Exhibit No.:

Issue:	Transport High-Capacity Loops
Witness:	Anthony Giovannucci, Steven L. Grossmann
Sponsoring Party:	AT&T Communications of the Southwest,Inc., TCG Kansas City, Inc., and TCG St. Louis, Inc.
Type of Exhibit:	Rebuttal Testimony
Case No.:	TO-2004-0207

AT&T COMMUNICATIONS OF THE SOUTHWEST, INC., TCG KANSAS CITY INC., AND TCG ST. LOUIS, INC.

REBUTTAL TESTIMONY

OF

ANTHONY GIOVANNUCCI AND STEVEN L. GROSSMANN

(NONPROPRIETARY VERSION)

TO-2004-0207

March 1, 2004

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I. INTRODUCTION AND PURPOSE OF TESTIMONY

Anthony Giovannucci

Q. PLEASE STATE YOUR NAME AND YOUR BUSINESS ADDRESS.

A. My name is Anthony J. Giovannucci. My business address is 429 Ridge Road, Dayton, New Jersey.

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

A. I am a Division Manager with AT&T Network Engineering and Operations, the organization within AT&T Corp. that provides local service to AT&T business customers.

Q. WHAT ARE YOUR DUTIES AND RESPONSIBILITIES?

A. In my current position I am responsible for a number of key areas of Outside Plant activity, including the development of an Outside Plant Plan ("OSP") of record for capital deployment. I also oversee the negotiation and completion of agreements controlling rights of way, franchises, and facilities builds (including joint facilities). Additionally, I am responsible for the development and application of Standard Network Architecture Guidelines.

As a Division Manager, I am part of a larger team that is responsible for the efficient planning, engineering, delivery, and management of local network capacity, assets, and associated information services. In general, this team ensures that AT&T optimizes the use of its limited resources and controls expenses while meeting end-user customers' expectations and allowing for an

appropriate return on the company's investment. In addition to overseeing the deployment of the local network, I do the same for the long-distance network.

Q. DO YOU HAVE ANY PRIOR TELECOMMUNICATIONS EXPERIENCE?

A. Yes. Prior to becoming a part of AT&T in 1998, I did contract work at various regional Bell companies (BellSouth) and operations companies between 1987 and 1993; from 1993 to 1998, I worked at Teleport Communications Group ("TCG"), which was acquired by AT&T in 1998.

Steven Grossmann

Q. PLEASE STATE YOUR NAME AND YOUR BUSINESS ADDRESS.

A. My name is Steven Grossmann. My business address is 5858 Horton, Emeryville, California.

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

A. I am a Division Manager with AT&T Network Engineering and Operations, the organization within AT&T Corp. that provides local service to AT&T business customers.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL AND EMPLOYMENT BACKGROUND.

A. I obtained my bachelor's degree in Engineering Operations from San Francisco State University in 1986, with a minor in business operations management. I began my telecommunications career at Sprint, initially performing engineering work for optical fiber network construction. I was promoted to a Director

position at Sprint leading the national Technical Support group that designed all radio and fiber routes.

In 1989, I moved to a more entrepreneurial opportunity with Centex Telemanagement, where I was involved in negotiating access to Centrex services from ILECs and long distance from IXCs as that full-service company sought to expand its market. When MFS purchased that company, I continued that same work as on behalf of MFS with added responsibilities in MFS' facilities-based business. After an interruption due to an automobile accident, I joined Northpoint as Vice-President of Network Building and Deployment. At Northpoint I was responsible for all of its collocation arrangements, network transport, and field operations.

When AT&T acquired Northpoint's collocation assets, I joined AT&T with the initial task of building out DSL infrastructure at over 1900 collocation arrangements. When the cost of that project proved prohibitive, I moved into my present position in Network Engineering and Operations, where my primary responsibility is in managing the access facilities that connect AT&T collocations to AT&T points of presence ("POPs"), in the many instances where circumstances have not justified self-deployment of AT&T network facilities to those collocations.

Q. HAVE YOU TESTIFIED PREVIOUSLY IN REGULATORY PROCEEDINGS?

A. No, I have not.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of our testimony is to respond to the trigger and potential deployment claims presented in the direct testimony filed by SBC Missouri ("SBC"). We respond from the perspective of our experience in planning and deployment of competitive local networks generally, and the AT&T local network in particular. SBC's testimony regarding the triggers gives the mistaken impression that existing CLEC ring facilities already provide, or are operationally ready to provide, the dedicated transport and high-capacity loop services defined in the FCC's Triennial Review Order ("TRO"). SBC's potential deployment testimony incorrectly assumes that competitors' local service facilities can be quickly and economically constructed or modified to provide dedicated transport, and that those facilities can be quickly and economically extended to provide high-capacity loops to large numbers of customer locations across broadly-defined areas. Our testimony will discuss the real world economic limitations and obstacles that AT&T has encountered in the construction and enhancement of its local network and how these factors limit its deployment of local transport facilities and effectively foreclose provisioning of dedicated transport between ILEC central offices, as well as how those factors constrain the deployment of high-capacity loop facilities. Additionally, our testimony will explain why SBC's allegations that AT&T offers wholesale dedicated transport or high-capacity loop services are inaccurate.

Q. HOW IS YOUR TESTIMONY ORGANIZED?

A. Section II of the testimony describes why existing CLEC fiber rings, including the facilities AT&T has deployed in Missouri, do not meet the requirements imposed by the TRO's trigger analyses. We explain why SBC is wrong when it asks this Commission to infer from the presence of CLEC fiber facilities at two SBC Missouri central offices that the CLEC is providing dedicated transport between those offices in a manner that satisfies the trigger requirements. Similarly, we describe why a CLEC's extension of fiber facilities to a building does not, without more, provide a basis for concluding that the CLEC is providing high-capacity loops to that location in a manner that satisfies the trigger requirements. Section III explains why, contrary to SBC's claims, AT&T does not provide wholesale dedicated transport or loop services. Section IV responds to SBC's potential deployment claims, which simply assumes away the economic and practical impediments encountered by CLECs who attempt to construct and deploy local network facilities.

II. AT&T'S MISSOURI LOCAL NETWORK FACILITIES, AND OTHER EXISTING CLEC FIBER RINGS, DO NOT MEET THE SELF-PROVISIONING OR WHOLESALE TRIGGER REQUIREMENTS

Q. DOES SBC'S APPROACH TO THE TRIGGER ANALYSES AUTHORIZED BY THE TRO GIVE DUE CONSIDERATION TO THE FACTORS THAT LED THE FCC TO MAKE NATIONAL FINDINGS THAT CLECS ARE IMPAIRED WITHOUT ACCESS TO UNBUNDLED DEDICATED TRANSPORT AND HIGH-CAPACITY LOOPS?

A. No. As Mr. Minter's direct testimony described in detail, high sunk costs, operational barriers, and limited revenue opportunities so consistently constrain CLEC and third-party deployment of alternative dedicated transport and high capacity loop facilities that the FCC made national findings that CLECs are

impaired without continued unbundled access to ILEC dedicated transport and high-capacity loops (DS-1, DS-3, and dark fiber, subject to certain maximums on DS-3). Recognizing the evidence of *limited* self-deployed and alternative competitive facilities in these categories, the FCC set out the self-provisioning and wholesale trigger requirements by which a challenger might seek to prove the presence of facilities that justified an exception to the national impairment findings on a specific dedicated transport route or for loops to a specific customer-location, at particular capacities. SBC treats the trigger requirements largely as mechanical counting exercises, with a heavy presumption in favor of findings of non-impairment, and in which the presence of qualifying competitive facilities may be found on the basis of liberal assumptions and inferences. In the process, SBC makes a mockery of the trigger requirements by assuming away the very real limitations on competitive facilities deployment that led to the FCC's impairment findings in the first place, which arise out of the facts and circumstances in which CLECs must seek to compete with the incumbent LECs.

Q. WHY IS ACCESS TO UNBUNDLED DEDICATED TRANSPORT NECESSARY EVEN FOR CLECS THAT HAVE CONSTRUCTED FIBER RINGS?

A. Generally, facilities-based CLECs have constructed one or more fiber rings of varying scope, and then connect customers to their network using those fiber rings whenever practical. Nevertheless, in a majority of instances, the CLEC will still need access to the ILECs' unbundled loops and interoffice transport, including loop/transport combinations ("enhanced extended links", or "EELs"),

to connect retail customers to its network. The CLEC's fiber rings connect aggregation points, such as collocation arrangements, and major customer sites to the carrier's switching or hub site. Although a CLEC may possess a facility that passes by two collocations, it will only rarely *connect* those two collocations to create a service configuration that is functionally equivalent to the dedicated transport UNE.

Facilities-based CLEC networks typically rely on UNE loops to serve the majority of their customers, given the fixed and sunk costs associated with building out loop facilities, as well as the delays in constructing such facilities, and the disadvantages that those factors create for a CLEC seeking to compete with the ILEC's already deployed infrastructure. Regardless of how they are configured, loop facilities are the fundamental component to serving customers. From a CLEC perspective, a loop is the connection between the retail customer's premises and the CLEC's telecommunication's network. Critically, however, the UNE loop provides only a portion of the path between the customer and the CLEC's network, i.e., the connection between the customer's premises and the incumbent wire center that would ordinarily serve that location (if the incumbent provided the retail service). The CLEC's entire loop may consist of 1) a UNE loop (described above) that is cross-connected to a self-provided backhaul facility; 2) a UNE loop that is obtained in combination with dedicated transport (i.e., an EEL); 3) a UNE loop that is cross-connected (in a CLEC collocation) to leased transport, which in turn connects to a self-provided facility (a loop provided with hubbed/aggregated transport); 4) or, in

rare instances, a completely self-provided facility. Similarly, dedicated transport – the unswitched connection between two incumbent LEC buildings – is typically used as the functional equivalent of the incumbent's loop feeder plant. It links the loops coming from a broad number of customer premises to a dedicated facility that connects to the CLEC's local network.

The critical point is that *both* loop UNEs *and* dedicated transport UNEs are employed by CLECs generally, and AT&T specifically, to provide what is *the functional equivalent of a loop in the incumbent's network*. Thus, when the Commission considers SBC's requests to limit access to loop and transport UNEs, the Commission should recognize that SBC is seeking to limit the CLECs' ability and options to connect customers to its network, thereby limiting facilities-based competition from AT&T and other CLECs. In this context, proof of competitive facilities and services actually being provided today should be required to satisfy all elements of the trigger requirements, not assumptions.

A. Dedicated Transport

Q. SBC SUGGESTS THAT THE IMPAIRMENT ANALYSIS FOR DEDICATED TRANSPORT IS MET IF A CLEC, SUCH AS AT&T, HAS A COLLOCATION WITH FIBER FACILITIES AT TWO SBC MISSOURI CENTRAL OFFICES. (E.g, J.G. Smith Direct at 20-21.) IS THIS THE PROPER ANALYSIS?

A. No. As explained below, and as applied to the available data in the accompanying rebuttal testimony of Sean Minter, much more in-depth analysis is required than to merely count collocations and fiber facilities. It is important

for the Commission to realize that SBC's direct case under the transport triggers rests entirely on Mr. Smith's assertion that "if a competing carrier has a fiber-based collocation arrangement in both [SBC] central office "A" and central office "Z", it follows that the carrier has transport facilities connecting A and Z." J.G. Smith Direct at 20. Mr. Smith's (and SBC's) analysis *assumes* that wherever a CLEC has extended its own fiber facilities to a collocation arrangement at central office "A" and to a collocation arrangement at central office "Z", that the CLEC necessarily is providing, or ready to provide, dedicated transport between those two locations. That assumption skips over proof of several necessary components of the FCC's trigger analyses, as discussed in more detail by Mr. Minter. In the case of AT&T facilities, the assumption is demonstrably wrong, and I would expect it to be wrong for CLEC fiber ring facilities generally.

Q. IF A FIBER CABLE RUNS BETWEEN TWO COLLOCATIONS OF THE SAME CLEC IS IT THEN APPROPRIATE TO CONCLUDE DEDICATED TRANSPORT IS OR CAN BE PROVIDED?

A. No. In answering this question, it is critical to keep in mind the FCC's definition of dedicated transport in the TRO. The FCC limited its definition "to those transmission facilities connecting incumbent LEC switches and wire centers within a LATA." TRO ¶ 365. As revised, the definition of the dedicated transport element includes only those transmission facilities that connect locations *within* an incumbent LEC's transport network -- that is, the transmission facilities between incumbent LEC switches. *Id.* at ¶ 366 (emphasis in original). Prior to the TRO, the FCC's definition of dedicated

transport also had included the ILEC's transmission facilities between one of its switches and a CLEC switch. The TRO removed from the definition of dedicated transport these transmission links "that simply connect a competing carrier's network to the incumbent LEC's network," observing that these links, referred to as "entrance facilities," "exist "*outside* the incumbent LEC's local network." *Id*. (emphasis in original). The definition of dedicated transport continues to require, as the name implies, that the transport facility be "dedicated to a particular customer or carrier." 47 C.F.R. § 51.319(e)(1), 51.319(e)(2).

With these definitions in mind, it can be seen that the mere existence of a fiber cable running past (or even through) two points proves nothing with regard to its use to provide direct (non-switched) connectivity between those points. First, a fiber cable is not a single transmission path. Rather, a single fiber cable is composed of multiple bundles (sheaths), each of which contains multiple fibers strands. It is these individual strands over which transmission paths can be created using optronic equipment.

Therefore, although a cable route may "run through" both ILEC office A and office B, the two offices may not be connected to the same bundle inside the cable, much less to the same fiber strand within the same bundle.[1] If the two ILEC offices have not been configured to provide termination of the same fiber strand at each office on the same transmission system (which is created by the

[1] In fact most of the fiber sheaths may only pass by the wire center, remaining in the conduit running down the street in front of the building rather than being split off to enter the wire center.

optronics equipment to which the strand is attached), then the CLEC does not (and cannot) have physical connectivity between the two locations. In order to provide such connectivity, a grooming and cross-connection function must be provided, using equipment at a third physical location.

AT&T typically connects its facility-based collocations, that is collocations to which it has constructed fiber facilities, to its network using two-point rings, where one point is the collocation and the second is the AT&T network location *(e.g.,* an AT&T switching center or point of presence). Accordingly, it is not possible to provide "dedicated transport" between two such collocations because, even though more than one collocation may be on the same cable route, each is connected to the AT&T switch by a different fiber strand, or "pair". In other words, the two collocations are not on the same fiber ring.

In more simple terms, a series of rings connect collocations at individual SBC central offices to the AT&T switch in either Kansas City or St. Louis. These rings create the hub-and-spoke scheme illustrated for St. Louis in Attachment VSM-R-1B to Mr. Minter's rebuttal testimony, not the meshed network, in which all collocations are connected to one another, as implied by SBC and illustrated in Mr. Minter's Attachment VSM-R-1A. The fiber strands that provide these separate rings may be running in the same sheath (bundle), or cable of sheaths, between various locations, but they are physically separate rings connecting AT&T's switch to individual collocations at SBC central offices.

Q. WHY WOULD A CLEC SUCH AS AT&T PUT A COLLOCATION ON THE SAME FIBER CABLE BUT NOT THE SAME FIBER?

A. There are a number of practical reasons. A collocation cannot be actively connected to a particular fiber until it is ready for operation. Connecting multiple collocations to a single fiber ring requires all the collocations to be ready for operation at essentially the same time the optronics equipment connected to the ring is activated to create a transmission system over the fiber. Said another way, transmission on the ring can only be activated when the last connection on the ring, or "node", is ready. Past experience has shown that delay at one or more sites is frequently experienced. For example, delays in collocation readiness or construction impediments at only one location may force the carrier to choose between a deferral of activation for all locations on the ring or to implement a different network design. The more practical approach is to run the fiber cable into a location (or to the access point just outside the wire center), if possible, and then activate each collocation on its own two-point ring using its own fiber pair.[2]

A second major advantage of placing one collocation on its own two-point fiber ring (connecting to the AT&T switch) is to simplify future upgrades and modifications. Changes in capacity needed to provide service can be achieved using the existing capacity of the two-point system *(i.e.,* by adding plug-in

[2] The term "fiber pair" is used here as a term of convenience. Typically, a bi-directional (protected) transmission system utilizes one pair of fibers to transmit traffic in one direction *(e.g.,* a clockwise direction) with a second pair assigned to provide transmission in the opposite direction *(e.g.,* the counterclockwise direction). This provides for immediate restoration capability in the event of a fiber cut or transmission equipment failure on the active path. Accordingly four fiber strands terminate on the optical multiplexer but two fiber strands (one in the primary and one in the backup direction) are required for the entire "circumference" of the ring. Note, however, that the segment from A to B does not necessarily occupy the same fiber pair as the connection from B to A.

modules) or by upgrading the system to higher transmission capacities *(e.g.,* from 0C48 to 0C192). Should such an upgrade be required, it impacts only the customers served out of that particular wire center. In contrast, if multiple wire centers were on the same transmission system *(i.e.,* fiber) all the wire centers on that fiber are potentially affected by a reconfiguration.

Q. IS IT TECHNICALLY FEASIBLE FOR A CLEC TO CREATE A CONNECTION IF THE TWO OFFICES ARE ON THE SAME FIBER CABLE, BUT NOT THE SAME FIBER?

A. Yes, it is technically feasible, but unless and until the CLEC has created such a connection, there is no direct connectivity between the two offices, and the CLEC simply is not providing dedicated transport between those offices (for itself or for others). In addition, there is a significant distinction between what is technically feasible and what is operationally and economically practical. Even though technology may permit a carrier to create a dedicated transport path between two points, the cost of doing so can be substantial, particularly given that the CLECs' traffic demand between the two endpoints in the incumbent's network will likely be very small. Accordingly, the FCC's trigger analysis properly requires that a "trigger firm" actually be providing service between the identified offices that form a dedicated transport route. As with all facilities construction, a carrier cannot rationally be expected to incur the costs of providing connections unless it is a rational approach to the serving arrangement and has the prospect to generate revenues sufficient to cover the costs incurred. And it is highly likely that a CLEC' s demand for capacity

between two ILEC wire locations on its own ring would be too small to justify such an approach.

Q. WHY WOULD YOU EXPECT THAT A CLEC WOULD NOT NORMALLY BE IN THE BUSINESS OF PROVIDING THE EQUIVALENT OF DEDICATED TRANSPORT TO CUSTOMERS?

A. The practical purpose of connecting one ILEC office to another (as opposed to connecting each office to the CLEC's network) is either (1) to provide a dedicated (private line) retail service between two customer premises, one of which is served by a loop from office A and the other served by a loop from office B, or (2) to provide wholesale service to other carriers between those two endpoints. Only the former situation would result in a condition appropriate for consideration in a self-provisioning trigger analysis, and even then only if the total demand were less than 12 DS3s worth of capacity (the only capacity that can be obtained as a UNE).

Using such a configuration for retail service strains credibility. A customer that might have substantial demand between two ILEC central offices would also (most likely) have even more traffic running to locations well beyond those two locations. That is, a customer is unlikely to have multi-megabits of transmission between two points in close proximity unless those two points are also connected to many other locations outside the local area. Given that such a hypothetical customer would be a very large enterprise customer, the CLEC would be more likely to build its loops out to the customer location. In such cases, AT&T (and, we believe, CLECs generally) would likely connect these loops to its local network facilities at a location other than a collocation space

in an SBC central office (such as a building where the CLEC has unrestricted access, typically one owned (or leased) by the CLEC). Thus, the customers' locations would be connected to AT&T's switch, and to one another, without going through an SBC central office. Because such a configuration would not connect two ILEC central offices, it could not be considered dedicated transport under the TRO.

For example, in the St. Louis area, the ** [redacted] ** firms are AT&T enterprise customers. Each firm has multiple offices that, if served by SBC Missouri, would be served out of different central offices. Where AT&T extends its own loop facilities to these customers, it connects those loops to the AT&T switch and POP directly over its own ring facilities, without taking the traffic back to a collocation arrangement in any SBC Missouri central office. No transportation between SBC Missouri central offices is involved in serving these large enterprise customers. Accordingly, serving multi-office customers in this type of setting does not put the CLEC in the position of providing dedicated transport between ILEC central offices.

Q. WHY WOULD THE CLEC LIKELY CONNECT THE SELF-PROVIDED LOOP AND INTERPREMISES SEGMENT AT A LOCATION OTHER THAN THE TRADITIONAL SERVING WIRE CENTER (OF THE INCUMBENT) FOR THE PREMISES?

A. The self-constructed loop facility would generally run back to a CLEC location (network node), rather than to ILEC collocation, and then be connected to other fiber as the particular customer design warrants. This affords the CLEC a better ability to control service quality, because its nodes are generally manned round-

the-clock, or at least are generally accessible. In addition, fewer potential points of failure (splice points and add/drop multiplexers) are generally involved. Furthermore, CLECs generally employ collocation to obtain interconnection with the incumbent LEC's network and to gain access to UNEs. In this instance, neither is involved, as illustrated by the St. Louis customer examples above. As a result, a CLEC would not ordinarily use costly collocations to create the connection, particularly one that connects facilities that it self-provides entirely from the customer's premises to its network.

Q. ARE THERE OTHER REASONS WHY A CLEC WOULD NOT PROVIDE "DEDICATED TRANSPORT" DESPITE HAVING A CABLE BETWEEN TWO INCUMBENT OFFICES?

A. Yes. Equally important from an operational/network perspective, is the fact that transmission capacity on a multi-node fiber ring is "zero sum." Every direct connection between any two points on the ring eliminates capacity across the entire ring. For example, when optronics equipment is activated on a fiber ring to create an OC48 transmission system, the system has the capacity to provide 48 "virtual circuits" (or dedicated optical paths) at a DS3 capacity, around the ring.

If the ring is provisioned to provide direct termination of traffic between two points on the ring *(i.e.,* to provide dedicated transport between two ILEC offices), it would not only reduce transmission capacity between those two points, it would reduce the CLEC's capacity to terminate traffic at all other points on the same ring. This occurs because all traffic on a protected ring

travels around the entire ring on a transmission system that has fixed capacity.[3] To illustrate, if a CLEC provisioned 6 DS-3 circuits between two ILEC central offices on an OC48 ring, that "dedicated transport" would eliminate 6 of the 48 potential DS3 paths around the entire ring. If the CLEC provisioned those dedicated transport circuits in both directions around the ring to provide redundancy, providing 6 DS3 paths between these two offices would consume 12 of the 48 DS3 paths around the entire ring. Every DS3 provisioned between any two points on the ring eliminates that amount of capacity everywhere on the ring. Such suboptimal use of a fiber ring transmission system represents another cost, or factor that explains why CLECs are unlikely to provision dedicated connections between ILEC central offices within their fiber local service networks.

The example below further illustrates this constraint. The table below describes an 0C48 system on a hypothetical CLEC ring that passes through two ILEC central offices and a CLEC switching node. In this example, all traffic from ILEC office A is routed directly to the CLEC's switching node and all traffic from ILEC office B is also routed directly to the CLEC's switching node, and there are no direct connections between ILEC offices A and B. In that case, the ring has characteristics shown below:

Task	Direction	Collo A	CLEC Node N	Collo B
Transmit	Clockwise	A-N: 24 B-A-N: 24	N-B: 24 N-B-A: 24	N-B-A: 24 B-A-N: 24

[3] This characterization is a simplification. In actuality, it is more likely that the transmission segment will be active in only one direction. In the event that a transmission failure is detected, the system will automatically activate a transmission path in the opposite direction.

• Receive	Clockwise	N-B-A: 24; B-A-N: 24	A-N: 24 B-A-N: 24	N-B: 24 N-B-A: 24
Transmit	Counter clockwise	A-B-N: 24 N-A-B: 24	N-A-B: 24 N-A: 24	A-B-N: 24 B-N: 24
Receive	Counter clockwise	N-A-B: 24 N-A: 24	A-B-N: 24 B-N: 24	A-B-N: 24 N-A- B: 24

The entire capacity of the system is utilized in the above example. However, if the CLEC were to reconfigure its ring to permit the direct exchange of traffic between ILEC offices A and B, the capacity available to permit ingress and egress at the CLEC's network *(i.e.,* A to N and B to N) is reduced. In this case, let us assume 6 DS3s are provisioned between A and B. The carrier's revised network configuration is reflected in the following table:

Task	Direction	Collo A	CLEC Node N	Collo B
Transmit	Clockwise	A-N: 21 B-A-N: 21 A-N-B:6	N-B: 21 N-B-A: 21 A-N-B:6	N-B-A: 21 B-A-N: 21 B-A:6
Receive	Clockwise	N-B-A: 21; B-A-N: 21 B-A:6	A-N: 21 B-A-N: 21 A-N-B:6	N-B: 21 N-B-A: 21 A-N-B:6
Transmit	Counter clockwise	A-B-N: 21 N-A-B: 21 A-B: 6	N-A-B: 21 N-A: 21 B-N-A: 6	A-B-N: 21 B-N: 21 B-N-A: 6
Receive	Counter clockwise	N-A-B: 21 N-A: 21 B-N-A:6	A-B-N: 21 B-N: 21 B-N-A:6	A-B-N: 21 N-A-B: 21 A-B:6

Thus, the direct routing of traffic between intermediate points on a ring will be the rare exception rather than the rule, because it "steals" capacity from the mainstream purpose of the CLEC's self-provided facilities — to connect retail customers to its network.

Q. WOULD THE SUBOPTIMAL USE OF RING FACILITIES YOU DESCRIBED ABOVE BE ADDRESSED BY EFFECTIVELY MAKING A CONNECTION BETWEEN THE TWO INCUMBENT OFFICES AT THE CLEC'S NODE?

A. No, not without the insertion of additional grooming functionality. This grooming capability is provided through a device such as a Digital Cross-connection System (DCS). A DCS is not an inexpensive device and itself consumes floor space and power resources. Nevertheless, the Commission must keep in mind that technical feasibility is not the equivalent of "actual" provisioning of dedicated transport. I believe that it is a rare instance when we see the convergence of the following conditions, each of which is required to justify the self-provisioning of dedicated transport facilities:

i. Two customer premises with substantial inter-premises demand to justify a dedicated connection for only that demand;

ii. The two locations home on different ILEC wire centers in the same local area;

iii. A CLEC has deployed a fiber cable between the two wire centers and connects the collocations within each wire center;

iv. The two wire centers are connected to a common CLEC network location on a transmission system having sufficient available capacity and the same transmission system on the same fiber;

v. The CLEC finds that the point-to-point demand between the locations, when combined with other demand at those premises is insufficient to build its own loop, (or in the alternative, chooses to build a loop to the collocation in the ILEC office rather than to its own network access point); and

vi. The CLEC has sufficient spare capacity for backhaul to its own network that the carrier can afford to dedicate demand to the point-to-point application.

Each condition is unlikely to occur. The joint probability of all six occurring is practically nil.

Q. SBC'S J. GARY SMITH HAS ASSERTED THAT AT&T FACILITIES ON SEVERAL "A" TO "Z" ROUTES SATISFY THE SELF-PROVISIONING AND WHOLESALE DEDICATED TRANSPORT TRIGGERS. WHAT HAVE YOU BEEN ABLE TO DETERMINE REGARDING THE AT&T FIBER FACILITIES CONNECTED TO AT&T COLLOCATIONS AT THOSE LOCATIONS?

A. I am informed that Mr. Smith identified AT&T as a trigger candidate for the 28 routes I have listed on Highly Confidential Exhibit SG-1(HC). For 24 of the 28 routes, the AT&T collocation at the "A" location is connected to a different AT&T local service fiber ring than the AT&T collocation at the "Z" location. For each of these 24 routes, AT&T's self-deployed local network facilities simply provide no direct physical connectivity between the two SBC central offices. AT&T is not (cannot be) currently providing dedicated transport between those locations, and could not do so without the modifications described above, for which the expense and associated inefficiencies are highly unlikely to be justified.

With respect to the remaining four routes, while the same fiber may be connected to the "A" and "Z" locations, the transmission system has been provisioned by activating optronics equipment to create virtual circuits (essentially, dedicated space within the light passed across the fiber) from the "A" location to the AT&T local switch serving the area, and from the "Z" location to the AT&T local switch serving the area, i.e., AT&T uses the fiber to

provide entrance facilities between each collocation and the serving AT&T local switch. The system has not been provisioned to create such a virtual connection between the "A" and "Z" locations and, without that connection , traffic cannot be passed directly from "A" to "Z". Dedicated transport between the two locations is not provided under this configuration. Again, the functioning connections created in this fashion are illustrated in the hub-and-spoke diagram attached to Mr. Minter's rebuttal.

Q. IF A CLEC HAS TERMINATED THE SAME FIBER AT ITS COLLOCATION ARRANGEMENTS AT TWO ILEC CENTRAL OFFICES WITHIN A LATA, DOESN'T THAT IMPLY THAT THE CLEC IS PROVIDING, OR CAPABLE OF PROVIDING, DEDICATED TRANSPORT, BETWEEN THOSE TWO OFFICES?

A. No. Even if the two ILEC offices are on the same fiber strand, it is not generally the case that the CLEC's network is designed to pass traffic between the two offices. If the virtual circuits provisioned on the ring connect each of those ILEC central offices to the CLEC's switch, and not to one another, as is the case for the AT&T facilities at the four routes discussed above and as will commonly be the case given CLECs' use of interoffice transport for the purpose of backhauling traffic to their switches, then the CLEC cannot be providing dedicated transport (to itself or at wholesale) between the ILEC offices. Moreover, some of the same expense, and all of the same siphoning off of transport capacity, would have to be incurred by the CLEC in order to modify its transmission systems to create a dedicated virtual circuit between two ILEC offices. CLECs are unlikely to find justified the provisioning of dedicated circuits between central offices that may be intermediate points on a

single ring, for the same reasons discussed above with respect to central offices located on different rings.

Q. YOU HAVE SAID THAT THE AT&T FIBER-FED COLLOCATION ARRANGEMENTS ARE ALL CONNECTED TO THE AT&T LOCAL SWITCH AND SERVE AS ENTRANCE FACILITIES. DOES THE MERE EXISTENCE OF FACILITIES ROUTED FROM SBC CENTRAL OFFICE "A" TO SBC CENTRAL OFFICE "Z" THROUGH THE AT&T LOCAL SWITCH CONSTITUTE DEDICATED TRANSPORT BETWEEN THE TWO LOCATIONS?

A. Absolutely not. Mr. Minter discusses why these facilities are not dedicated transport under the TRO definition. Even Mr. Smith seems to agree; his illustration of dedicated transport in SBC's network (Schedule JGS-1L, page 2 of 2) shows SBC central offices "A" and "Z", with SBC central office "X" in between. His exhibit identifies the transport link between A and X, and the transport link between X and Z as "dedicated interoffice transport facilities," as well as a separate link that runs all the way from A to Z without passing through the switch at X. What he does not, and could not, identify as dedicated transport between A and Z, is a path that would carry traffic from A to X, where it is switched from X to Z.

Any suggestion that transporting traffic across a CLEC switch could satisfy a dedicated transport trigger would be as fundamentally wrong as asserting that switched access and special access are the same things. On the contrary, transport across a switch, which functions to create temporary, only as-long-as-needed, circuits between the trunks connecting into the switch, is the antithesis of a transport circuit that is dedicated (24 hours a day, 7 days a week) to a particular carrier or customer. For example, providing a single DS3

"dedicated" path across a switch would consume 672 DS0 lines worth of the switch's ports and infrastructure, 24 hours a day, 7 days a week. There are 21 "A" to "Z" SBC central office combinations in the St. Louis area where AT&T has a fiber-fed collocation at each central office. The AT&T fiber facilities at these collocations serve as entrance facilities to a single AT&T local switch serving the area. Providing a single DS3 path over each of these 21 "routes" through the AT&T switch would consume 14,112 lines worth of switching capacity on a round-the-clock basis. This purely hypothetical arrangement would add the full cost of a modest-sized class 5 switch to serve a mere point-to-point transport function. The illustration is nonsensical, because switched and dedicated transport are fundamentally different.

Q. DID SBC IDENTIFY SPECIFIC TRANSPORT CAPACITY LEVELS PROVIDED BY COMPETING CARRIERS ON EACH CHALLENGED ROUTE?

A. No. SBC once again relied on assumptions and inferences, asserting that the presence of a CLEC's fiber-fed facilities implies that the CLEC is able to provision DS3 transport. Specifically, Mr. Smith states that if a carrier has deployed fiber optic transport facilities, it is "capable" of providing service at "virtually any level – including DS-3."[4] However, the TRO makes clear that self-provisioned facilities at the OC(n) level do not qualify as trigger candidates. It is essential that equipment being used for OC(n) level services be distinguished from equipment providing DS3 or dark fiber transport. As the FCC determined, carriers generally configure transport facilities at higher

[4] J.G. Smith Direct at 29 (Transport).

capacity levels than a DS3. TRO ¶ 382. It is reasonable to assume that, even where there actually is a connection between two SBC wire centers, it is most likely provisioned at an OC(n) level of capacity for data networking purposes, which would make it inapplicable for the self-provisioning trigger.

It should be recalled here that the TRO limits a CLECs' access to unbundled DS3 transport to a maximum of 12 DS3s on a single route. TRO ¶ 388. According to the FCC, CLECs with a need for greater capacity are not impaired without access to unbundled dedicated transport. Accordingly, only evidence that a CLEC is self-provisioning 12 or fewer DS3s on a route will be relevant to the trigger analysis. A CLEC's deployment of OC-48 transport facilities that include "A" and "Z" locations has no bearing on whether someone with a need for only 12 or fewer DS3s between those two locations can economically self-provide them. For that reason as well, the AT&T transport facilities connected to its Missouri on-net collocations, which are deployed at a minimum of one OC-48 connection to each collocation, are not relevant to the DS3 self-provisioning trigger analysis.

B. High-Capacity Loops

Q. HAS SBC IDENTIFIED ANY MISSOURI CUSTOMER LOCATIONS TO WHICH A CLEC IS PROVIDING ONLY 1 OR 2 DS-3 LOOPS?

A. Not to my knowledge. As an AT&T non-attorney employee, I am precluded by Missouri practice and the Protective Order in place in this case from reviewing "Highly Confidential" information pertaining to parties other than AT&T. Mr. Minter can address any information in Mr. Smith's "Highly Confidential"

exhibits. However, from the text of J. Gary Smith's testimony, it is evident that he does not attempt to identify the actual provisioning of single DS-3 loops or pairs of DS-3 loops to any location. Rather, he assumes that CLEC fiber optic transmission facilities connected to a customer location can provide service at the DS-3 level: "[a]lmost by definition, then, a fiber optic facility will satisfy the trigger for DS-3 loops." J.G. Smith Direct-Loop at 20. He also points to general advertising of DS-3 high-capacity loop service.

Q. DOES MR. SMITH'S APPROACH SATISFY THE SELF-DEPLOYMENT TRIGGER REQUIREMENT FOR DS3 LOOPS?

A. No. As discussed above with respect to dedicated transport, the FCC also limited CLEC access to unbundled DS-3 loops – to a maximum of two per requesting carrier to any single customer location. TRO ¶ 324. This limitation has a corollary: the self-provisioning trigger for DS-3 loops can only be satisfied by showing that two competing carriers are providing one or two DS-3 loops to a single customer location. A CLEC who has provisioned 3 DS-3 loops (equivalent to, and which may be provided through, OC-3 capacity fiber facilities), or higher-capacity fiber facilities, to a customer location is irrelevant to the DS-3 self-provisioning analysis. The demand and revenue opportunities that may enable that CLEC to justify deployment of OC-3 or higher capacity facilities have no bearing on whether a CLEC with an opportunity to provide only one or two DS-3 loops to a building could economically and practically justify deploying its own facilities.

SBC has made no attempt to limit its identification of competitive DS-3 loop facilities for purposes of the self-provisioning trigger in this fashion. Its assumption that DS-3 loops are being provisioned misses the relevant question and includes facilities that should not be included. For example, to the extent any of the providers characterize themselves generally as broadband providers, and because such access is very likely Ethernet access at 100Mbps, it is more reasonable to assume that they are providing an OC(n) level of service into their buildings, unless specifically indicated otherwise. In fact, because the ability of potential competitors to connect retail customers to their network is at stake, no location should be considered for trigger purposes absent proof that the identified carriers are actually providing only one of two DS3s or dark fiber loops to the location and the carrier experiences (and foresees) no limitation on its access to customers within the building. Thus, without proof that the self-provider identified for a location provides fewer than 3 DS3 loops, then the carrier should not qualify as serving the location with respect to the DS3 loop unbundling trigger.

Q. DOES AT&T PROVIDE FEWER THAN 3 DS-3 LOOPS TO ANY OF THE CUSTOMER LOCATIONS FOR WHICH SBC HAS IDENTIFIED AT&T AS A SELF-PROVISIONING DS-3 TRIGGER CANDIDATE?

A. Not ordinarily. AT&T generally does not build to a location without committed demand sufficient to justify deployment of at least one OC-3 facility. As Mr. Minter describes, AT&T's continuing review of this subject has identified a very small number of Missouri locations to which it currently provides only one or two DS-3 loops. AT&T is continuing to investigate the

circumstances surrounding its current service at those locations. However, as a general matter, AT&T will not extend its facilities to a location without demand for loop service equivalent to at least 3 DS-3s.

Q. DOES THE FACT THAT A CLEC HAS EXTENDED SOME FIBER TO A BUILDING MEAN THAT THE CLEC HAS ACCESS THAT WILL PERMIT IT TO SERVE ALL CUSTOMERS IN THE ENTIRE BUILDING?

A. No. As I will discuss further below in connection with SBC's potential deployment claims, real limitations and obstacles persist with respect to CLEC's ability to obtain access to serve customers throughout multi-tenant premises. Of the locations to which AT&T has extended high-capacity loop facilities in Missouri, AT&T has established access to the entire premises in only a distinct minority. Mr. Minter's rebuttal testimony will provide the specific locations that fail this trigger requirement. These include locations at which AT&T's building access is restricted to a particular customer's unit or to an individual floor, or group of floors.

III. AT&T DOES NOT WHOLESALE DEDICATED TRANSPORT OR HIGH-CAPACITY LOOP SERVICES

Q. MR. SMITH ATTACHES INFORMATION TO HIS DIRECT TESTIMONY WHICH HE ASSERTS DEMONSTRATES THAT AT&T PROVIDES WHOLESALE DEDICATED TRANSPORT AND LOOPS. ARE HIS ASSERTIONS ACCURATE?

A. No.

Q. WHY NOT?

A. As I will explain, AT&T does not offer wholesale transport or high-capacity loops to other CLECs and therefore cannot be counted as a carrier satisfying the wholesale trigger on any of the routes or locations identified by Mr. Smith.

Q. WHAT IS THE BASIS FOR YOUR DISAGREEMENT WITH MR. SMITH THAT AT&T IS A WHOLESALER OF DEDICATED TRANSPORT SERVICES?

A. There are two main reasons I disagree with Mr. Smith. First, his supposition is simply wrong. AT&T has made a business decision not to offer dedicated transport facilities to other CLECs connecting to any SBC Missouri wire center. Thus, even if AT&T had dedicated transport facilities, which it does not, AT&T cannot qualify as a wholesale transport supplier.

Q. WHAT IS THE OTHER REASON YOU DISAGREE WITH MR. SMITH'S SPECULATION?

A. As I have explained above, AT&T does not self-provide any "dedicated transport" facilities as that term is defined in the TRO. The only transport that AT&T has self-provisioned in Missouri is transport between an ILEC CO and AT&T's own switch. Obviously, all carriers necessarily build their switched networks so that *switched* traffic can flow to all parts of their network, as well as directly or indirectly to the networks of other carriers. However, from the perspective of deployment of facilities for self-provisioned transport services, AT&T's fiber network is not configured to flow traffic from one ILEC wire center collocation to another ILEC wire center collocation. The network is more logically thought of as a hub-and-spoke arrangement, hauling traffic from the CLEC's collocation to the central tandem-area local switch. This is a

central-point-to-any-point architecture, not an any-point-to-any-point architecture.

All of AT&T's transport routes in Missouri are "entrance facilities" that directly connect an ILEC CO to the AT&T switch and do not qualify as dedicated transport under the TRO. AT&T has no facilities in Missouri that directly connect two ILEC COs. Thus, AT&T has no dedicated transmission paths between its COs; rather, such connections can only be made through its switch, which is *not* dedicated transport.

Therefore, AT&T has not self-provisioned any dedicated transport between two ILEC wire centers, which is the only transport defined to be "dedicated transport" in the TRO. Because AT&T does not self-provide any dedicated transport, it does not qualify as a "self-provider" on any transport route in Missouri, and therefore cannot be considered a wholesaler of dedicated transport.

Q. AS SUPPORT FOR HIS POSITION THAT AT&T PROVIDES WHOLESALE TRANSPORT, MR. SMITH POINTS TO STATEMENTS ON AT&T'S OWN WEBSITE; IS MR. SMITH CORRECT TO RELY ON THESE STATEMENTS TO SUPPORT HIS POSITION?

A. No. AT&T does offer some services on a wholesale basis to other carriers, including some that involve forms of transport. However, AT&T does not offer at wholesale any services that fall under the TRO definition of dedicated transport.

Those carriers who obtain transport service from AT&T desire a particular kind of transport. These carriers want transport that will move traffic from their switches to an ILEC CO. That is what AT&T offers. However, AT&T never has offered transport between two ILEC COs, which is the only type of transport defined in the TRO as "dedicated transport."

Q. CAN YOU PROVIDE AN EXAMPLE OF TRANSPORT SERVICE PROVIDED BY AT&T TO CONNECT ANOTHER MISSOURI CARRIER'S COLLOCATION ARRANGEMENTS AT SBC CENTRAL OFFICES TO ITS SWITCH?

A. Yes. In responses to discovery in this case, NuVox (formerly Gabriel) Communications identified several SBC Missouri central offices in the St. Louis and Kansas City areas at which it obtains transport service from AT&T to its local switch. NuVox was careful to state that it did not know whether the AT&T transport facilities routed its traffic directly to its switch from each central office, or from one central office to another before taking the traffic to its switch. In fact, AT&T does provide a direct connection between the NuVox collocation at each central office and the NuVox local switch. Review of AT&T network records confirms that most of the NuVox collocation arrangements are connected to different AT&T rings. Even for those few pairs of offices that are on the same AT&T ring, no virtual circuit has been mapped or provisioned between the two offices; rather, virtual DS3 or DS1 paths have been mapped to connect each NuVox collocation directly to its switch. This pattern, of course, parallels the hub-and-spoke pattern of entrance facilities that AT&T provides to itself between its on-net collocations and its local switch serving those collocations. None of the circuits provided to NuVox are

dedicated transport as defined in the TRO. Thus, AT&T cannot be considered a wholesaler of dedicated transport.

Q. MR. SMITH ALSO ASSERTS THAT AT&T MAY BE A WHOLESALE PROVIDER OF HIGH-CAPACITY LOOP; HAVE YOU REVIEWED THE PORTION OF MR. SMITH'S DIRECT TESTIMONY THAT MAKES THIS CLAIM?

A. Yes.

Q. DO YOU AGREE WITH MR. SMITH'S CLAIM THAT AT&T MAY BE A WHOLESALER OF HIGH-CAPACITY LOOPS?

A. No. SBC has cited no evidence to support this claim, other than the same website references discussed above for transport, which are even less relevant here. There is a simple reason AT&T does not satisfy the wholesale trigger for loops: AT&T offers no high-capacity loops at wholesale. AT&T has made a choice not to engage in the business of wholesaling loops. AT&T is simply unwilling to make high-capacity loops widely available on a wholesale basis.

IV. SBC'S POTENTIAL DEPLOYMENTS CLAIMS ASSUME AWAY REAL IMPEDIMENTS TO POTENTIAL DEPLOYMENT OF DEDICATED TRANSPORT AND HIGH-CAPACITY LOOPS

Q. PLEASE DESCRIBE WHAT IS MEANT BY POTENTIAL DEPLOYMENT.

A. At the end of its discussions of the self-provisioning triggers for dedicated transport and high-capacity loops, the FCC provides that incumbents may attempt to demonstrate that no impairment exists on a specific route (for dedicated transport at a particular capacity) or to a specific customer location (for loops at a particular capacity), even though neither trigger has been satisfied. This is generally referred to as the potential deployment test. Mr.

Minter's direct testimony describes in detail the requirements imposed by the Triennial Review Order in conjunction with a potential deployment review.

Q. DID THE FCC EXPECT THE POTENTIAL DEPLOYMENT TEST TO APPLY BROADLY?

A. No. FCC Commissioner Abernathy described the test to Congress as follows: With respect to interoffice transport . . . [t]he Commission also authorized states to find, based on their consideration of various economic factors, an absence of impairment where a route is served by fewer than two wholesalers or three total carriers, but such findings will constitute a narrow exception to the rule."[5] The Commissioner's logic applies equally to high-capacity loops. For both categories, findings of non-impairment based on potential deployment should be the narrow, or rare, exception.

A. Dedicated Transport

Q. HAVE YOU REVIEWED THE DIRECT TESTIMONY OF J. GARY SMITH OF SBC CONCERNING THE POTENTIAL DEPLOYMENT OF DEDICATED TRANSPORT?

A. Yes, I have.

Q. WHAT WERE THE CONCLUSIONS OF THE POTENTIAL DEPLOYMENT ANALYSIS AS PROVIDED BY SBC?

A. SBC has asserted that all of the transport routes that it challenges under either the self-provisioning and/or wholesale triggers should also receive non-impairment findings from the Commission on the basis of potential

[5] Commissioner Abernathy's Responses to Post-Hearing Questions for the Record on the Triennial Review Proceeding from the Subcommittee on Telecommunications and the Internet, submitted in a March 17, 2003 letter from Commissioner Abernathy to Hon. Fred Upton, Subcommittee Chair, at page 1 of the attachment.

deployment. The specific routes for which non-impairment is claimed by SBC are found in Schedules JGS-10T and JGS-13T to the Direct Testimony of J. Gary Smith - Transport.

Q. ON WHAT BASIS DOES SBC ASSERT THAT THESE TRANSPORT ROUTES MERIT A POTENTIAL DEPLOYMENT ANALYSIS FOR DEDICATED TRANSPORT?

A. Basically, SBC assumes that if a location has the *potential* to qualify for purposes of a wholesale or self-provisioning trigger that it would likewise merit consideration for a potential deployment evaluation. That assumption is nonsensical in the absence of substantial additional facts.

Q. DO YOU BELIEVE THAT SBC'S POTENTIAL DEPLOYMENT ANALYSIS FOR DEDICATED TRANSPORT IS PROPER?

A. No, and I say that for several reasons. First, as Sean Minter explains in his rebuttal testimony regarding both the self-provisioning and wholesale triggers, SBC has greatly overstated the number of existing dedicated transport routes of competing providers. Second, SBC cannot satisfy the potential deployment analysis unless it can show that multiple carriers have the potential to self-provision transport at the capacity levels that would otherwise be available as UNEs. A proper analysis needs to reflect the FCC's specific decision that CLECs are impaired without unbundled access to dark fiber transport and twelve or fewer DS3s of transport along any given route. *See* TRO ¶ 388. Thus, as noted above, SBC cannot rely on the existence of OC(n) level transport routes to show that potential deployment is possible at lower capacity levels. And even for the rare route where the potential for self-deployment

might be persuasively demonstrated, the potential deployment evaluation does not and should not result in a relaxing of unbundling obligations for all quantities of UNEs but rather, should only result in an adjustment (down or up) to this national threshold of IJNE availability (12 DS3s).

Q. DID SBC PROVIDE A GRANULAR ANALYSIS SHOWING THAT THE ROUTES MEET THE FCC'S REQUIREMENTS FOR ECONOMIC VIABILITY, OR THAT THEY HAVE CONSIDERED THE NINE FACTORS OUTLINED BY THE FCC?

A. No. SBC has provided no route-specific analysis of any kind to support its potential deployment claims for dedicated transport. On this basis alone, any potential deployment claims for these routes should be rejected.

Q. ARE THERE OTHER SPECIFIC REASONS WHY YOU DO NOT AGREE WITH MR. SMITH'S ANALYSIS OF POTENTIAL DEPLOYMENT?

A. Yes. Mr. Smith suggests that, for each of the transport routes that do not meet either the self-provisioning or wholesale triggers, the Commission should find that there is sufficient potential for deployment to make a finding of non-impairment on all of these routes. Mr. Smith apparently reasons that, if one carrier has already deployed some fiber along a given route, any other carrier can likewise deploy fiber along that same route, and therefore there is no impairment along that route.

This is a flawed analysis. First, Mr. Smith's analysis assumes that, simply because one carrier had deployed dedicated transport facilities, other carriers would have reason to construct such facilities and could quickly and easily do so as well. It is wrong to make this assumption. As described in connection

with the trigger analysis above, it will be the rare circumstance that justifies construction and provisioning of dedicated transport facilities by a CLEC. They can only be justified where a carrier has sufficient traffic volume to justify the expense – for this purpose, volume between two ILEC central offices.

Moreover, Mr. Smith's testimony would essentially render the triggers irrelevant. For example, assume there is a transport route on which there is only one carrier that had deployed dedicated transport. Such a route would not meet the self-provisioning trigger because the TRO requires three self-providing carriers. Indeed, even if the existence of one carrier on a route offers some evidence regarding potential deployment, it is clearly not dispositive. For example, the carrier may have been operating under a unique set of circumstances that are not applicable to competitive carriers in general. (This is, in fact, the very reason that the FCC requires proof that multiple carriers have surmounted the barriers to self-provisioning to a particular building or on a specific route.) Similarly, as the market evidence has shown, competitors have often deployed facilities in the hopes that there will be sufficient demand to fill them in the future, only to find that the hoped-for demand never materialized. Thus, the FCC has held that the presence of only one (or even two) self-providers is not dispositive of the fact that the location/route at issue is suitable for multiple competitive supply, and SBC cannot rely on the presence of a single carrier to undermine that conclusion, unless it can make a specific

showing that it would in fact be economically and operationally feasible for a competitor to construct its own facilities on the identified route.

Q. HOW DOES AT&T DECIDE WHEN IT WILL SELF-PROVISION TRANSPORT FACILITIES?

A. AT&T only entertains possible network expansions where there is sufficient traffic demand to support the costs AT&T incurs when building its network. The economics of expansion are only sensible when there is sufficient traffic volume between two points to justify the construction.

When AT&T considers whether to build its own interoffice transport facilities to an ILEC Central Office ("CO"), i.e, entrance facilities, most COs can be eliminated right off of the bat because they do not have sufficient traffic volume to economically justify such construction. Indeed, in 70 percent of the ILEC COs where AT&T provides service, AT&T does not have sufficient traffic to fill a single DS-3 facility to reasonable levels of utilization, including both local and long distance traffic demand. This falls far short of the traffic required to justify self-deployment. As the FCC concluded, such construction cannot be justified without the reasonable expectation that the facility will be used to support multiple (e.g. 12) DS-3s worth of traffic. Thus, building facilities to the vast majority of COs is infeasible for AT&T (and other CLECs). Even where sufficient volumes may be anticipated, AT&T must have the collocation necessary to connect its self-provisioned facilities. And in any event, the transport facilities that AT&T does find practical to build at times are

facilities that will connect an AT&T collocation at an SBC central office to AT&T's local switch or point of presence, not to another SBC central office.

Q. PLEASE IDENTIFY SOME OF THE FACTORS THAT PRECLUDE POTENTIAL SELF-DEPLOYMENT OF CLEC LOCAL TRANSPORT FACILITIES.

A. There are any number of other factors that may preclude using a Type I arrangement" in a given CO.[6] These include: (1) the construction obstacles detailed below; (2) prior volume and/or term commitments by the customer that make it uneconomical to convert facilities because of termination liability penalties; (3) exhaustion of collocation capacity; (4) distances between the CO and POP that are too great to make construction economically feasible; and (5) lack of assurances that the conditions required to make the business case (i.e., sufficient traffic volumes) will not evaporate. Any one of these factors may make construction of transport facilities to a given location infeasible. These same factors would apply to CLEC construction of transport between two ILEC COs, i.e., dedicated transport, with the justification for construction much more unlikely, for the reasons discussed earlier.

Often, the most critical issue is timing. New network construction is very time consuming. The process, beginning with the acquisition of necessary rights of

[6] AT&T connects it customers to its own network using two distinct methods. Under the first method, referred to as "Type I" provisioning, AT&T provides the connection between the end-user customer and AT&T's network entirely on AT&T owned and operated facilities. In these situations, AT&T either owns or is economically able to justify building facilities to the end-user's premise. The second – and by far more common provisioning method, is referred to as "Type II" provisioning, in which AT&T leases from another carrier some portion of the equipment or facilities used in providing connectivity to the end-user's premises. When it uses Type II provisioning, AT&T has determined that it does not have, or cannot feasibly build, facilities all the way from its network to an end-user's premises.

way and continuing throughout the physical deployment of the facilities, is fraught with hurdles that slow, and at times can even stop deployment. Typically, such construction requires cooperation from local authorities and other carriers and can take months, or even years, to complete. But customers typically seek service in timeframes measured in days or weeks. As a result, when faced with the prospect of significant construction delays, AT&T must rely on other suppliers able to meet those time constraints or lose the customer's business. And the choice of other suppliers is generally a choice of one - the ILEC.

Q. YOU MENTIONED RIGHTS OF WAY. HOW DOES RIGHTS-OF-WAY ACCESS IMPACT CONSTRUCTION OF FACILITIES?

A. Unreasonable delays in the granting of access to rights-of-way ("ROWs") constitute perhaps the greatest operational obstacle faced by CLECs in deploying their own transport facilities. AT&T cannot begin construction of a route until all of the needed ROW agreements are in place.

Q. PLEASE DESCRIBE THE PROCESS OF OBTAINING ROW ACCESS IN MISSOURI.

A. AT&T must obtain ROW access for the entire footprint of its network. AT&T is therefore required to obtain ROW access from many entities, including municipalities, counties, the State of Missouri, railway companies, power companies, governmental entities, and private landowners before it begins construction. AT&T's only legal resort when negotiating with these entities is the Federal Telecommunications Act of 1996.

Even with municipalities that recognize an obligation to allow for competitive facilities construction under the Act, the practical process of submitting plans for review and obtaining approvals still may delay projects for months. Other owners of ROWs may demand exorbitant fees and set other onerous conditions. AT&T has experienced resulting delays and additional costs across the country.

Q. CAN YOU GIVE AN EXAMPLE OF DELAYS RESULTING FROM ACTIONS OF RIGHT OF WAY OWNERS IN MISSOURI?

A. Yes. A recent example involved an AT&T project to build into several locations near Olive & Lindbergh in St. Louis for an enterprise customer. For part of the project, AT&T sought to place aerial cable on poles under agreement with a third party who had access to the poles. The poles were built on private rights-of-way. The property owner refused to allow AT&T use of the rights-of-way without an agreement to pay him a portion of the revenues from the circuits to be placed there, and the aerial cable was never activated.

Railroad rights-of-way present another problem area. For example, last summer, AT&T was working to complete facilities to a customer that included use of a Norfolk Southern railroad spur that crossed between two adjacent private commercial properties. When it was discovered that the railroad spur was on an easement granted by a previous property owner, the process of obtaining right-of-way agreement added over two months delay at a time when the customer was pressing for completion. And this experience was a relatively good one in dealing with railroad rights-of-way.

Finally, it is my understanding that, in order to obtain access to rights-of-way for construction in the city of St. Louis and in St. Louis County, even the routine review of applications and construction plans and drawings adds a month to a project in order to obtain permits.

Q. WHAT CHOICES DOES AT&T HAVE IN RESPONDING TO SUCH IMPEDIMENTS TO OBTAINING RIGHTS OF WAY?

A. To avoid these delays, AT&T and other CLECs have three choices: they can accept these burdensome and discriminatory conditions and additional costs; use the existing facilities of the incumbent; or forego competing to provide service to customers. None of these alternatives puts a CLEC in a practical position to compete.

Q. ONCE AT&T HAS OBTAINED THE NECESSARY AUTHORIZATIONS, DOES IT INCUR OBSTACLES DURING THE CONSTRUCTION PROCESS?

A. Yes**.** Even if AT&T obtains all of the necessary authorizations (e.g., rights-of-way), that is only the beginning of the process. Once all these steps have been successfully completed - and assuming the customer is still willing to wait for service - the CLEC is then in a position to begin constructing the necessary facilities. As with any type of construction project, unforeseen problems (including such external factors as labor and equipment shortages) can delay completion. Even under ideal conditions, it typically takes a number of months for a facility to become "revenue ready" - *i.e.,* ready to provide service to a customer or customers subtending a particular central office. Such ideal

conditions include the availability of collocation space and all construction proceeding without unforeseen delays.

Q. IN ADDITION TO CONSTRUCTING THE TRANSPORT ROUTE, WHAT ELSE WOULD AT&T HAVE TO DO TO PROVIDE DEDICATED TRANSPORT?

A. AT&T and other CLECs would have to establish appropriate collocation in the two ILEC central offices to be connected by dedicated transport.

Q. HOW IS THIS NEED RELEVANT TO THE POTENTIAL DEPLOYMENT TRANSPORT CLAIMS ADVANCED BY SBC HERE?

A. SBC Missouri has limited its potential deployment transport claim to routes that it is challenging under the trigger analyses. However, the fact that two or three CLECs presently have collocation space at "A" and "Z" central offices says nothing about whether another CLEC who had a need for dedicated transport between those two offices (at or below 12 DS3s) would find collocation space available in those offices on a timely basis and would be able to justify the expense of a collocation arrangement to obtain this limited volume of dedicated transport between the two offices. SBC has not even attempted to show that collocation is available and affordable on any particular route, although that would be an essential component of determining that self-provided dedicated transport is economical for CLECs on that route.

B. High-Capacity Loops

Q. HAVE YOU REVIEWED THE TESTIMONY OF J. GARY SMITH OF SBC CONCERNING THE POTENTIAL DEPLOYMENT OF HIGH CAPACITY LOOPS?

A. Yes, I have.

Q. DO YOU AGREE WITH HIS ANALYSIS OF POTENTIAL DEPLOYMENT?

A. I do not. Mr. Smith's approach to potential deployment of loops is, if anything, an even more extreme departure from the TRO than his approach to transport. Mr. Smith's theory appears to be that because some fiber has been deployed by particular carriers in portions of St. Louis and Kansas City, a customer lateral can be quickly and easily constructed by any carrier and connected to this fiber to service any building within 300 feet of this fiber. There are multiple problems with this theory, many of which are discussed in the testimony of Sean Minter. However, I will explain several problems that I have with this theory from a network engineering standpoint.

First, the fact that carrier A has fiber near a building does not mean that carriers B and C can build customer laterals to that buildings; it only means that carrier A alone *might* be able to build a customer lateral. Mr. Smith does not say which, if any, of the buildings he has identified as "potential deployment" candidates could be served by more than one carrier. Thus, he offers no information as to whether those buildings are suitable for multiple competitive supply. As with his theory regarding dedicated transport, the fact that one carrier is serving a building is not sufficient to meet the loop triggers, so the *mere possibility* that one carrier might be able to serve a building is likewise insufficient to demonstrate that potential deployment is feasible for CLECs in general, or that the identified building is suitable for multiple competitive suppliers.

Another problem with Mr. Smith's theory is that he simply and without explanation assumes that any building within 300 feet of fiber can be served by a customer lateral of 300 feet. However, in my experience, it is frequently the case that the necessary path from the fiber ring to the building is not a straight line, but instead is a meandering path that is longer than the as-the-crow-flies distance would suggest. As a result, many of the buildings are not really within 300 hundred feet of the fiber ring in the first place.

Finally, Mr. Smith's theory is flawed because it suggests that loops can be quickly and easily constructed to any of the building locations. This sort of demonstration could only be meaningful if it were made on a location by location basis, because there are often unique circumstances that prevent a CLEC from building an extension to serve a building.

Q. WHAT OBSTACLES DOES AT&T FACE IN DEPLOYING ITS OWN HIGH-CAPACITY LOOPS?

A. When AT&T is deploying its own loops, it faces not only all of the hurdles that it faces when building interoffice transport, but also faces a number of additional hurdles as well. Because loops generally serve only a single location (and often only one or a few customers at that location), it is even more difficult to accurately identify instances where the potential demand, the costs to build, and the difficulty of construction indicate a wise investment.

A critical problem that AT&T has encountered in deploying its own loops is the need to negotiate access to each building. This is all too often an independent barrier to entry. It is often the case that access agreements are too difficult to

complete, such that landlords only allow AT&T to provide "fiber to the floor" to serve a particular customer rather than to the common space necessary to serve customers located throughout the building. This result keeps AT&T from accessing the entire building. In such a case, AT&T loses the ability to serve all of the customers in a building who are not on the particular floor where AT&T has obtained access.

Q. HOW HAS THE NEED TO NEGOTIATE BUILDING ACCESS AGREEMENTS ADVERSELY AFFECTED AT&T'S ABILITY TO DEPLOY HIGH-CAPACITY LOOPS?

A. There are two primary ways AT&T has been handicapped by the need to negotiate building access agreements. First, the negotiation imposes a delay on providing service. This discourages potential customers from having an interest in changing their service to AT&T. Second, the access agreements cost money, that must be factored into the determination whether it will be economically justifiable to provision service to a new customer.

Q. WHAT TYPE OF PROBLEMS HAS AT&T ENCOUNTERED IN OBTAINING BUILDING ACCESS?

A. AT&T has encountered a wide range of problems, including building owners who will not return AT&T calls regardless of our level of persistence, and owners who are only willing to provide access in exchange for AT&T's agreement to unreasonable terms — most often highly inflated monthly fees for placing AT&T facilities in a building.

Q. CAN YOU GIVE EXAMPLES FROM MISSOURI?

A. Yes. I already have described the example of the private right-of-way owner who halted an aerial cable project by insisting on sharing in the revenues from the project. Another recent example is a project for **[redacted]** in which AT&T was ready to proceed with construction in mid-October 2003 (and to complete construction by month end) for a customer who wanted service by December 1, 2003. To date, however, AT&T has been unable to negotiate entry into the building with the owner. This delay has required the customer to continue with SBC on a month-to-month basis, jeopardizing AT&T's acquisition of this customer's business. This is the sort of real-world problem that AT&T and other competitors can and do encounter in seeking to extend service to customers, and they vary from owner to owner unpredictably, not on the basis of proximity to existing CLEC fiber. I do not believe it is fair, appropriate, or at all justified for SBC to assume these problems away, even within a 300-foot corridor, without consideration of owner demands or practices at any individual building, solely on the basis of Mr. Gary O. Smith's statement that, in his experience representing SBC, he has found "that building owners are willing to negotiate agreeable access arrangements to their property." G.O. Smith Direct at 24. It is not surprising that building owners long have accommodated, or that they would continue to accommodate, the provider who for so long was the only provider of local telecommunications services, but that fact is not evidence that building owners offer reasonable terms of access to CLECs generally in Missouri, and it certainly is not evidence that CLECs have access to the entire building at any of the particular locations

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for which SBC seeks to eliminate its § 251(c)(3) unbundling obligation in this case on the basis of potential deployment.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.