Exhibit No:
Issue: Loop
Witness: J. Gary Smith
Type of Schedule: Direct Testimony
Sponsoring Party: Southwestern Bell Telephone, L.P. d/b/a/ SBC Missouri
Case No.: TO-2004- 0207 Phase III

SOUTHWESTERN BELL TELEPHONE, L.P. D/B/A

SBC MISSOURI

CASE NO. TO-2004-0207

DIRECT TESTIMONY

OF

J. GARY SMITH

ST. LOUIS, Missouri
January 12, 2004

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of a Commission Inquiry into the Possibility of Impairment without Unbundled Local Circuit Switching When Serving the Mass Market	))))	Case No. TO-2004-0207

AFFIDAVIT OF J. GARY SMITH

STATE OF TEXAS)

COUNTY OF COLLIN)

I, J. Gary Smith, of lawful age, being duly sworn, depose and state:

1. My name is J. Gary Smith. I am presently a consultant to SBC Management Services, L.P.

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.

J. Gary Smith

Subscribed and sworn to before me this 9 day of January, 2004.

Notary Public

My Commission Expires: June 19, 2004

LISA L. WALLACE
MY COMMISSION EXPIRES
June 19, 2004

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DIRECT TESTIMONY OF J. GARY SMITH
ON BEHALF OF SBC MISSOURI

I. INTRODUCTION

A. WITNESS QUALIFICATION AND PURPOSE OF TESTIMONY

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is J. Gary Smith. My address is 8129 Lynores Way, Plano, Texas 75025.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am currently an independent consultant working for Southwestern Bell Telephone, L.P. d/b/a SBC Missouri ("SBC Missouri").

Q. WHAT IS YOUR TELECOMMUNICATIONS EXPERIENCE?

A. Since November of 2001, I have owned and managed my own competitive analysis and regulatory consulting business in Dallas, Texas. Before then, I was employed by Southwestern Bell Telephone Company from December 1977 through November 2001. From 1992 until 2001, I worked as Area Manager - Competitive Analysis. In this position, I was responsible for preparing competitor profiles, evaluating product and revenue impacts from competitive losses, advising management on strategic and policy issues raised by competitive activities, and providing analysis and testimony on competitive entry in Kansas, Arkansas, California and other SBC states. In that capacity, I examined and investigated the ways in which competing carriers developed their networks and provisioned services to their customers, including among other things dedicated transport and high-capacity loops. As part of these efforts, I spent time in the

field observing competing carriers' network facilities and identifying the location of competing carriers' fiber routes.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to demonstrate that there is no impairment, and thus no basis for unbundling of high-capacity loops, with respect to the customer locations identified in Schedules JGS-4L, JGS-7L, and JGS-10LHC. The FCC's *Triennial Review Order* directs state commissions to assess impairment for certain specific customer "locations" served by high-capacity loops of incumbent local exchange carriers like SBC. The FCC's order establishes three alternative methods to show non-impairment: (1) a "self-provisioning trigger" based on existing high-capacity loop facilities that competing carriers use to serve their own end users; (2) a "wholesale trigger" based on existing facilities that competing carriers offer to other carriers; and (3) a "potential deployment" analysis, which considers existing facilities and local engineering factors to determine whether carriers would be impaired without unbundled access.

In this testimony, I identify the customer locations for which SBC challenges the FCC's national finding of impairment. I demonstrate non-impairment with respect to DS-3 and dark fiber loops based on the self-provisioning trigger for 86 customer locations, which are listed on Schedule JGS-4L. My testimony also demonstrates non-impairment with respect to DS-1 loops based on the wholesale trigger for those same 86 customer locations, which are listed in Schedule JGS-7L. Finally, my testimony shows that competing carriers are not impaired without unbundled access to DS-3 and dark fiber

loops based on evidence of potential deployment for 321 locations, which are summarized on Schedule JGS-10LHC. My testimony regarding potential deployment is supported and supplemented by the testimony of Mr. Gary O. Smith, an engineer, who provides a detailed analysis of the engineering and cost considerations identified by the FCC. Mr. Joseph Ramatowski provides cost input to Mr. Smith.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. First, in Section I.B, I provide background information about high-capacity loops and review the development and extent of competitive facilities. Next, I discuss in Section I.C the pertinent provisions of the FCC's *Triennial Review Order*. I provide an overview of the three "impairment" analyses set forth in that Order. In Section II, I apply the FCC's "triggers" for self-provisioned and wholesale loops (which are based on existing competitive facilities). I then consider the FCC's analysis of potential deployment in Section III. Overall, I describe the evidence of competitive facilities (both existing and potential) that I considered and demonstrate that such evidence supports a finding of "non-impairment" for the locations I identify.

B. BACKGROUND

Q. WHAT IS A LOCAL LOOP?

A. Generally speaking, a local "loop" is the transmission path between the customer's premises and one of the "central offices" in SBC's network (or an analogous facility in a competing provider's network). In the simplest case, a basic copper loop runs from the customer's location to the Main Distribution Frame within the applicable central office,

where it can be connected to SBC Missouri's switch or to the equipment that a competing carrier has installed in a "collocation arrangement" on SBC Missouri's premises. The basic loop is sometimes called a "DS-0" loop or a voice-grade equivalent loop.

Q. WHAT ARE HIGH-CAPACITY LOOPS?

A. High-capacity loops are typically used to serve business customers, with more advanced needs (e.g., more voice lines, data services, etc.) than customer requiring only a voice line. As stated above, the capacity of a traditional loop used for voice service is designated "DS-0." The *Triennial Review Order* uses the term "high-capacity" loops to encompass loops with transmission capacities greater than DS-0. For example, a DS-1 loop has capacity equivalent to 24 DS-0 voice-grade circuits (or 1.544 Mbps); a DS-3 loop is equivalent to 28 DS-1 circuits or 672 voice-grade equivalent loops (or 44.736 Mbps). Schedule JGS-1L provides an illustration of high-capacity loops in SBC Missouri's network.

Q. ARE HIGH-CAPACITY LOOPS PROVIDED OVER FIBER OPTIC FACILITIES OR METALLIC (COPPER) FACILITIES?

A. DS-1 loops can be provided over certain metallic facilities or over fiber optics. However, high-capacity loops at the DS-3 level and above are provided over fiber optic transmission facilities. A strand of fiber optic cable has vast capacity to carry information. The amount of information carried by the fiber is defined by the type and capacity of "optronic" equipment connected to the fiber. A fiber transmission system is

capable of carrying several DS-3 level loops. In a SONET-based network,[1] transmission capacity is classified using "OC-n" terminology. The "OC" stands for "Optical Carrier" and the "n" serves as a placeholder for the applicable transmission level (for example, an "OC-3" has the capacity equivalent to three DS-3s, an OC-48 is equivalent to 48 DS-3s, and so on). A fiber optic facility can be "channelized" to simultaneously carry DS-1, DS-3, and other levels of loop transmission.

Q. WHAT ARE "DARK" FIBER LOOPS?

A. Dark fiber is unused fiber within an existing fiber optic cable that has not been activated (*i.e.*, it has not been "lit" by optronic equipment, which uses lightwave pulses to transmit information over the fiber cable). "Lit" fiber, by contrast, refers to fiber strands that have been activated to enable transmission. A dark fiber "loop" runs between a customer location and an SBC central office (or an analogous facility owned by a competing provider). Dark fiber "transport" facilities, which are the subject of my separate testimony, run between central offices or between central and "tandem" offices (or analogous competing facilities). See Schedule JGS-1L.

Q. HAVE OTHER CARRIERS DEPLOYED THEIR OWN HIGH-CAPACITY LOOPS?

A. Yes, competitors have widely deployed their own high-capacity loops to connect their networks to business customers. The *Triennial Review Order* states that approximately

[1] SONET™ stands for synchronous optical network, and is an American National Standards Institute ("ANSI") standard for optical fiber transmission.

30,000 of the nation's commercial office buildings are served by competitor-owned fiber loops.[2]

Q. HAVE COMPETING CARRIERS WIDELY DEPLOYED HIGH-CAPACITY LOOPS IN MISSOURI?

A. Yes. As I will discuss in more detail in this testimony, a significant amount of fiber loop facilities have been deployed in Missouri by carriers other than SBC Missouri, for example in the St. Louis and Kansas City areas. Schedule JGS-2L is a list of carriers that provide fiber loop facilities in the state, along with descriptions of each carrier taken from the applicable carrier websites..

Q. PLEASE PROVIDE SOME SPECIFIC EXAMPLES OF COMPETING CARRIERS THAT HAVE DEPLOYED FIBER LOOP FACILITIES IN MISSOURI.

A. The carriers identified on Schedule JGS-2L provide "lit" fiber loop facilities to serve enterprise building locations. According to its website, LightCore (CenturyTel) offers Metropolitan Area Networks (MANs) designed to interconnect major bandwidth aggregation points. LightCore (CenturyTel) also states that the MAN "extends into major multi-tenant office buildings, corporate campuses, medical centers and other key locations" Schedule JGS-3L.

[2] *Triennial Review Order* ¶ 298 n. 856.

C. OVERVIEW OF FCC'S CONCLUSIONS

Q. HOW DID THE FCC DEFINE HIGH-CAPACITY LOOPS IN ITS *TRIENNIAL REVIEW ORDER*?

A. The FCC Rule defines the local loop generally as "a transmission facility between a distribution frame (or its equivalent) in an incumbent LEC central office and the loop demarcation point at an end-user customer premises."[3] A DS-1 loop is a "digital local loop having a total digital signal speed of 1.544 megabytes per second."[4] The definition includes "two-wire and four-wire copper loops capable of providing high-bit rate digital subscriber line services."[5] A DS-3 loop is a digital local loop with a "total digital signal speed of 44.736 megabytes per second."[6] As I stated earlier, a DS-3 loop has capacity equivalent to that of 28 DS-1 loops or 672 DS-0 loops.

Q. WHAT FINDINGS DID THE FCC MAKE WITH RESPECT TO HIGH-CAPACITY LOOPS?

A. With respect to OC-n loops, the FCC found that "requesting carriers are not impaired on a nationwide basis without access to unbundled 'lit' OCn loops."[7] With respect to dark fiber, DS-3, and DS-1 loops, the FCC made a provisional finding of impairment, but delegated to the state commissions the authority to "collect and analyze more specific

[3] 47 C.F.R. § 51.319(a).
[4] *Id.* § 51.319(a)(4).
[5] *Id*.
[6] *Id*. § 51.319(a)(5).
[7] *Triennial Review Order* ¶ 315.

evidence . . . to determine customer locations where competitive carriers are not impaired."[8]

Q. WHAT BASIS DID THE FCC GIVE FOR ITS DECISION?

A. The FCC recognized that there is already substantial "competitive deployment of loops at the OCn level," which demonstrates that competing carriers "are often able to economically deploy these facilities to the business customers which use them."[9] The FCC also recognized that "some carriers have been able to overcome" the costs of deploying DS-3 loops in some locations, but stated that "[t]he record does not . . . provide sufficient evidence to determine the specific factors that make such deployment feasible at these locations."[10] Similarly, the FCC stated that "evidence of alternative providers at the DS3 and higher capacity levels suggests that there may be specific locations where competitive carriers have deployed fiber and could offer excess capacity at the DS1 loop level."[11] Thus, for dark fiber loops, DS-3 loops, and DS-1 loops, the FCC recognized that alternative deployment has already occurred at some customer locations and could potentially occur at others, which could lead to a finding of "no impairment" at those locations. The FCC asked the states to perform "a more granular impairment analysis" to identify such customer locations.[12] As I explain below, the FCC's Rule sets forth three separate methods for analyzing DS-3, dark fiber, and DS-1 loops.

[8] *Id*. ¶¶ 314, 321 & 327.
[9] *Id*. ¶ 315.
[10] *Id*. ¶ 321.
[11] *Id*. ¶ 327.
[12] *Id*. ¶ 328.

Q. WHAT ARE THE METHODS TO SHOW NON-IMPAIRMENT FOR DS-3 LOOPS?

A. There are three alternative methods to show non-impairment. The first, which is called the "self-provisioning trigger," is satisfied where two or more unaffiliated competing carriers have already deployed DS-3 loop facilities and are serving customers via those facilities at that location.[13] The second method, called the "competitive wholesale facilities trigger," is met where two or more unaffiliated wholesale providers have deployed DS-3 facilities and offer a DS-3 capacity loops on a widely available wholesale basis to other competing providers seeking to serve customers at the specific customer location."[14] If either trigger is satisfied, there is no impairment at that location. If neither trigger is satisfied, the FCC Rule requires the state commission to assess *potential* deployment of DS-3 loops by competing carriers.[15] I describe each "trigger," and the "potential deployment" analysis, in more detail in Sections II and III below.

Q. PLEASE DESCRIBE THE FCC'S "POTENTIAL DEPLOYMENT" ANALYSIS.

A. The FCC Rule recognizes a competing carrier might be able to deploy loops to a specified location, even if the number of carriers specified by the trigger test have not already done so. Thus, the Rule provides that "[w]here neither trigger . . . is satisfied, a state commission shall consider whether other evidence shows that a requesting telecommunications carrier is not impaired without access to an unbundled DS3 loop" at the location in question. The "other evidence" to be considered includes "evidence of

[13] 47 C.F.R. § 51.319(a)(5)(i)(A).
[14] *Id.* § 51.319(a)(5)(i)(B).
[15] *Id* § 51.319(a)(5)(ii).

alternative loop deployment at that location" as well as engineering and cost conditions that show carriers could potentially deploy a DS-3 loop at that location.[16]

Q. WHAT ANALYSIS APPLIES FOR DARK FIBER LOOPS?

A. For dark fiber loops, the FCC Rule applies the "self-provisioning" trigger and the potential deployment analysis, but does not apply the "wholesale" trigger. As with DS-3 loops, the self-provisioning trigger is satisfied for dark fiber loops when at least two unaffiliated carriers have deployed their own fiber facilities at the customer location. The potential deployment analysis for dark fiber loops is essentially the same as that for DS-3 loops, which I described above.[17]

Q. WHAT ANALYSIS APPLIES FOR DS-1 LOOPS?

A. The FCC's test for DS-1 loops uses the same "wholesale" trigger described above for DS-3 loops.[18] However, the FCC did not define a "self-provisioning" trigger for DS-1 loops, and its rule does not establish a "potential deployment" analysis for such loops.

D. Summary of Conclusions

Q. HOW DID YOU GO ABOUT APPLYING THE FCC'S IMPAIRMENT TESTS?

A. First, I identified where competing carriers have deployed fiber loop facilities, and which specific customer locations already have existing competitor-provided loops that satisfy an applicable "trigger." Then , locations were identified where *potential* deployment of

[16] *Id.*
[17] *Id.* § 51.319(a)(6).
[18] *Id.* § 51.319(a)(4).

DS-3 and dark fiber loops could occur, based on (i) actual deployment of high-capacity loops and the associated fiber facilities to date by competing carriers, and (ii) the other engineering and cost considerations identified by the FCC. The potential deployment analysis is described in more detail below and in the separate testimony of Mr. Gary O. Smith, and the results are summarized below.

Q. HOW DID YOU DETERMINE THE LOCATION OF THE COMPETING CARRIERS' EXISTING HIGH-CAPACITY LOOPS IN ORDER TO APPLY THE FCC'S TRIGGERS?

A. SBC Missouri does not have access to, or maintain its own records of, the high-capacity loops deployed by its competitors. However, SBC Missouri has obtained information regarding those loops from two sources. First, SBC Missouri issued discovery requests to all parties and other providers operating in Missouri. Not all of those requests have been fully answered to date, but SBC Missouri has already received sufficient information to confirm that one or both triggers have been satisfied at a number of locations. Second, several third-party firms maintain information regarding the deployment of existing fiber facilities, facility capacity, and "fibered" or "lit" building locations. I reviewed information from both of these sources to determine whether either of the applicable triggers have been satisfied, as I describe in more detail in Section II.B below.

Q. IN ADDITION TO DISCOVERY RESPONSES, WHAT INFORMATION DID SBC RECEIVE FROM INDEPENDENT THIRD PARTIES TO IDENTIFY CUSTOMER LOCATIONS FOR THE TRIGGER ANALYSIS?

A. SBC Missouri obtained data from GeoResults, Inc. ("GeoResults") that identify specific customer locations that have been "fibered" or "lit" by competing providers' fiber optic equipment. I provide further information about GeoResults in Section II.

Q. HOW DID YOU ANALYZE POTENTIAL DEPLOYMENT OF HIGH CAPACITY LOOPS BY COMPETING CARRIERS?

A. The best evidence that deployment of high capacity loops can *potentially* be done is that deployment has *already* been done. Thus, the first step was to look at areas where competing carriers have already deployed high-capacity loops and the associated fiber facilities. SBC Missouri then considered whether engineering and cost factors would allow a competing provider to deploy high-capacity loops for certain customer locations. A primary consideration in that analysis is the presence of existing fiber facilities near the particular building location. Obviously, the closer a building is to an existing fiber facility, the easier (and cheaper) it is for a carrier to extend the fiber into the building to deploy high-capacity loop facilities. For this testimony, SBC Missouri focused on building locations with annual telecommunications revenues of $50,000 or more, within existing competitive fiber corridors in the St. Louis and Kansas City wire centers. I describe this analysis, and the results, in more detail in Section III below.

Q. PLEASE SUMMARIZE YOUR CONCLUSIONS.

A. The data and analysis demonstrate that: (i) competing providers have already deployed a significant amount of fiber optic facilities and high-capacity loops in Missouri; (ii) these facilities already satisfy the FCC's triggers for at least 86 building locations in the state, as listed on Schedules JGS-4L and JGS-7L; and (iii) competing providers could potentially provide such loops at 321 additional customer locations, listed on Schedule JGS-10LHC.

Q. DO SCHEDULES JGS-4L, JGS-7L, AND JGS-10LHC INCLUDE ALL LOCATIONS IN MISSOURI WHERE THERE IS "NO IMPAIRMENT" FOR HIGH-CAPACITY LOOPS?

A. No. First, SBC Missouri's analysis of existing loop deployment is based primarily on the available information received thus far in discovery and from third parties. The most complete information about competitive high-capacity loops resides with the competing providers that deploy and maintain those loops. While SBC Missouri has diligently sought to gather all relevant data through discovery requests, those efforts are ongoing. Therefore, additional locations that satisfy the triggers may be identified in the future. Second, due to the time frame of this proceeding, and the limited information currently available, SBC Missouri is focusing its initial "potential deployment" analysis on enterprise customer locations within selected competitive fiber "corridors" in two locations – St. Louis and Kansas City – where competing carriers have robustly deployed fiber optic facilities. There are likely numerous additional enterprise locations in other areas where loop deployment could potentially occur, as shown by the fact that there has

clearly been competitive high-capacity loop deployment in the state. The FCC Rule specifies that parties may petition the Commission to initiate additional non-impairment proceedings in the future, and SBC intends to seek relief on additional "non-impaired" locations in the future.[19]

II. TRIGGER ANALYSES

A. Overview of FCC Trigger Rules

Q. PLEASE REVIEW THE FCC'S "TRIGGERS" FOR HIGH-CAPACITY LOOPS.

A. As I discussed above, the FCC's rules contain two "triggers": a "self-provisioning" trigger and a "wholesale" trigger. The self-provisioning trigger applies to dark fiber and DS-3 loops only. The wholesale trigger applies to DS-3 and DS-1 loops only. If either of the applicable triggers is satisfied for a particular type of loop at a given location, then the state Commission "*shall* find that a requesting telecommunications carrier is not impaired without access to" such loops on an unbundled basis at that location.[20] If neither trigger is satisfied, the Commission "shall consider . . . other evidence" to assess non-impairment for DS-3 and dark fiber loops, applying the potential deployment analysis.[21]

B. APPLICATION OF TRIGGERS

1. Self-Provisioning Trigger (Dark Fiber and DS-3)

[19] 47 C.F.R. § 51.319(a)(7)(ii).
[20] *Id*. §§ 51.319(a)(4)(ii), (a)(5)(i), (a)(6)(i).
[21] *Id*. § 51-319(a)(4)(ii), (a)(5)(i) & (a)(6)(i), *id.* § 51-319(a)(5)(ii) & (a)(6)(ii).

Q. PLEASE DESCRIBE IN MORE DETAIL THE "SELF-PROVISIONING TRIGGER" FOR UNBUNDLED DS-3 AND DARK FIBER LOOPS.

A. This trigger is satisfied when at least two unaffiliated CLECs have deployed their own fiber facilities at a specific customer location. A competing provider that has obtained dark fiber facilities under a long-term indefeasible right of use ("IRU") is considered a "competing provider" with its own dark fiber or DS-3 facilities. A competing provider that uses unbundled dark fiber loops from SBC does not count towards the trigger.[22]

Q. HAVE YOU DETERMINED IF THE SELF-PROVISIONING TRIGGER HAS BEEN MET FOR ANY LOCATIONS?

A. Yes. Schedule JGS-4L is a list of building addresses where at least two unaffiliated competing providers have each deployed their own fiber facilities, thus satisfying the trigger. Schedule JGS-5LHC presents the same list of building addresses, showing the competing carrier identities serving those locations. As I discussed earlier, fiber facilities are capable of carrying vast amounts of voice and data telecommunications traffic – at any transmission speed or level, including but not limited to DS-3 and beyond. Accordingly, these locations meet the self-provisioning trigger for dark fiber loop facilities and for DS-3 loops.

Q. WHAT DATA HAVE YOU RELIED ON TO SUPPORT THE SELF-PROVISIONING TRIGGER ANALYSIS?

[22] *Id.* § 51-319(a)(5)(i) & (a)(6)(i).

A. I reviewed data from two primary sources. First, I examined information provided by the competing providers in discovery. Among other things, competing providers were asked to (1) identify the specific customer locations where they have deployed (or are in the process of deploying) high-capacity loops, (2) provide information as to loops they obtain from wholesale providers, and (3) state the capacity level of each loop (DS-1, DS-3, or higher). SBC Missouri has not received complete responses from all providers to date and the analysis of the information that has been received is ongoing. Nonetheless, some providers have provided information concerning the locations at which they have deployed high-capacity loops for their own use and for use by other carriers. Second, SBC Missouri obtained information from an independent third party (GeoResults) regarding the location of competing carriers' fiber equipment, the buildings served by such equipment, the identity of the carrier providing service, and the bandwidth capacity of any identified ring or fiber optic equipment system in the building.

Q. WHO IS GEORESULTS?

A. GeoResults Inc. is a database marketing and consulting firm.

Q. WHAT PARTICULAR TYPES OF INFORMATION DOES GEORESULTS PROVIDE?

A. GeoResults provides its clients with national databases of business and residential customers, customized database marketing and mapping services, business and marketing analyses, competitive intelligence reports, and other analytical tools and services. It has developed a national data base with over 80,000 Fiber 'Lit' buildings throughout the U.S.

(along with the identity of each service provider that has lit equipment in these buildings) and over 35,000 switching entities along with their building location, the identity of the service provider that owns each switch and the identity of each service provider that is selling services using each switch.

Q. WHO ARE THEIR CLIENTS?

A. GeoResults provides products and services to incumbent and competing LECs, and to vendors of telecommunications equipment. Their customers include SBC operating companies, as well as Verizon, BellSouth, Qwest, Sprint, American Fiber Systems, Cox Enterprises, Global Crossing, Lucent, RCN, and Time Warner Telecom.

Q. HOW DO COMPANIES WITHIN THE INDUSTRY USE THE INFORMATION THAT GORESULTS PROVIDES?

A. Telecommunication carriers use the information provided by GeoResults to help make decisions regarding the installation of loops and other facilities in a particular area, to assess the availability of transport networks with which to connect their existing or planned loop facilities, to locate and evaluate potential customers, and to determine markets in which to sell products like excess fiber. Basically, GeoResults brings together the buyers and sellers of telecommunications facilities and services.

Q. HOW DOES GORESULTS OBTAIN INFORMATION ON FIBERED OR "LIT" BUILDINGS?

A. GeoResults has access to two equipment databases used throughout the industry: a library of equipment Common Language Location Identifier ("CLLI") codes, maintained by Telecordia, and an inventory of equipment codes in the Central On-line Entry System ("CLONES") database. When a carrier obtains equipment that will be connected to a public telecommunications network, such as a switch, it must obtain a CLLI code denoting the type and location of equipment. Common Language–based products were initially developed in the 1960s to keep track of all elements in the "Bell System" network and are currently used worldwide and recognized by numerous national and international telecom standards bodies. These systems were developed by Telcordia Technologies, which was previously known as Bellcore. Telcordia now operates independently of any carrier, and is a pre-eminent creator of technical standards in the telecommunications industry. Today, U.S. telecommunications service providers use Telcordia products to keep track of their network assets and to facilitate interoperability and network and service management for all companies within the industry. Telcordia's CLLI codes and CLONEs databases are maintained for industry access and use.

Q. HOW DO THESE CLLI CODES DEMONSTRATE THE PRESENCE OF HIGH-CAPACITY LOOPS?

A. The GeoResults database contains a listing of fiber terminating equipment such as multiplexers. Such equipment is connected to fiber transmission facilities to create DS-1, DS-3 and other circuits over which end users can transmit their voice and data calls. The presence of working equipment of this type at a specific customer location demonstrates that there is also a fiber transmission facility at that location because there is no other use

for that equipment. A competing provider (or its customer) would own the equipment used to terminate a competing carrier's fiber loop facility. On the other hand, if an end user or carrier ordered a SBC Missouri high-capacity service, such as DS-1 or DS-3, SBC Missouri would provide its own equipment to terminate the fiber transmission facility to the customer location.

Q. WHAT WERE THE RESULTS OF YOUR REVIEW OF THE INFORMATION RECEIVED IN DISCOVERY AND FROM GEORESULTS?

A. I have summarized the results of this review in Schedules JGS-4L and JGS-5LHC. As noted above, Schedule JGS-4L lists the locations where at least two competing providers have deployed fiber loops. Schedule JGS-5LHC lists the competing providers that provide service at these locations. The shaded cells of Schedule JGS-5LHC show the source of the information for this location was the competing providers' discovery responses. Many of these locations were also provided by the GeoResults' independent data. In all, I have identified 86 locations that satisfy the self-provisioning trigger. Of these 86 locations, satisfaction of the trigger has already been confirmed by discovery responses to date for 63 locations.

Q. DOES SBC PLAN TO ADDRESS THE LOCATIONS THAT HAVE NOT YET BEEN CONFIRMED BY THE APPLICABLE PROVIDERS?

A. Yes. For those competing providers that have not yet responded to discovery requests, SBC will continue to pursue the requested information. For those competing providers that have responded, but have not identified a particular location where GeoResults'

independent data shows they have deployed a high-capacity loop, SBC Missouri's investigation will continue.

Q. HOW DO YOU KNOW THAT THESE FACILITIES CAN PROVIDE SERVICE AT THE DS-3 LEVEL?

A. First, some carriers that have responded to discovery requests thus far have confirmed that they provide DS-3 service at the locations indicated. Second, the competing carriers themselves advertise that they provide DS-3 capacity. For example, XO, McLeod, and AT&T all advertise that they provide DS-3 high capacity loops. In addition, AT&T offers a "comprehensive portfolio of wholesale Voice, Data and IP Services," including OC-3 Local Channel circuits with an optional multiplexing option that "allows for channelization and an economical means to separate and transmit lower-capacity DS1, DS3. . . signals." See Schedule JGS-6L. Other competing carriers offer dark fiber (e.g., Level 3 and US Signal), which enables a DS-3 loop to be provided by attaching the appropriate equipment to the loop.

These results square with common sense. Once a CLEC has deployed fiber optic loop transmission facilities to a location and has lit the fiber with equipment, those fiber facilities are certainly capable of carrying traffic at the DS-3 capacity level and serving customers who require a DS-3 loop. As I explained above, the DS-3 level is one of the building blocks of high capacity digital communication. A basic fiber optic transmission system has a capacity of at least OC-3, which is enough to carry three DS-3s of traffic (equivalent to 2,016 voice-grade circuits). Almost by definition, then, a fiber optic facility will satisfy the trigger for DS-3 loops.

Q. WHAT IS THE BASIS FOR CONCLUDING THAT THESE PROVIDERS ALSO HAVE DARK FIBER?

A. Again, carriers like LightCore (CenturyTel) advertise dark fiber offerings. See Schedule JGS-3L. Here too, the result is dictated by common sense. Fiber optic cables are typically installed in increments of 12, 24, 48 and higher. One DS-3 loop would take no more than 4 of those fibers. As the largest initial cost of deploying fiber is not the fiber itself, carriers typically include spare "dark" facilities to allow for future growth and reduce the chance that additional fiber would have to be deployed later.

Q. WHAT CONCLUSION HAVE YOU REACHED?

A. As shown in my Schedules JGS-4L and JGS-5LHC, the self-provisioning trigger has been satisfied for at least 86 locations in the state. Thus, requesting carriers are not impaired without unbundled access to DS-3 and dark fiber loops at these locations. While other customer locations may satisfy the trigger, SBC has not yet received sufficient information to show that they do. Additional information possessed by the CLECs and not yet provided in discovery would be required to make that determination.

2. Wholesale Trigger

Q. PLEASE DESCRIBE IN MORE DETAIL THE "WHOLESALE TRIGGER" FOR UNBUNDLED DS-1 AND DS-3 LOOPS.

A. The "competitive wholesale facilities trigger" (i.e., "wholesale trigger") is satisfied if the state commission finds that at least two unaffiliated wholesale providers (i) have deployed loop transmission facilities to that location, (ii) offer the designated loop

capacity over those facilities on a wholesale basis, and (iii) have access to the entire customer location, including each individual unit within that location. For purposes of this trigger, the competing provider may use unbundled, leased, or purchased dark fiber facilities if it has attached its own optronics to activate the fiber.[23]

Q. WHICH LOCATIONS SATISFY THE WHOLESALE TRIGGER?

A. As shown in my Schedule JGS-7L, the wholesale trigger has been satisfied, to the best of my knowledge, for at least 86 locations. While other locations may pass this test, I cannot determine conclusively that they do from the data available to SBC at this time. Information possessed by the CLECs would be required to make that determination.

Note that these locations also satisfy the self-provisioning trigger, as discussed in the previous section of my testimony and as shown on Schedule JGS-4L. Because the self-provisioning trigger is already sufficient to show impairment for DS-3 loops at these locations, there is no need to apply the redundant wholesale trigger for DS-3. However, the self-provisioning trigger does not apply to DS-1 loops; only the wholesale trigger applies in that context. Accordingly, the remainder of this section applies the wholesale trigger only for purposes of demonstrating non-impairment with respect to DS-1 loops.

Q. HOW DID YOU DETERMINE THAT THESE LOCATIONS SATISFY THE WHOLESALE TRIGGER?

[23] 47 C.F.R. § 51-319(a)(4)(ii) & (a)(5)(ii)(B).

A. As with the self-provisioning trigger I described in the preceding section, I considered information obtained in discovery and from GeoResults to establish which locations have at least two high-capacity loops deployed by competing providers. The main difference is that under the wholesale trigger, the providers offer their loops to other carriers for their use, instead of or in addition to serving their own end users. Thus, I started with the same list of buildings with at least two competing providers that I prepared for the self-provisioning trigger (Schedule JGS-4L). I then determined whether at least two of the carriers at each location offer wholesale service, based on two independent sources. First, I reviewed publicly-available information from the carriers' websites to determine that they offer wholesale loops. The results of that analysis are summarized on Schedule JGS-2L. Second, I reviewed the information received by SBC thus far in discovery, to verify whether (i) the competing provider has stated that it provides wholesale service or (ii) one of its carrier customers has stated that it receives wholesale service.

Q. HOW DID YOU DETERMINE WHETHER THE COMPETING PROVIDER "HAS ACCESS TO THE ENTIRE CUSTOMER LOCATION, INCLUDING EACH INDIVIDUAL UNIT WITHIN THAT LOCATION"?

A. This analysis is ongoing. Some competing providers have affirmatively identified the buildings where they have access to all units at a location and satisfy this aspect of the wholesale trigger analysis. As SBC Missouri obtains more information regarding building access, it will supplement the record on this point.

Q. HOW DID YOU VERIFY THAT THE COMPETING PROVIDERS OFFER DS-1 OR DS-3 CAPACITY?

A. As I noted above, fiber facilities have more than sufficient capacity to provide multiple DS-1 loops (and higher capacities such as DS-3 as well). In addition, some carriers have also confirmed that their offerings include DS-1 and DS-3 loops.

III. ANALYSIS OF POTENTIAL DEPLOYMENT

Q. PLEASE DESCRIBE THE FCC'S IMPAIRMENT ANALYSIS FOR HIGH-CAPACITY LOOPS AT LOCATIONS WHERE NEITHER THE SELF-PROVISIONING OR WHOLESALE TRIGGERS APPEARS TO BE MET.

A. For those locations where neither trigger is satisfied, the FCC's rules require the state commission to examine "other evidence" (including "evidence of alternative loop deployment at that location" along with other operational factors) to determine whether requesting carriers are impaired without access to unbundled DS-3 or dark fiber loops at that location.[24] These criteria are addressed in more detail below and in Mr. Gary O. Smith's testimony.

Q. HOW IS EVIDENCE OF ACTUAL DEPLOYMENT RELEVANT?

A. A primary reason that the FCC gave for making a provisional "finding" of impairment (subject to the more granular analysis at the state level) was "sunk cost."[25] The FCC's

[24] 47 C.F.R. § 51.319(a)(5)(ii), (a)(6)(ii).
[25] *Triennial Review Order,* ¶ 303. The FCC explained that optronics are not considered sunk costs, because they can be moved from one location to another if the provider no longer serves a particular location. *Id*. ¶ 313 n.922.

view was that a carrier would not want to make the initial investment to deploy a high-capacity loop facility unless it had sufficient assurance that it would earn the necessary revenue to recover that cost. But if a competitor has already deployed loop facilities at or near a location, then all or most of the "sunk cost" of deployment has already been incurred and no longer poses a hurdle to providing service. Further, evidence of actual fiber facilities at or near a location means that at least one carrier has already thoroughly evaluated the pertinent economic and engineering considerations, and made a business decision to invest in the placement of its own facilities (even though the regulatory environment allowed it to lease high capacity unbundled loops at low rates). For these reasons, FCC Rule 51.319(a)(5)(ii) and (a)(6)(ii) lists "evidence of alternative loop deployment" as the very first factor for state commissions to consider in assessing potential deployment.

In addition, the existence of *nearby* competitor-deployed loop facilities (including competitive carrier-owned nodes, hubs, POPs and carrier hotels) is also relevant to the economics of installing new loops, and specifically to the "cost of underground or aerial laying of fiber," one of the factors a state is to consider under the FCC Rule. The closer the competitor's existing fiber facilities are to existing business locations, the less expensive (and more economic) it is to extend the fiber a few hundred feet (i.e., the distance of a short city block) further into the building. As a simplified analogy, one can think of competitive fiber facilities as streets, and loops as the "driveways" that lead from the street into each building location. Clearly, it is much cheaper to put in a new

driveway if the building is within 300 feet of the street than it is if the building is a mile from the street.

Q. HOW DID YOU APPROACH THE POTENTIAL DEPLOYMENT ANALYSIS?

A. SBC took a tightly focused approach, in light of the accelerated time frames of this initial proceeding and the fact that discovery (which yields important evidence about existing and potential competitive facilities from the competing providers themselves) is still ongoing. As I describe in more detail below, SBC Missouri took several steps to narrow the "universe" of enterprise customer locations throughout the state to a much smaller set of locations where there is already substantial "evidence of alternative deployment" and where the operational considerations are uniform among locations. First, SBC Missouri selected only three of the many wire centers in the state.[26] These wire centers are located in St. Louis and Kansas City. Next, SBC Missouri focused only on those locations that are within 300 feet of a competing carrier's existing fiber facilities. Third, the review was limited to business and government locations. Then those locations with an annual "spend" on telecommunications services of at least $50,000 were selected, to focus on locations that are most likely to warrant high-capacity loops. Schedules JGS-8L and JGS-9L illustrate the geographic areas from which SBC selected specific customer locations for review; Schedule JGS-10LHC is a list of the 321 specific customer locations selected.

[26] SBC does not waive any of its rights to pursue other wire centers and areas for potential deployment of high capacity loops.

From there, an experienced engineering expert, Mr. Smith, applied the various factors described by the FCC (such as engineering costs, the cost of underground or aerial placement of fiber, and installation costs) to determine whether competing carriers are not impaired without access to unbundled high-capacity loops at these 321 specific locations. That analysis is described in the separate testimony of Mr. Smith.

A. GEOGRAPHIC SCOPE OF ANALYSIS

Q. PLEASE DESCRIBE FURTHER THE STEPS YOU TOOK TO FOCUS THE GEOGRAPHIC SCOPE OF THE ANALYSIS.

A. First, we selected a limited geographic area and excluded the rest of the state. We focused on two wire centers with high customer density, a significant number of large "enterprise" locations that would warrant high-capacity loops, and evidence of competitive entry – the hallmarks of potential deployment.

Within those wire centers, we narrowed our view again to those locations that are within 300-foot "corridors" of existing competitive fiber. Carriers that plan to deploy high-capacity loops first, lay fiber down a city street as a backbone or "base," from which they can more easily extend a short lateral to serve any customer locations along that street. Locations within these corridors present a simple analysis of potential deployment, in that competing providers have already made a decision to deploy and have already done much of the physical "ground work" to deploy fiber facilities as well.

Q. COULD YOU ILLUSTRATE THE LOCATIONS SBC REVIEWED?

A. Yes. Schedules JGS-9L and JGS-10LHC contain maps that show those specific customer locations, and the 300-foot corridors in which they are situated. To illustrate, Schedule JGS-8L contains two sets of maps covering the St. Louis area. The first set of maps shows the alternate provider fiber facilities available in the wire center in red, along with customer locations that are already served by one or more competing providers (depicted as green and blue triangles). The second set of maps highlights the 300-foot corridors surrounding the alternate providers' fiber facilities. As with the first set of maps, many customer locations within those corridors are already served by at least one competing provider, and these are shown again as green and blue triangles. Customer locations that SBC selected for review that are not already served by a competing provider (or at least where the information available to SBC thus far has not revealed a competing provider) are shown as diamonds. The first set of maps shows alternative provider fiber facilities in the wire center, and more than a dozen fiber lit buildings. The second set of maps shows that all of those fiber lit buildings, and numerous other enterprise building locations, fall within 300 feet of an alternate provider fiber facility.

Schedule JGS-9L contains similar maps for the Kansas City area. All in all, 27 of the 321 locations selected by SBC for review already have fiber loops served by one competing provider. They appear in representative form on the maps as blue triangles. The remaining locations appear as diamonds. The specific addresses (along with the identities of the competing providers identified to date) for these locations are identified on Schedule JGS-10LHC. Note that there are several different competing providers

listed, showing that multiple competitors have already deployed loops in these corridors. For reference, locations that satisfy the "triggers" based on the deployment of loops by two or more competing providers are also shown, as green triangles, separate and apart from the 321 "potential deployment" locations.

Q. WHY IS SBC'S TARGETED APPROACH CONSERVATIVE?

A. First, as shown on the maps at Schedules JGS-8L and JGS-9L, several carriers have already placed a significant amount of the infrastructure and backbone of their networks. In order to add traffic to their networks, these carriers actively seek to serve new enterprise customers and building locations. As discussed in Mr. Smith's testimony, it is feasible (in fact, relatively simple) for these carriers to extend their facilities a few hundred feet further to serve the enterprise customer location, at a relatively low cost.[27] In fact, as shown on Schedule JGS-10LHC, 22 of these locations already have fiber loops provided by one of several different competing providers. Further, as I discussed above, more than 22 additional locations in these three wire centers are served by *more* than one competing provider, and are included in SBC Missouri's analysis of the triggers (see Schedule JGS-4L).

Second, because SBC Missouri's analysis is limited to locations within selected competitive fiber corridors that are narrowly defined (roughly equivalent to a short city block on each side of the existing competitive fiber), the local economic, engineering,

[27] In fact, some carriers use high-speed wireless connections to connect buildings to their fiber networks such as "fiberless" optical high speed connections.

and topographical factors which the FCC considers relevant are largely homogeneous for all locations within the corridors. For example, if an enterprise building is within 300 feet (about 1/17 of a mile) of a competing carrier's existing fiber facilities, it is highly unlikely that there would be a large hill or river in between the two. That is certainly the case with regard to the downtown St. Louis and Kansas City areas examined in this proceeding. The fact that multiple carriers have already deployed fiber loops to numerous customer locations within the same 300-foot "corridors" provides further evidence that there is no "impairment" for potential deployment to enterprise locations within those corridors. Further, SBC Missouri excluded those locations with estimated telecommunications spending under $50,000 per year, as I describe further below.

Q. WHAT DATA DID YOU USE TO ESTABLISH THE LOCATION OF EXISTING FIBER FACILITIES AND LIT BUILDINGS?

A. As I discussed above, SBC Missouri obtained information from two independent third-parties. GeoResults, which I described earlier, provided information as to which locations already have fiber loop facilities, and information about carrier hubs or "hotels" to which competing networks are often connected. Another independent party, GeoTel, provided information regarding the location and layout of competing fiber networks. I also reviewed competing carriers' web sites, which include details such as route maps and lists of cities and locations served. Finally, SBC Missouri obtained additional information from competing carriers in discovery.

Q. WHO IS GEOTEL?

A. GeoTel, Inc. is an analysis firm specializing in serving the telecommunications industry. It provides expert consulting services to assist service providers in penetrating new markets and expanding existing markets, and to help fiber vendors sell or lease fiber to those service providers. It gathers information about business opportunities, product offerings, potential customers, and telecommunications markets throughout the country, and then it provides that information to clients. Like GeoResults, GeoTel is a member of a consortium of consulting companies called "MapInfo."

Q. WHAT SERVICES DO THEY PROVIDE?

A. GeoTel offers a wealth of information on fiber facilities, including fiber transport routes, points of presence, interconnection facilities, collocation and data centers, and the location of wireless towers. As with GeoResults, GeoTel's customers include both competing and incumbent LECs, along with fiber wholesalers and large business users of communications facilities. Like GeoResults, GeoTel helps its customers assess their current markets and make decisions about new business opportunities. GeoTel helps them see how their network fits with those of other carriers.

Q. WHAT INFORMATION DID THEY PROVIDE TO SBC FOR USE IN THE ANALYSIS HERE?

A. GeoTel provided SBC with a report showing the locations of fiber routes for the St. Louis and Kansas City areas, and the identities of the applicable providers.

Q. HOW DID GEOTEL OBTAIN THAT INFORMATION?

A. GeoTel has several sources that it uses to compile and verify information. First, GeoTel acquires information from fiber owners themselves: Some fiber owners provide the information to GeoTel so that GeoTel can help them locate buyers; others provide the information at GeoTel's request. Second, GeoTel has researchers go through large cities tracing fiber routes, by looking at fiber access manholes and using Global Positioning Systems to map the location of the fiber. Finally, GeoTel searches public records, such as construction permits and information from companies that lay trenches for fiber.

Q. HOW DID GEOTEL VERIFY THEIR DATA?

A. As I described in my previous answer, GeoTel uses multiple sources to gather data, and each serves as a cross-check on the others. Further, approximately every six months, GeoTel repeats its methodology to keep its information accurate and up-to-date.

B. SELECTION OF SPECIFIC CUSTOMER LOCATIONS

Q. WITHIN THE FIBER CORRIDORS SHOWN IN SCHEDULES JGS-8L AND JGS-9L, WHAT CUSTOMER LOCATIONS DID YOU SELECT FOR FURTHER ANALYSIS OF POTENTIAL DEPLOYMENT?

A. The first step we took was to remove any residential locations that are within those corridors and focus on business and government locations. SBC Missouri consulted a database provided by Dun & Bradstreet ("D&B"), which maintains a wealth of information about business and government entities and the geographic locations of their offices, right down to the building address.

Q. PLEASE DESCRIBE BRIEFLY DUN & BRADSTREET AND THE SERVICES IT PROVIDES.

A. D&B is a world leader in obtaining, maintaining, and analyzing data about business and government, for use in credit, marketing, and purchasing decisions worldwide. Its databases include more than 64 million businesses worldwide (including 13 million in the United States).

Q. AFTER OBTAINING THE LIST OF BUSINESS AND GOVERNMENT ADDRESSES FROM D&B, DID YOU NARROW FURTHER THE SCOPE OF LOCATIONS SELECTED FOR ANALYSIS?

A. Within the locations identified by D&B, we selected only those locations with an annual telecommunications "spend" of $50,000 or more, as identified by TNS Telecoms ("TNS"). This resulted in an overall set of 321 customer locations selected for review. These are listed on Schedule JGS-10LHC.

Q. PLEASE DESCRIBE TNS TELECOMS.

A. TNS Telecoms "(TNS") is the world's largest provider of telecommunications market information. It offers in-depth market intelligence on all aspects of the telecommunications market and its clients include the major worldwide providers of telecommunications services. It has a strategic alliance with Dun & Bradstreet, who I discussed above.

Q. HOW DOES TNS DETERMINE THE ANNUAL TELECOMMUNICATIONS "SPEND" OF A BUILDING?

A. TNS conducts random samples of businesses across the nation to determine how much they spend each year. Schedule JGS-11L is a TNS publication that describes its database. Using a model that it developed, TNS uses its samples to estimate the telecommunications spending characteristics of businesses based on size, location, industry, and other factors. TNS verifies its estimates by conducting 3,500 additional surveys each quarter. Further detail concerning TNS' methodology is set forth in Schedule JGS-12L.

Q. HOW DID SBC SELECT THE $50,000 FIGURE?

A. In FCC Docket 96-98, the FCC's ongoing rulemaking to implement the 1996 Act, the United States Telecommunications Association submitted a study from the Cambridge Strategic Management Group ("Cambridge study") that analyzed the costs and other factors of extending an existing fiber network.[28] Schedule JGS-13L. The results of that study showed that an annual revenue threshold in the range of $44,000 would, on average, be sufficient to recover the investment required to extend a CLEC SONET network 500 feet to an enterprise building. SBC Missouri's selected figure is above the $44,000 average revenue threshold identified by the Cambridge study, and also above the results for all of the individual cities in that study.

[28] This study, the "CLEC Network Extension Model", was attached to the Reply Comments of the United States Telecom Association ("USTA") filed in FCC CC Docket No. 96-98 on April 30, 2001.

Q. DOES THE TNS ESTIMATE OF TELECOMMUNICATIONS SPENDING MEAN THAT A CLEC IS GUARANTEED $50,000 IN REVENUE (OR AT LEAST THE $44,000 REVENUE THRESHOLD ESTABLISHED BY THE CAMBRIDGE STUDY) SIMPLY BY EXTENDING ITS FIBER TO THE BUILDING?

A. There are no guarantees, but there are a number of factors that make the $50,000 figure reasonable. First, most of the locations we selected have an annual estimated spend that is well above $50,000. Further, once a carrier installs a fiber loop to serve one or more customers at a location, it can price aggressively to obtain more customers (and more revenue) in that location. Still, the revenue a carrier can gain is a complicated matter with many variables. But that is not the point of the $50,000 figure here. For present purposes, it does not matter whether the carrier will actually earn $50,000, or achieve the average revenue threshold of $44,000. If the carrier does not think that a particular building location (or a particular customer opportunity within that location) will spend enough on telecommunications service to warrant a DS-3, it does not need a DS-3 in the first place and would not be impaired without unbundled access to a DS-3 loop. The actual analysis of particular locations, including the local engineering and cost factors identified by the FCC, is documented in Mr. Smith's testimony. By applying a spending criteria, SBC Missouri is limiting the scope of that analysis to exclude small-revenue locations that are unlikely to demand a DS-3 in the first place. For that purpose, TNS provides a reasonable, objective estimate of revenue, and the Cambridge study provides a reasonable benchmark revenue threshold figure.

Q. PLEASE SUMMARIZE THE RESULTS OF YOUR ANALYSIS AND THAT OF MR. SMITH.

A. Based on the "evidence of alternative loop deployment" set forth above, and based on the analysis of other engineering and cost considerations set forth in Mr. Smith's testimony requesting carriers are not impaired without access to unbundled DS-3 and dark fiber loops at the 321 customer locations set forth in Schedule JGS-10LHC.

IV. CONCLUSION

Q. PLEASE SUMMARIZE THE CONCLUSIONS YOU HAVE REACHED.

A. As shown above, requesting carriers would not be impaired without unbundled DS-3 and dark fiber loops at the approximately 407 customer locations identified in Schedules JGS-4L and JGS-10LHC to my testimony, and they would not be impaired without unbundled access to DS-1 loops at the 86 customer locations identified in Schedule JGS-7L to my testimony.

Q. DO YOU AGREE THAT CLECS ARE IMPAIRED IN THE CUSTOMER LOCATIONS NOT ADDRESSED IN YOUR TESTIMONY?

A. No, but the customer locations that I have identified in this testimony are the only ones SBC Missouri has shown meet the FCC's triggers or potential deployment requirements. As conditions change and SBC Missouri is able to gather additional information,, SBC Missouri may petition the Commission at a later date regarding additional customer locations .[29]

[29] This statement also applies to interoffice transport routes described in my separate testimony.

Q. Does this conclude your direct testimony?

A. Yes.