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EXHIBIT NO:
ISSUE: POLICY
WITNESS: AREND
TYPE OF EXHIBIT:DIRECT TESTIMONY
SPONSORING PARTY COMPLAINT
CASE NO: XC-20030011

MISSOURI PUBLIC SERVICE COMMISSION
UTILITY OPERATION DIVISION

DIRECT TESTIMONY
OF

JAMES R. AREND

XC 2003 0011

Jefferson city, missouri
May 5, 2003

DIRECT TESTIMONY

OF

JAMES R AREND

IN

CASE NO. XC - 2003-0011

Q. Please state your name and give your business address.

A. My name is James R. Arend, President of Tri-Lakes Net, Inc. a corporation since 1996 and employs 9. I have owned and managed a lumber business for 25 years and was on the bank board of security Bank, Branson, Missouri for 20 years as vice president and chairman of the board. I got into this business with my son but due to other commitments it became necessary for him to terminate his employment therefore I have been operating Tri-Lakes Net, Inc. As president and owner for the past 4 years.

Q. Please describe the business, its function and all served.

A. Tri-Lakes Net, Inc has approximately 2900-3400 customers. We purchase internet, and frame relay from MCI then resale it to our customers . It is without question that we rely on MCI to provide service and support in accordance to the terms of the contract which we sighed . Failure to consistently bill at the contracted prices and moreover to not perform the service that would enable the use of the contract ed data lines to full use, leaves Tri-Lakes Net overpaying contracted our contract terms, using only a percentage of the purchased bandwidth due to incomplete service by MCI, thus placing our ability to perform for our customers and meeting our financial obligation, Myself along with Joanie Ellis have talked to MCI on differnt occasions with intent to resolve the problems stated in Joanie's testimony.

Q. I am founder and owner of Tri-Lakes Net, Inc an internet service provider . Which means Tri-Lakes Net leases Internet from a vender such as MCI for resale to the local customer. The internet, sometimes called simply "the net," is a worldwide system of computers- a network of networks in which users atany one computer can, with permission, get information from any other computer. It was conceived by the Advanced Research Projects Agency of the U.S government in 1969 and was first known as the ARPANET. The original aim was to create a network that would allow users of a research computer at one universit y to be able to "talk to" research computers at other universitys. A side bene fit of ARPANet's design was that, because messages could be routed or rerouted in more than one direction,the network could continue to function even if part s of it were destroyed in the event of a military attack or other disaster.

Q. Explain Tri- Lakes function in the process?

A. Tri-Lakes Net has 20 locations in which we provide local internet. We use what is called a frame Relay to get the data from the remote location back to the internet. Frame RelaY is a telecommunication service designed for cost-efficient data transmission for intermittent traffis between end-points in a wide area network (WAN). Frame relay puts data in a variable- size unit called a frame and leaves any necessary error correction(retransmission of date) up to the end- points. This speeds up overall dats transmission. For most services, the network provides a permanent virtual circuit (PVC). Permanent virtual circuit is a software-desighed logical connection in a network such as a frame relay network. A feature of frame relay that makes it a highly flexible network technology is that users (companies or clients of netwowk providers) can define logical connections and required bandwidth between end points and let the frame relay network technology worry about how the physical network is used to achieve the defined connections and manage the traffic.

Q. Explain function of the frame relay?

A. In frame relay, the end points and a stated bandwidth called committed information rate (cir) constitute a PVC, which is defined to the frame relay network devices. The bandwidth may not exceed the possible physical bandwidth. Typically, multiple PVC's share the same physical paths at the same time. To manage the variation in bandwidth requirements expressed in the CIR'S the frame relay devices use a technique called statistical multiplexing.

Q. What is the funtion of the bandwidth?

A. Bandwidth has a general meaning of how much information can be carried in a given time period (usually a second) over a wired or wireless communications link. For example, a link with a broad bandwidth-that is, a broadband link-is one that may be able to carry enough information to sustain the succession of images in a video presentation. More technically, bandwidth is the width of the range of frequencies that an electronic signal occupies on a given transmission medium. Any digital or analog signal has a bandwidth. In digital systems, bandwidth is expressed as bits (of data) per second (bps). Thus a modern that works at 57,600 bps has twice the bandwidth is expressed in terms of the difference between the highest-frequency signal component and the lowest-frequency signal component.

Q. Explain the function of freguency?

A. Frequency is measured in the number of cycles of change per second, or hertz. A typical voice signal has a bandwidth of approximately three kilohertz(3khz): AN ANALOG TELEVISION BROADCAST VIDEO signal has a bandwidth of six megahertz (6MHZ) some 2,000 times as wided as the voice signal. It should be remembered that a real communications path usually consists of succession of links, each with its own bandwidth bottleneck.

Q. Explain the T-carrier system used?

A. The T- carrier system, introduced by the Bell System in the U.S in the 1960's was thefirst successful system that supported digitized voice transmission rate(1.544 Mbps) in the T-1 line is in common use today internet service providers(ISP) cinnections to the internet. Another level, the T-3 line, providing 44.736 Mbps is also commonly used by internet service providers Another commonly installed service is a fractional T-1 which is the rental of some portion of the 24 channels in a T-1 line, with the other channels going unused. T he T-carrier system is entirely digital, using pulse code modulation and time-division multiplexing. The system uses four wires and provides duplex capability(two wires for recieving and two for sending at the same time). The T-1 digital stream consists of 24 64-kbps channels that are multiplexed. (The standardized 64 kbps channel is based on the bandwidth required fora voice conservation.) The four wires were originally a pair of twisted pair capper wires, but can now also include coaxial cable, optical fiber, digitAL MICROWAVE, AND OTHER MEDIA. A number of variations on the number and use of channels are possible. In the T-1 system, voice signals are samples 8,000 times a second and each sample is digitized into an 8-bit word. With 24 channels being digitized at the same time, a 192-bit frame(24 channels each with an 8-bit word)is thus being transmitted 8,000 times a second. Each frame is separated from the next by a single bit, making a 193 -bit block. The 192 frame multiplied by 8,000 and the additional 8,000 framing bits make up the T-1's 1.544 Mbps date rate The signaling bits are the least significant bits in each frame.

BEFORE THE PUBLIC SERVICE COMMISSION OF MISSOURI

JEFFERSON CITY, MISSOURI

Tri- Lakes Net, Inc, A Missouri Corporation, PETITIONER: MCI Worldcom Communications, Inc, RESPONDENT:	)	Case No. XC-2003-0011

STATE OF MISSOURI)
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COUNTY OF TANEY

AFFIDAVIT OF James R. AREND

James R. Arend, of lawful age, being duly sworn, states his name is James R. Arend, and swears and affirms that the answers contained in the attached direct testimony testimony to the questions, therein propounded, consist of 4 pages and Exhibit A to be presented in the above case: that he has knowledge of the matters set forth in such answers; and that such matters are true and correct to the best of his knowledge, and information and belief.

James R Arend
JAMES R. AREND

Subscribed and sworn to before me this 2 day of May,2003.

Sara Copeland
Notary Public

MY Commission Expires 9.19.04

SARA COPELAND
Notary Public - Notary Seal
STATE OF MISSOURI
Taney County
My Commission Expires Sept. 19, 2004