to herein as "CenturyTel."

I. BACKGROUND

Q. BY WHOM ARE YOU EMPLOYED AND WHAT IS YOUR POSITION?

A. I am employed by CenturyTel Service Group, L.L.C., a subsidiary of CenturyTel, Inc. CenturyTel Service Group, LLC. provides many management and accounting functions for subsidiaries of CenturyTel, Inc., including CenturyTel of Missouri, LLC. and Spectra Communications Group, LLC. I am presently employed by CenturyTel as Director – Network Support Centers.

Q. WHAT ARE YOUR RESPONSIBILITIES WITHIN CENTURYTEL SERVICE GROUP AS DIRECTOR – NETWORK SUPPORT CENTERS?

A. As Director of Network Support Centers, I support a team that is responsible for 24x7 monitoring and primary technical support for TDM, SONET, ATM, DSLAM, Ethernet, Frame, and IP technologies. My team is also responsible for network traffic analysis, translations, and database administration.

Q. HAVE YOU EVER TESTIFIED BEFORE ANY REGULATORY AGENCY?

A. No.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK-RELATED TRAINING.

A. I graduated from Louisiana Tech University in 1988 with a Bachelor of Science Degree in Petroleum Engineering. I began my career with CenturyTel in 1989 as a Network Planning Engineer in the Mobile Communications Group. There, I held a variety of engineering positions and was responsible and for the design and build out of CenturyTel's Cellular & PCS networks. In 2000, I was promoted to Director of Engineering and Construction for CenturyTel's Wireline & Wireless Networks. During my tenure in this position, my team was responsible Capital Planning, Contract Administration, Engineering Standards, Engineering Policies and Procedures, Hardware Evolution, and CALEA Compliance. During that time period, my team worked with Regional Engineering to introduce DSL capability across our network. In 2002, I became CenturyTel's Corporate Director of Operations. While in that position, my team was responsible for Inside and Outside Plant Audits, Policies & Procedures, Safety & Environmental, and Technical Training. In late 2004, I became the Director – Network Support Centers. My current team is responsible for our 24x7 Network Support centers where we provide surveillance, hardware support, and software support for CenturyTel's TDM, ATM, Frame, and IP networks. My team is responsible for all manual ATM programming for new xDSL orders and proactively responds to ATM, Frame, & DSLAM network events. My DSL Support Team also provides

primary technical support for field technicians on any issues associated with ATM, Frame, or DSLAM equipment

II.
PURPOSE OF TESTIMONY

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. In my testimony, I will address certain disputes between the parties related to the terms and conditions to be incorporated into the Agreement for the provisioning of xDSL loops and subloops. All of these issues arise under Article XVIII of the Agreement. By way of general summary, my testimony will address CenturyTel's position associated with the following: use of non-standard xDSL-based technology; xDSL loop length; the process that should apply if CenturyTel rejects a Socket order for an xDSL loop or subloop; technical issues related to the rate structure for line conditioning, issues related to the process for supplementing an order for line conditioning; the cost of shielded cross connects; CenturyTel's spectrum management policies; and other discrete issues related to the ordering and provisioning of line conditioning.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. In Section III below, I will address those disputed issues related primarily to xDSL matters, including line conditioning, arising out of the parties' negotiation of Article XVIII. To that end, I will testify about subject matters or general issues, and I will specifically identify the disputed issues and/or specific contract provisions that are affected by the disputed subject matter or general issue.

In Section IV below, I will address Socket's demand for electronic access to OSS as it relates to xDSL "loop qualification" and/or access to CenturyTel's

loop makeup information. This testimony supplements that of Maxine Moreau, who testifies more extensively about Article XIII (OSS).

III.
ARTICLE XVIII DISPUTED ISSUES

Q. WITH RESPECT TO THE PARTIES' DISPUTES IN ARTICLE XVIII, ARE YOU ADDRESSING ALL ASPECTS OF ALL ISSUES THAT REMAIN IN DISPUTE BETWEEN THE PARTIES?

A. No. I will address those xDSL issues, including line conditioning issues, that pertain primarily to operational and technical matters. CenturyTel witness Ted Hankins also will address issues related to xDSL rates and/or pricing, including the rate structure and pricing associated with line conditioning.

GENERAL ISSUE: Should CenturyTel be required to permit Socket to deploy "non-standard" xDSL technology in CenturyTel's network? [Issues 2 (Sec. 2.7), 3 (Sec. 3.3), 4 (Sec. 4.5 & 4.6), 10 (Sec. 10.3 & 10.6)]

Q. WHAT IS THE BASIS OF THE PARTIES' DISPUTE IN ISSUES 2 (SEC. 2.7), 3 (SEC. 3.3), 4 (SEC. 4.5 & 4.6) AND 10 (SEC. 10.3 & 10.6)?

A. Socket has proposed numerous contract provisions that would give it the unilateral and unqualified right to deploy "non-standard xDSL-based technology" in CenturyTel's network. Indeed, Socket's proposed definition of "non-standard xDSL-based technology" (Sec. 2.7), clearly identifies that such technology is different from the other technologies that the FCC has deemed presumptively acceptable for deployment. (I will further discuss technology that is presumed acceptable for deployment below.) Moreover, Socket's proposed definition actually states that the deployment of such "non-standard" technology is "allowed" and "encouraged" under the Agreement. CenturyTel disagrees with Socket that it should be permitted, much less encouraged, to deploy "non-

standard" xDSL technology in CenturyTel's network, in part, because allowing Socket to use CenturyTel's network as its own personal laboratory unnecessarily places CenturyTel's customers' services at risk. Socket should be permitted to deploy only "standard" xDSL technologies and/or xDSL technologies that are "presumed acceptable" for deployment under the FCC's advanced services rules.

Q. WHAT IS CENTURYTEL'S POSITION ON THE USE OF NON-STANDARD XDSL TECHNOLOGY AND EQUIPMENT IN ITS NETWORK, AND WHY?

A. CenturyTel does not deploy or support the use of non-standard xDSL technology or equipment within its network. Since CenturyTel does not deploy or support such non-standard xDSL technology or equipment, CenturyTel should not be required to permit Socket to do so. The installation of non-standard xDSL equipment risks generating "crosstalk interference" and degrading the service of existing customers served via the same cable—in other words, interfering with the service of other customers served by loops contained within the same binder group (a grouping of pairs bound together within the serving cable) as Socket's loop.

Crosstalk interference is unwanted noise that is electrically coupled into other metallic cable pairs within a multi-paired copper telecommunications cable (e.g., other cables in the same binder group). Such crosstalk interference emanates from the offending cable and unacceptably degrades the services provided over other pairs within close proximity in the binder group. The likelihood and extent of crosstalk interference increases with higher power levels, higher frequencies and exposure ("exposure" is a measure of the proximity of pairs within the cable and the length over which the pairs are in proximity).

Non-standard equipment that transmit at power levels higher than standard at given frequencies will cause crosstalk interference. If Socket is permitted to deploy non-standard xDSL technologies, it could conceivably deploy non-standard equipment to support those technologies that have higher non-standard power and frequency outputs; thus, generating interference that will impact the services of other customers served by copper pairs within the same binder group.

Q. WHY IS IT IMPORTANT THAT CENTURYTEL AND OTHER CARRIERS CONNECTED TO CENTURYTEL'S NETWORK USE ONLY "STANDARD" XDSL TECHNOLOGIES?

A. Standardized DSL equipment uses measurements of crosstalk and other noise on the loop to determine operational behavior on the loop. Higher than standard power levels, or sudden changes in noise spectrum or intensity will degrade standard based DSL, which is what CenturyTel currently deploys within its network.

All equipment utilizing CenturyTel's network should meet the ANSI T1.417 issue 2 Spectrum Management standard as a basis loop system, legacy system, a specified spectrum management class or by independent evaluation of the proposed technology using method B as described in Annex A of the standard. All non-standard equipment should exhibit constant power spectral density (PSD) in both upstream and downstream directions independent of the data being transmitted. The stationary PSD requirement also should be verified using section 6.4.3 of the ANSI T1.417-2003, "Spectrum Management for Loop Transmission Systems." This ANSI T1.417 standard was developed to assist carriers in creating an environment where multiple technologies can co-exist. CenturyTel's use of equipment meeting this standard, and exclusion of equipment

not meeting this standard, helps to ensure that multiple services can co-exist in the same binder group.

Q. WOULD SOCKET BE PREJUDICED IF THE COMMISSION DETERMINES THAT CENTURYTEL IS NOT REQUIRED TO PERMIT SOCKET TO DEPLOY "NON-STANDARD" XDSL TECHNOLOGY ON CENTURYTEL'S NETWORK?

A. No. CenturyTel acknowledges that the FCC encourages the deployment of advanced services loop technology. To that end, the FCC developed rules that permit a CLEC like Socket to deploy on CenturyTel's network xDSL technology that is "presumed acceptable," even if CenturyTel does not deploy such technology itself. Importantly, CenturyTel has agreed with Socket to incorporate terms into the Agreement that reflect these rules. Specifically, the FCC's rules provide that an xDSL technology is "presumed acceptable" for deployment in CenturyTel's network if that technology: (1) complies with existing industry standards; (2) is approved by an industry standards body, the FCC, or any state commission; or (3) has been successfully deployed by any carrier without significantly degrading the performance of other services. *See* 47 C.F.R. § 51.230(a). Moreover, if a CLEC's xDSL technology qualifies under this rule as "presumed acceptable," an ILEC may not deny the CLEC's request to deploy it without demonstrating to the state commission that its deployment will significantly degrade the performance of other advances services technologies or voice services. *See* 47 C.F.R. § 51.230(b). These rules, and others related to them, are reflected in the following terms of the parties' Agreement, and they are not in dispute: Article XVIII: Sec. 2.6 (definition of "presumed acceptable"); Sec. 3.4, Sec 3.4.1 and Sec. 3.5. Therefore, even if the Commission rejects

Socket's attempt to require CenturyTel to permit unrestrained deployment of non-standard xDSL technology, the Agreement still provides Socket with the ability to deploy a very broad array of xDSL technologies, including technologies that are not currently deployed in CenturyTel's network. Moreover, to the extent Socket wants to deploy a non-standard xDSL technology, these rules, which have now been incorporated into the parties' Agreement, provide Socket with a mechanism for qualifying such technology as a technology "presumed acceptable for deployment."

Q. DOES CENTURYTEL'S POSITION PROMOTE THE DEPLOYMENT OF ADVANCED SERVICES LOOP TECHNOLOGIES?

A. Yes. The undisputed contract terms mentioned above, which have been incorporated into the parties' Agreement, provide Socket with a mechanism or process for qualifying a "non-standard" xDSL technology as a technology that is "presumed acceptable" for deployment under the Agreement. Once so qualified, CenturyTel has agreed to provision xDSL-capable loops to support the new technology. As I said above, Socket can qualify a "non-standard" technology as a technology "presumed acceptable" for deployment by demonstrating that the technology (1) complies with industry standards, (2) is approved by an industry standards body, the FCC or any state commission, or (3) has been successfully deployed by another carrier without significantly degrading the performance of other services. Socket, however, should not be permitted in this Agreement to deploy a new or non-standard xDSL technology until it has qualified that technology as "presumed acceptable for deployment."

I also would like to point out that CenturyTel has agreed to reasonably assist Socket in developing "new" xDSL technology. For example, CenturyTel has agreed, in Sections 4.5.1 and 4.5.2, which are not in dispute, to reasonably cooperate with Socket in the testing and deployment of new xDSL technologies, which cooperation may include referring testing of such technology to a third-party laboratory for evaluation. With this assistance, if Socket can demonstrate to CenturyTel and/or the Commission that the new or non-standard xDSL technology will not significantly degrade other advanced or voice services, CenturyTel will provision loops or subloops for Socket's deployment of such new technologies. Based on these contractual commitments, even if the Commission rejected Socket's proposal for unlimited and unchecked deployment of "non-standard" xDSL technologies, Socket would not be prejudiced in its ability to deploy "new" xDSL technologies, or to qualify non-standard xDSL technologies as technologies "presumed acceptable" for deployment under the FCC's advanced services rules.

Q. WITH RESPECT TO SOCKET'S PROPOSED SECTION 4.5, DOES CENTURYTEL DISPUTE THAT SOCKET MAY DEPLOY A NEW OR NON-STANDARD XDSL TECHNOLOGY WHERE IT DEMONSTRATES TO THE COMMISSION THAT THE LOOP TECHNOLOGY WILL NOT SIGNIFICANTLY DEGRADE THE PERFORMANCE OF OTHER ADVANCED SERVICES OR TRADITIONAL VOICE BAND SERVICES?

A. No. As I stated above, such a demonstration to the Commission—that a new or non-standard technology will not significantly degrade the performance of other advanced or voice services—is one the ways that Socket actually can qualify a technology as "presumed acceptable for deployment" under the FCC's rules and the terms of the parties' Agreement. CenturyTel's primary dispute with Socket's

proposed Section 4.5 is about "timing." As drafted, the provision is ambiguous on the point of whether Socket's demonstration to the Commission, and the Commission's approval of such technology, must occur before or after Socket seeks to deploy the new or non-standard technology on CenturyTel's network. To the extent it is clarified that the Commission must approve the new technology *before* Socket seeks to deploy it, CenturyTel could agree with the provision. Nevertheless, since the parties already have agreed to provisions addressing how xDSL technology is qualified as "presumed acceptable for deployment" elsewhere in the Agreement, and this provision appears to address only a piece of the broader process, the Commission should reject it as unnecessarily redundant and duplicative.

Q. DOES SOCKET'S PROPOSAL GO WELL-BEYOND THE REQUIREMENTS OF THE FCC'S ADVANCED SERVICES RULES?

A. Yes, they do. The FCC's rules in 47 C.F.R. §§ 51.230 – 233, which have been incorporated into the undisputed terms of the Agreement, establish a regime or process by which a CLEC can qualify a "non-standard" xDSL technology, or any technology really, as a technology presumed acceptable for deployment. In Rule 51.230(c), Socket bears the burden of demonstrating to the Commission that its proposed deployment of a technology meets the threshold for a technology "presumed acceptable" for deployment. Socket proposed contract terms—Sec. 2.7, Sec. 3.3, Sec. 4.5 , Sec. 4.6, Sec. 10.3 and Sec. 10.6—attempt to bypass this process and would require CenturyTel to permit the deployment of unproven, non-standard technology in its network without any prior assurance or demonstration that the technology will not significantly degrade the performance

of other advanced services or voice services provided to CenturyTel's customers. Socket's proposal should be rejected as it over-reaches the requirements of the FCC's advanced services rules and unnecessarily places CenturyTel's customers at risk. In addition, the rejection of Socket's "non-standard" technology proposal will not prejudice Socket because the Agreement already incorporates a method by which Socket may qualify a new or non-standard technology as on that this presumed acceptable for deployment, and CenturyTel even has agreed to reasonably cooperate with Socket in the testing and deployment of new xDSL technologies. However, the extent of CenturyTel's reasonable cooperation should not extend to allowing Socket to use CenturyTel's network as Socket's personal laboratory and CenturyTel's customers as Socket's guinea pigs.

GENERAL ISSUE: Should CenturyTel be able to reject Socket orders for xDSL-capable loops in excess of 18,000 feet in length? [Issues 2 (Sec. 2.2), 4 (Sec. 4.4), 6 (Sections 6.1 & 6.2.2) and 9 (Sec. 9.2)]

Q. WHAT IS YOUR UNDERSTANDING OF THE PARTIES' DISPUTE IN ISSUES 2 (SEC. 2.2), 4 (SEC. 4.4), 6 (SECTIONS 6.1 & 6.2.2) AND 9 (SEC. 9.2)?

A. In several provisions of this Article, Socket has proposed language requiring CenturyTel to provide xDSL-capable loops in excess of 18,000 ft. in length and/or limiting CenturyTel's ability to reject a Socket order for an xDSL loop based on loop length. On the other hand, CenturyTel has proposed language in several places providing that it will not provide xDSL-capable loops in excess of 18,000 ft., and otherwise reserving its right to object to an xDSL-capable loop order on the basis of loop length. However, CenturyTel believes that this dispute actually is more nuanced than the parties' competing proposals would suggest.

I should clarify that CenturyTel does not object to provisioning Socket xDSL loops in excess of 18,000 ft. to the extent Socket agrees to only deploy standard xDSL technologies. However, if Socket is permitted to deploy "non-standard" xDSL technology (without first qualifying such technology as "presumed acceptable for deployment"), CenturyTel should retain the right to deny Socket's request for such loops in excess of 18,000 ft. Thus, CenturyTel's position on this issue is largely dependent on the resolution of the "non-standard" xDSL technology issue addressed immediately above.

Q. WHY SHOULD CENTURYTEL NOT BE REQUIRED TO PROVIDE XDSL LOOPS IN EXCESS OF 18,000 FT. IF SOCKET IS PERMITTED TO DEPLOY "NON-STANDARD" XDSL TECHNOLOGY?

A. If Socket is permitted the right to deploy non-standard xDSL technology under the Agreement, the associated equipment it may use to provide xDSL service (particularly if it is a higher speed xDSL service) over a loop that exceeds 18,000 ft. in length almost certainly will require power and frequency outputs that exceed the standard. Generally, standard xDSL equipment is designed for use on loops not to exceed 18,000 ft. In simple terms, propagating an xDSL signal a longer distance—e.g., over 18,000 ft.—will require non-standard xDSL equipment with higher than standard power and frequency outputs. These higher outputs interfere with other circuits in the binder group, causing increased crosstalk and noise and otherwise degrading the service of other customers.

Q. IS CENTURYTEL'S POSITION CONSISTENT WITH ITS OWN OPERATIONAL PRACTICE?

A. Yes. CenturyTel's internal practice is to only serve xDSL customers up to, but not in excess of, 18,000 feet from the serving DSLAM with standard xDSL

technology. xDSL provisioning to this distance, using standard xDSL technologies and equipment, minimizes interference with other pairs within the binder group, ensures reliable xDSL service, and reduces the need for order-specific spectral engineering in a rural environment. CenturyTel's customers that request xDSL service are usually served by the same loop that provides their POTS service. The careful selection of standardized xDSL equipment and the policies established by CenturyTel Engineering help to preserve the compatibility of services within the same cable or binder group. CenturyTel's experience with its practices as a xDSL carrier serving predominantly rural areas has proven that order-specific spectrum management is currently not required to preserve service compatibility, so long as standard xDSL technologies and equipment are used. The introduction to CenturyTel's network of non-standard xDSL technology and the non-standard equipment needed to provision xDSL service on a loop in excess of 18,000 ft. will greatly increase the cost of xDSL service for CenturyTel by creating the requirement for order-specific engineering. It also will greatly increase the amount interference and service degradation experienced by other customers served by the network.

Q. EXPLAIN THE IMPORTANCE OF THE RELATIONSHIP BETWEEN THE DSLAM, ITS DISTANCE FROM THE CUSTOMER AND THE LENGTH OF THE LOOP TO THAT CUSTOMER.

A. The xDSL network typically consists of an xDSL modem at the customer premise, a twisted-pair copper loop, a Digital Subscriber Line Access Multiplexer (DSLAM), and a variety of switches and routers that are used to access the Internet. The xDSL modem that is located at the customer's premise is the connection for the customer to connect his/her home computer or home network

to the xDSL network. The xDSL modem signal is passed to a splitter where it is combined with the customer's POTS signal and it traverses a distance of up to 18,000 feet to a second set of splitters that are collocated with the serving DSLAM. The DSLAM splitter separates the xDSL signal from the POTS signal. The POTS signal is passed to the serving office or remote which also is collocated with the DSLAM. The xDSL signal is passed to the DSLAM which multiplexes the signals of several xDSL customers together and passes the aggregated traffic to a serving ATM, Frame, or Ethernet switch. The traffic is then authenticated through a Broadband Remote Access Server (BRAS) and is passed to the Internet. The primary factor that limits potential xDSL speed is the distance between the customer and the serving DSLAM. If Socket is permitted to provision xDSL services in excess of 18,000 ft., the critical distance between the customer and the serving DSLAM likely will increase, requiring Socket to use equipment with higher power and frequency output to provision service. As I stated above, the use of such non-standard equipment will cause significantly increase instances of interference and service degradation with the services provided to other customers served by the network.

Q. HOW SHOULD THE COMMISSION RULE ON THIS ISSUE?

A. If the Commission determines that Socket should not be permitted to deploy "non-standard" xDSL technology without first qualifying such technology as "presumed acceptable for deployment" under the FCC's rules (as incorporated into the Agreement), then CenturyTel would have no issue with provisioning Socket xDSL loops greater than 18,000 ft. in length. However, if the Commission determines that Socket should be permitted to deploy non-standard xDSL

technology, the Commission should minimize the service interruption and degradation impact on other customers served by CenturyTel's network by allowing CenturyTel to provide Socket with xDSL-capable loops of only 18,000 ft. or less in length.

ISSUE 4 (Sec. 4.4): If CenturyTel rejects a Socket request for an xDSL-capable loop or subloop, should CenturyTel be required to nevertheless provision the loop or subloop pending a dispute resolution process?

Q. **IF CENTURYTEL REJECTS SOCKET'S REQUEST FOR AN XDSL LOOP OR SUBLOOP, WHY WOULD IT BE UNREASONABLE, AND SOMETIMES IMPOSSIBLE, TO PROVISION THE LOOP OR SUBLOOP ANYWAY WHILE THE PARTIES ENGAGE IN THE DISPUTE RESOLUTION PROCESS?**

A. If CenturyTel denies Socket's request for an xDSL-capable loop or subloop, CenturyTel already has agreed to provide to Socket the reason for the denial within two (2) business days. However, Socket's demand that, notwithstanding any denial, CenturyTel provision the loop or subloop anyway pending resolution of the Dispute Resolution process ignores reality. If CenturyTel denies the request because of a lack of facilities, there would be no loop to provision during dispute resolution. For example, CenturyTel may deny the request because the Socket customer is served behind an Integrated Digital Loop Carrier (IDLC), and there is no Universal DLC capability or spare copper facility available. In that instance, there would be no technically feasible way—short of building new facilities for Socket, which the law does not require CenturyTel to do—to provision the loop. Thus, there would be no loop to continue provisioning if Socket initiates dispute resolution over CenturyTel's denial.

Socket's proposed language overreaches and does not acknowledge that there are situations where CenturyTel simply cannot provision a requested xDSL loop or subloop while the parties engage in dispute resolution. Socket's overly broad language then would place CenturyTel in the position of being in breach of the contract in instances when it is impossible or technically infeasible to provision the requested xDSL loop or subloop. The last sentence of Socket's proposed Sec. 4.4, therefore, is entirely unreasonable and does not account for reality.

Q. HOW DOES CENTURYTEL PROPOSED TO DEAL WITH DISPUTES ARISING OUT OF CENTURYTEL'S REJECTION OF REQUEST FOR AN XDSL LOOP OR SUBLOOP?

A. The parties have spent a great deal of time negotiating and finalizing their agreement on the Dispute Resolution provisions of the Agreement. Under CenturyTel's language, the parties would address any such dispute in the agreed-to Dispute Resolution process. There may be instances when CenturyTel could continue to provision the requested xDSL loop or subloop during the pendency of the dispute resolution process, but those instances are subject to what facilities are currently available in CenturyTel's network and what is technically feasible. Socket's unreasonable proposal, on the other hand, makes no allowance for the same, and the Commission should reject it and adopt CenturyTel's proposed language in Sec. 4.4.

ISSUE 6 (Sections 6.2.1 & 6.2.2) & ISSUE 9 (Sec. 9.2): Should a separate charge apply to line conditioning requested by Socket on xDSL loops over 12,000 ft. in length?

Q. WILL YOU EXCLUSIVELY BE ADDRESSING THIS ISSUE?

A. No. I will address certain technical and/or network-related issues that support CenturyTel's position that a separate line conditioning charge should apply on xDSL loops over 12,000 ft. in length. However, CenturyTel's witness, Ted Hankins, will address the rate structure and other pricing issues applicable to line conditioning charges.

Q. WHAT IS YOUR UNDERSTANDING OF THE DISPUTE IN ISSUE 6 (SECTIONS 6.2.1 & 6.2.2) AND ISSUE 9 (SEC. 9.2)?

A. Socket basically proposes that no line conditioning charge should apply to xDSL-capable loops under 17,500 ft. in length. In other words, as I understand it, Socket's language states that the costs of line conditioning on such loops already is included in the monthly recurring charge for loop. CenturyTel's position is that no line conditioning charge should apply to xDSL-capable loops under 12,000 ft. Separate line conditioning charges should apply to such loops that are 12,000 ft. or more in length. The line conditioning charges at issue here for the removal of excessive bridged tap and load coils.

Q. WHY IS SOCKET'S DEMAND—THAT NO SEPARATE LINE CONDITIONING CHARGES SHOULD APPLY ON XDSL LOOPS UNDER 17,500 FT. IN LENGTH—NOT ACCEPTABLE TO CENTURYTEL?

A. I can answer this question only in part, and only as it relates to the engineering of CenturyTel's network. It should be noted that Socket proposes the same line conditioning "rate structure" used by AT&T-MO (fka SBC-MO). However, CenturyTel differs from the RBOCS regarding loop lengths due to the rural nature of our business. CenturyTel is much more likely to have treatment (e.g., bridged

tap, load coils and repeaters) on even recently shortened loops. Treatment such as load coils or conditions such as bridged tap are common in our network.

CenturyTel focuses on providing telephone service to rural America. Due to the rural nature of the areas that CenturyTel serves, cable length is considerably longer than would be found in an urban area. In order to preserve voice quality, outside plant routes greater than 18,000 ft. are typically loaded at 3,000 ft., and then every 6,000 ft. thereafter. The use of the cable plant in Missouri has evolved over time. Much of the plant consists of cable routes greater than 18,000 ft., and those routes have retained their loading and bridged tap. Because of this, CenturyTel has found that extensive loop conditioning is required for customers who request xDSL service and are located between 12,000-18,000 ft. of an xDSL-capable office or remote.

Because of the way CenturyTel's network is engineered, CenturyTel must conduct more extensive loop conditioning before the loop is capable of providing xDSL service. Therefore, CenturyTel is entitled to recover the costs of its more extensive line conditioning efforts and costs on loops over 12,000 ft.

ISSUE 6 (Sec. 6.6): Should Section 6.6 of Article XVIII specify, when Socket requests "to add or modify" a pending line conditioning order, that "no additional service order charges shall be assessed"?

Q. WHAT IS YOUR UNDERSTANDING OF THE DISPUTE IN ISSUE 6 (SEC. 6.6)?

A. In Section 6.6, Socket proposes language that will potentially allow it to avoid additional charges when CenturyTel performs additional work at Socket's request. According to Socket's unreasonable proposed language, if Socket already has submitted an order for line conditioning, it may add to or modify that order

without being subject to any additional service order charges. From CenturyTel's perspective, if CenturyTel has already acted under the pending order to conduct even some of the line conditioning requested by Socket, and Socket's request to add additional line conditioning or to modify that line conditioning, requires additional work to be performed or re-performed, the additional request or modification should be considered a separate order that is subject to additional service order charges.

Q. WHY SHOULD THE COMMISSION ACCEPT CENTURYTEL'S PROPOSED LANGUAGE IN SEC. 6.6 AND REJECT SOCKET'S PROPOSED LANGUAGE?

A. Socket's language is overly broad and unreasonably assumes that it requires a mere administrative input to add to or modify a pending line conditioning order. However, as I testified above, Socket's language does not acknowledge the possibility that CenturyTel already may have undertaken significant line conditioning activities for Socket by virtue of the pending order and that that work activity may be substantially complete prior to the time that Socket submits its additional or modified line conditioning request. If that is the case, then the substantially complete pending order and the subsequent additional/modified order should be treated as separate orders subject to separate service order charges. Sitting here today, CenturyTel cannot determine whether a Socket request to add to or modify a pending order will require CenturyTel to re-perform a significant amount of additional line conditioning work, or significantly add to line conditioning work that is substantially complete. However, CenturyTel's proposed language reasonably accounts for the possibility, and the Commission should accept CenturyTel's proposed language in Sec. 6.6. Specifically,

CenturyTel's language specifies that, where Socket submits a subsequent order to add to or modify a pending line conditioning order, additional service order charges and line conditioning charges "may" apply. CenturyTel's language says that such charges "may" apply—for example, in those situations identified above that would require CenturyTel to re-perform work or add to work that is substantially complete. However, CenturyTel's proposed language is flexible enough that where Socket's subsequent request to add to or modify a pending can be accommodated before any actual line conditioning work is undertaken, no additional service order charge would apply in that instance. CenturyTel's proposed language accounts for the real-world realties and it is reasonable.

ISSUE 6 (Sec. 6.7): Should Section 6.7 of Article XVIII specify that, to the extent Socket requests from CenturyTel a "shielded cross-connect" for Central Office wiring, that such shielded cross-connect is "subject to applicable charges"?

Q. WHAT IS YOUR UNDERSTANDING OF THE PARTIES' DISPUTE IN ISSUE 6 (SEC. 6.7)?

A. In Section 6.7, the parties have agreed to the following language:

> 6.7 Socket, at its sole option, may request shielded cross-connects for central office wiring.

Socket disputes CenturyTel's proposal to insert the phrase "subject to applicable charges" at the end of the agreed-to language. CenturyTel proposes to include this language to clarify that, while Socket is entitled to order shielded cross-connects, it is not entitled to obtain them for free. Socket may argue that the price of a shielded cross-connect should be the same as for a standard cross-connect. However, if that is Socket's argument, it is wrong. It requires more labor and

material to provide a shielded cross-connect and, therefore, the cost of a shielded cross-connect should be higher.

Q. CAN YOU DESCRIBE HOW THE LABOR AND MATERIAL USED TO PROVIDE A STANDARD CROSS-CONNECT IS DIFFERENT THAN THAT USED TO PROVIDE A "SHIELDED CROSS-CONNECT"?

A. Running a "shielded" 2-wire cross-connect requires the frame technician to perform one (1) more wire wrap than would be needed in a standard 2-wire cross-connect. A standard 2-wire cross-connect between the distribution frame horizontal and the distribution frame vertical requires the frame technician to perform 4 wire wraps and to pull cross-connect wire between the associated frame positions. The installation of a shielded cross-connect will require an additional wire wrap for the ground at the horizontal end and coordinated grounding (to the frame ground bar). The installation of a shielded cross-connect requires a total of 5 wire wraps and increases wire congestion at the protectors.

Q. WHY SHOULD THE COMMISSION ACCEPT CENTURYTEL'S PROPOSAL TO INSERT THE PHRASE "SUBJECT TO APPLICABLE CHARGES" IN SEC. 6.7?

A. I think there are two primary reasons why the Commission should accept CenturyTel's proposed language. First, if it is not made clear in the Agreement that CenturyTel provides shielded cross-connects "subject to applicable charges," Socket or other CLECs operating under these terms, may attempt to interpret the Agreement as requiring CenturyTel to provide shielded cross-connects free-of-charge. Even though that interpretation would be contrary to CenturyTel's right under the FTA to obtain just and reasonable rates for its services (*See* § 252(c)(2) & (d)), the omission of CenturyTel's reasonably proposed language would invite such an unreasonable interpretation. Second, to the extent CenturyTel does not

currently have an established price for a shielded cross-connect, there are undisputed terms in the parties' Agreement that will allow them to arrive at an appropriate price. Specifically, Section 47.0 of Article III addresses "TBD" pricing and says that the parties will meet and confer to establish an appropriate charge where none is contained in the Agreement. If the parties cannot agree on a price, the parties will use the tariffed rate for the most analogous service until a price is determined under the Dispute Resolution process.

ISSUE 10 (Sec. 10.2 & 10.3): Should Socket's onerous language regarding CenturyTel's "spectrum management" policies be incorporated into the Agreement?

Q. WHAT IS YOUR UNDERSTANDING OF THE DISPUTE IN ISSUE 10 (SECTIONS 10.2 & 10.3)?

A. The dispute in sections 10.2 and 10.3 are again centered around Sockets proposal to utilize non-standard xDSL technology within the CenturyTel network, and the impact of such non-standard technology on CenturyTel's spectrum management policies. Socket's proposed language essentially attempts to unduly restrict or limit CenturyTel's ability to manage its spectrum and binder groups, which is ironic given that Socket's demand to use non-standard xDSL technology may require such management. As I testified to above, CenturyTel opposes the use of non-standard technology and equipment due to its potential service impact on CenturyTel's customers, other CLECs, and special circuits. That notwithstanding, in CenturyTel's proposed Section 10.2, CenturyTel has proposed language that is virtually identical to the FCC's applicable rule, in which CenturyTel has agreed not to designate, segregate or reserve particular loops or binder groups for use solely by an particular advanced services loop technology.

However, consistent with the applicable FCC rule, CenturyTel's language also provides an exception for "loops on which a known disturber," as defined by the FCC, is deployed. Socket's language makes no such exception.

Q. WHAT DOES "SPECTRUM MANAGEMENT" MEAN?

A. Spectrum management is the engineering process of distributing services within a binder group and cable based upon the power level and frequencies utilized by each in an effort to ensure mutual compatibility. Poor spectrum management could lead to increased crosstalk interference resulting in reduced service quality within POTS, failure for special circuits, and reduced speeds for xDSL.

Q. WHY SHOULD THE COMMISSION REJECT SOCKET'S PROPOSED SECTIONS 10.2 & 10.3 AND ACCEPT CENTURYTEL'S PROPOSED SECTION 10.2?

A. Socket's language overreaches the FCC's requirements by unnecessarily restricting CenturyTel's ability to manage spectrum within a binder group. Indeed, Socket's language states that CenturyTel may not "implement, impose or maintain any spectrum management . . . or binder group management program." The addition of multiple broadband disturbers to a cable route will increase the need for the coordinated use of spectrum within the cable. CenturyTel must have the ability to implement a spectrum management and/or binder management policy for its cable routes in order to ensure service quality to its customers, CLECS utilizing the facilities, and for the special circuits that ride the route. CenturyTel's language appropriately tracks the FCC's rule in 47 C.F.R. § 51.232, which only prohibits CenturyTel from designating, segregating or reserving particular loops or binder groups "for use solely by any particular advanced services loop technology." Unlike Socket's proposed language, the rule does not

prohibit CenturyTel from having "any" management policies at all, and it does not prohibit CenturyTel from coordinating and managing its binder groups in a competitively neutral manner. CenturyTel will not use its spectrum management policies to intentionally interfere with Socket's or any carrier's deployment of DSL services. CenturyTel's spectrum management policy will be neutrally managed. But CenturyTel is not prohibited by applicable law from prudently and neutrally managing the spectrum in its binder groups, even if only to coordinate with other carriers in such a way as to reduce interference within the binder groups.

Moreover, Socket's language in Section 10.2 refers to an "LFACS" and "LEAD" database, which are terms that refer to AT&T or Bell-specific databases. As I understand it, "LFACS" refers to a Loop Facility Assignment Control System database, and "LEAD" refers to a Loop Engineering Assignment database. CenturyTel does not own, operate or use these specific databases. It is entirely inappropriate and unreasonable to adopt Socket's proposed Section 10.2 when Socket's proposed terms attempts to impose obligations on CenturyTel's use of databases it doesn't even own or use.

ISSUE 11 (Sec. 11.2): Should Section 11.2 of Article XVIII require CenturyTel to make "clean loops" and "clean subloops" available for all xDSL services and use by all xDSL providers, including Socket?

Q. WHAT IS YOUR UNDERSTANDING AS TO THE DISPUTE IN ISSUE 11 (SEC. 11.2)?

A. Socket purports to require CenturyTel to make a "clean loops" and "clean subloops" available for any xDSL service provider, including Socket. Presumably, this language purports to require CenturyTel to make available

conditioned, xDSL-capable loops in advance of any CLEC request for such a loop. CenturyTel disputes this provision because, as I stated above, CenturyTel's loops in excess of 12,000 ft. would require extensive line conditioning in order to make them "clean" out to 18,000 ft. CenturyTel is entitled under the FTA to recover its costs incurred in such conditioning.

Q. WHY SHOULD THE COMMISSION REJECT SOCKET'S PROPOSED SECTION 11.2?

A. First, applicable law does not require CenturyTel to make available "clean" loops and subloops for any carrier prior to a carrier actually requesting an xDSL-capable loop or subloop. Socket's demand simply overreaches the requirements of applicable law. Second, as I stated above, CenturyTel would incur significant costs in "cleaning" or conditioning loops over 12,000 ft., and CenturyTel is entitled to recover its costs for such conditioning under the FTA. It would not be able to do so if it pre-cleaned or pre-conditioned all or some of its loops before any carrier requested them. To the extent Socket's wants line conditioning, CenturyTel will provide it subject to applicable charges. Of course, if Socket requests an xDSL loop and a "clean loop" already is available, CenturyTel will make it available to Socket.

IV.
ARTICLE XIII (OSS) DISPUTED ISSUE RELATED TO "LOOP MAKEUP INFORMATION"

ARTICLE XIII JOINT ISSUE STATEMENT (OSS): Should the Agreement contain an Article addressing Operations Support Systems issues?

Q. WHAT IS THE PURPOSE OF THIS PORTION OF YOUR TESTIMONY?

A. Socket has demanded in its proposed Article XIII (OSS) that CenturyTel implement certain electronic access to OSS. To the extent that Socket is demanding access to Loop Makeup Information by means of an electronic system in the xDSL loop qualification process, my testimony is intended to demonstrate that this request unreasonable, unnecessary and prohibitively costly.

Q. WHAT HAS SOCKET DEMANDED WITH RESPECT TO ELECTRONIC INTERFACE OSS FOR THE XDSL LOOP QUALIFICATION PROCESS?

A. It is not exactly clear to CenturyTel what Socket's demands are with respect to electronic loop qualification. The parties have negotiated language on loop qualification that provides for a manual process "[u]ntil such time as access to Loop Makeup Information is available via an electronic interface[.]" The manual process is not in dispute between the parties. However, it appears that Socket is demanding, as part of its broader demand for full electronic OSS, electronic access to databases containing Loop Makeup Information. Loop Makeup Information, as set forth in the Agreement, may include: (a) actual loop length; (b) the length by gauge; (c) the presence of repeaters, load coils, or bridged taps; and where the information is available, (d) the approximate location, type, and number of bridged taps, load coils, and repeaters; and (e) the presence, location, type, and number of pair-gain devices, DLC and/or DAML.

Q. PLEASE DESCRIBE THE VARIOUS DATABASES CENTURYTEL USES TO ACCESS LOOP MAKEUP INFORMATION.

A. Unlike RBOCs that have developed and deployed, at great cost, specific loop qualification databases, CenturyTel has no single database serving as a repository for loop engineering records. CenturyTel has multiple databases and systems from which it gleans the information constituting Loop Makeup Information.

Specifically, CenturyTel relies on two primary databases or system applications to identify Loop Makeup Information—"MARTENS" and "StellarMap." "MARTENS," among other things, is a plant records database. It is not a "loop records" database, but it does contain some information regarding loops in CenturyTel's physical plant. However, it typically does not contain loop-specific records identifying the end-to-end engineering of a specific loop. For example, MARTENS would be able identify the presence of physical devices and/or cross-connects (including bridged taps, load coils and repeaters) on a circuit's route. It typically would not, for example, identify the loop length or loop gauge of the circuit. To identify the loop length and gauge, CenturyTel would access "StellarMap." StellarMap has a separate database that correlates to some of the information in MARTENS. As used in the manual loop qualification process, StellarMap presents a graphical representation of the overall network. It is not designed to provide customer-specific record information. The graphical representation that is does provide is not unlike a geographic map, but with graphical representations of loop segments and other outside plant. Using its link to certain MARTENS records, the StellarMap graphic can identify the number and location of physical devices and/or cross-connects on a circuit. In addition, CenturyTel can use StellarMap to identify loop gauge and to calculate the length of a loop to a customer. I say "calculate" because StellarMap does not provide the loop length per se, but rather the lengths of loop segments. Therefore, a CenturyTel engineer has to add up the length of the loop segments to determine the actual loop length. As shown above, a CenturyTel engineer would use both

MARTENS and StellarMap in a process to identify Loop Makeup Information, whether that information is need by CenturyTel or needed to respond to a request for such information by Socket.

CenturyTel also has developed a web-based tool, posted on CenturyTel's website and accessible to anyone who has access to the Internet, that "pre-qualifies" a customer for ADSL service. This web-based tool is the primary tool that CenturyTel uses to qualify its retail customers for ADSL service. The tool is available to anyone who has access to CenturyTel's website, including CenturyTel's own customers. The tool is linked to a database that is based on three primary data parameters—the customer's phone number, the distance of the customer from a serving office or remote terminal, and the location of CenturyTel's installed DSLAMs (either at a central office or remote terminal). When a telephone number is entered into the web tool, the customer or the CenturyTel representative, as the case may be, receives a "yes" or "no" response as to whether ADSL service is available for that customer based on the customer's location and his/her proximity to an installed DSLAM. If a customer requests DSL service and this "pre-qualification" process returns a "yes" response to the initiated query, CenturyTel will generate a "customer service request" to provision the ADSL service to the customer.

In some instances, the web-tool query does not return a "yes" or "no" answer, but rather a response indicating that the availability of DSL service to a particular customer must be qualified "manually." In those instances, CenturyTel must conduct a manual loop qualification process to determine whether DSL

service is available. This process may include research into Loop Makeup Information as contained in CenturyTel's records and databases.

Q. TO THE EXTENT SOCKET'S DEMANDS INCLUDE HAVING A REAL-TIME, ELECTRONIC INTERFACE TO THE DATABASES USED BY CENTURYTEL TO ACCESS LOOP MAKEUP INFORMATION, WHAT IS CENTURYTEL'S POSITION?

A. It my understanding, based on reports of negotiations with Socket, that Socket is under the impression that CenturyTel has and uses a "loop record" database for loop qualification. Apparently, Socket believes that CenturyTel purchased such a system or database when it purchased certain Verizon (f/k/a GTE) network assets in the state of Missouri. That simply is not the case. Rather, CenturyTel uses various resources to provide Loop Makeup Information on a loop, including the three different systems and/or databases discussed above.

With respect to CenturyTel's web-based tool used to allow CenturyTel's customers to determine for themselves whether ADSL service is available, the database used by that tool is the same database CenturyTel uses internally to "pre-qualify" its customers. Socket actually has real-time access to that tool today. Nothing prevents Socket from going to CenturyTel's website and querying the telephone number of a customer. The response provided will be a "yes," "no," or a response to the effect that the customer needs to be "manually" qualified. However, because the database only contains the location of CenturyTel's installed DSLAMs, its responses would be more relevant for Socket's resale customers who desire xDSL service. In other words, because the database supporting the tool does not contain the location of Socket's DSLAMs or the

location of customers from those DSLAMs, Socket could not rely on it to "pre-qualify" its UNE customers.

CenturyTel is not required to build a database or maintain a database that includes the location of Socket's DSLAMs or the distance between customers served by CenturyTel's network and Socket's DSLAMs. Those locations and distances are not part of the data that constitutes CenturyTel's Loop Makeup Information. Thus, in order to be able to rely on such a tool for its UNE customers, Socket would need to develop its own database, either on its own or with the assistance of a third party, similar to that developed by CenturyTel.

With respect to "MARTENS" and "StellarMap," I cannot say with certainty whether Socket demands an electronic interface to both systems and/or databases. However, since the full range of Loop Makeup Information is gleaned only from both systems, CenturyTel must assume that that is Socket's demand. Given the low order volume from Socket, and from CLECs generally in the state of Missouri, the costs of developing these systems with partitioned electronic access is prohibitively costly. These systems are proprietary commercial systems for which CenturyTel operates under licenses. Therefore, part of those costs must necessarily include the costs to Socket to obtain the necessary licenses. At bottom, these costs simply are not justified by Socket's order volume, particularly given that CenturyTel has agreed to provide Socket with requested Loop Makeup Information via a manual process within three (3) business days of Socket's request. Not only is this provisioning interval consistent with the time it takes CenturyTel's engineers to research such information for its own retail purposes, it

is a reasonable interval that allows Socket a meaningful opportunity to compete for customers. CenturyTel's parity obligations require nothing more.

Q. WHAT HAS CENTURYTEL AGREED TO PROVIDE SOCKET USING THE MANUAL LOOP QUALIFICATION PROCESS?

A. It should be noted that CenturyTel is not required to "qualify" a loop at a CLEC's request. Rather, as I understand the FCC's rules, CenturyTel's obligation is to provide the CLEC access to Loop Makeup Information so that the CLEC can evaluate for itself whether a particular loop is xDSL capable and/or requires line conditioning to make it so. *See* 47 C.F.R. § 51.319(g). To that end, CenturyTel has agreed to respond to Socket's request for Loop Makeup Information within three (3) business days of its request.

Q. DOES PROVIDING LOOP MAKEUP INFORMATION TO SOCKET WITHIN THREE (3) BUSINESS DAYS OF ITS REQUEST PROVIDE SUCH INFORMATION AT PARITY WITH HOW CENTURYTEL PROVIDES SUCH INFORMATION TO ITSELF?

A. Yes. To the extent CenturyTel is required to manually qualify a loop for its own customer, three (3) business days is a reasonable estimation of the amount of time it would take CenturyTel's engineering department to research and access the appropriate information for its own use. When a CenturyTel customer requests xDSL service, and CenturyTel is required to determine whether provisioning such service is possible through a manual loop qualification process, CenturyTel attempts to provision the service to the customer within about five (5) business days. Thus, CenturyTel endeavors to complete any manual loop qualification within about three (3) business days in order to have the service turned up for the customer in about five (5) business days.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.