ORIGINAL

AT&T

Tracy Hatch
Senior Attorney
Law and Government Affairs
Southern Region

Suite 700
101 N. Monroe Street
Tallahassee, FL 32301
850-425-6360

February 19, 2004

RECEIVED-FPSC
04 FEB 20 AM 11:36
COMMISSION
CLERK

BY OVERNIGHT MAIL
Ms. Blanca Bayó, Director
The Commission Clerk and Administrative Services
Room 110, Easley Building
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Docket Nos. 030851-TP and 030852-TP

Dear Ms. Bayó:

Enclosed for filing are an original and 15 copies of AT&T Communications of the Southern States, LLC's Late-filed Deposition Exhibits of Jay Bradbury.

Please acknowledge receipt of this letter by stamping the extra copy of this letter "filed" and returning the same to Lisa Sapper in the enclosed stamped envelope.

Thank you for your assistance with this filing.

Sincerely yours,

Tracy Hatch/las

Tracy W. Hatch

AUS
CAF
CMP
COM
CTR
ECR
GCL
OPC
MMS
EC 1
TH

TWH/las
Enclosure
cc: Parties of Record

RECEIVED & FILED

FPSC-BUREAU OF RECORDS

DOCUMENT NUMBER-DATE

02496 FEB 20 04

FPSC-COMMISSION CLERK

CERTIFICATE OF SERVICE
DOCKET NO. 030851-TP

I HEREBY CERTIFY that a copy of the foregoing has been furnished via electronic mail and U.S. Mail or as indicated this 19th day of February 2004, to the following parties of record:

Jeremy Susac Office of the General Counsel Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850	BellSouth Telecommunications, Inc. * Nancy B. White c/o Ms. Nancy H. Sims 150 South Monroe Street, Suite 400 Tallahassee, FL 32301-1556 Phone: (850) 224-7798 Fax: 222-8640 Email: nancy.sims@bellsouth.com
Florida Cable Telecom. Assoc., Inc. Michael A. Gross 246 E. 6th Avenue, Suite 100 Tallahassee, FL 32303 Phone: 850-681-1990 Fax: 681-9676 Email: mgross@fcta.com	MCI WorldCom Communications, Inc. * Ms. Donna C. McNulty 1203 Governors Square Blvd., Suite 201 Tallahassee, FL 32301-2960 Phone: (850) 219-1008 Fax: 219-1018 Email: donna.mcnulty@wcom.com
Sprint – Florida* Susan S.Masterton 1313 Blairstone Road MC: FLTLHO0107 Tallahassee, FL 32301 Phone: (850) 847-0244 Fax: 878-0777 Email: susan.masterton@mail.sprint.com	KMC Telecom III, LLC * Marva Brown Johnson, Esq. 1755 North Brown Road Lawrenceville, GA 30043-8119 Phone: (678) 985-6261 Fax: (678) 985-6213 Email: marva.johnson@kmctelecom.com
Covad Communications Company* Charles E. Watkins 1230 Peachtree Street, NE 19th Floor Atlanta, GA 30309 Phone: (404) 942-3492 Email: gwatkins@covad.com	ITC^DeltaCom * Nanette Edwards 4092 South Memorial Parkway Huntsville, AL 35802 Phone: (256) 382-3856
McWhirter Reeves McGlothlin Davidson* Kaufman & Arnold, PA Vicki Gordon Kaufman 117 South Gadsden Street Tallahassee, FL 32301 Phone: (850) 222-2525 Email: vkaufman@mac-law.com	Verizon Florida Inc.* Mr. Richard Chapkis/Kim Caswell 201 N. Franklin Street, MCFLTC0007 Tampa, FL 33601 Phone: (813) 483-2606 Fax: (813) 204-8870 Email: richard.chapkis@verizon.com
Allegiance Telecom of Florida, Inc. Charles V. Gerkin, Jr. 9201 North Central Expressway Dallas, TX 75231 Phone: (469) 259-4051 Fax: 770-234-5965 Email: charles.gerkin@algx.com	Allegiance Telecom, Inc. Terry Larkin 700 East betterfield Road Lombard, IL 60148 Phone: 630-522-6453 Email: terry.larkin@algx.com

Messer Law Firm * Floyd Self/Norman Horton P.O. Box 1876 Tallahassee, FL 32302-1876 Phone: 850-222-0720 Fax: 850-224-4359	MCI WorldCom Communications, Inc.(GA)* De O'Roark, Esq. Six Concourse Parkway, Suite 600 Atlanta, GA 30328 Email: de.oroark@wcom.com
Granite Telecommunications, LLC Rand Currier/Geoff Cookman 234 Copeland Street Quincy, MA 02169-4005 Phone: (617) 847-1500 Fax: (617) 847-0931 Email: rcurrier@granitenet.com	Miller Isar, Inc. Andrew O. Isar 7901 Skansie Avenue, St. 240 Gig Harbor, WA 98335 Phone: (253) 851-6700 Fax: (253) 851-6474 Email: aisar@millerisar.com
Moyle Law Firm (Tall) Jon Moyle, Jr. The Perkins House 118 North Gadsden Street Tallahassee, FL 32301 Phone: (850) 681-3828 Fax: 681-8788 Email: jmoylejr@/moylelaw.com	NewSouth Communications Corp.* Jake E. Jennings/Keiki Hendrix Two North Main Center Greenville, SC 29601-2719 Phone: (864) 672-5877 Fax: (864) 672-5313 Email: jejennings@newsouth.com
BellSouth Telecommunications, Inc.* R. Douglas Lackey 675 W. Peachtree Street, Suite 4300 Atlanta, GA 30375 Phone: (404) 335-0747	Supra Telecommunications and Info. Systems Jorge Cruz-Bustillo 2620 S.W. 27th Avenue Miami, FL 33133 Phone: (305) 476-4252 Fax: (305) 443-1078 Email: Jorge.cruz-bustillo@stis.com
Supra Telecommunications and Info. Systems Jonathan Audu 1311 Executive Center Drive, Suite 220 Tallahassee, FL 32301-5027 Phone: (850) 402-0510 Fax: (850) 402-0522 Jonathan.audu@stis.com	Sprint (KS) Kenneth A. Schifman 6450 Sprint Parkway Mailstop: KSOPHN0212-2A303 Overland Park, KS 66251-6100 Phone: 913-315-9783
Sprint (NC) H. Edward Phillips, III 14111 Capital Blvd. Mailstop: NCWKFR0313-3161 Wake Forest, NC 27587-5900 Phone: 919-554-7870	Xspedius Communications Ms. Rabinai E. Carson 5555 Winghaven Blvd., Suite 300 O'Fallon, MO 63366-3868 Phone: (301) 361-4220 Fax: (301) 361-4277 Email: rabinai.carson@xspedius.com
Matthew Feil FDN Communications 390 North Orange Avenue Suite 2000 Orlando, FL 32801 (407) 835-0460 mfeil@mail.fdn.com	Scott A. Kassman FDN Communications 390 North Orange Avenue Suite 2000 Orlando, FL 32801 (407) 447-6636 skassman@mail.fdn.com

Charles J. Beck Deputy Public Counsel Office of Public Counsel C/O The Florida Legislature 111 West Madison Street, #812 Tallahassee, FL 32399-1400 Phone: 850-487-8240 Fax: 850-488-4491 Beck.charles@leg.state.fl.us	Casey & Gentz, L.L.P. Bill Magness 919 Congress Avenue, Suite 1060 Austin, TX 78701 Phone: 512-225-0019 Fax: 512-480-9200
Pat Lee Office of the General Counsel Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850 plee@psc.state.fl.us	

Tracy Hatch/cas

Tracy W. Hatch

CERTIFICATE OF SERVICE
DOCKET NO. 030852-TP

I HEREBY CERTIFY that a copy of the foregoing has been furnished via electronic mail or as indicated this 19th day of February, 2004 to the following parties of record:

Adam Teitzman Office of the General Counsel Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, FL 32399-0850 Email: ateitzma@psc.state.fl.us	BellSouth Telecommunications, Inc. * Nancy B. White c/o Ms. Nancy H. Sims 150 South Monroe Street, Suite 400 Tallahassee, FL 32301-1556 Phone: (850) 224-7798 Fax: 222-8640 *Email: nancy.sims@bellsouth.com*
Florida Cable Telecom. Assoc., Inc. Michael A. Gross 246 E. 6th Avenue, Suite 100 Tallahassee, FL 32303 Phone: 850-681-1990 Fax: 681-9676 Email: mgross@fcta.com	MCI WorldCom Communications, Inc. * Ms. Donna C. McNulty 1203 Governors Square Blvd., Suite 201 Tallahassee, FL 32301-2960 Phone: (850) 219-1008 Fax: 219-1018 Email: donna.mcnulty@wcom.com
Sprint – Florida* Susan S. Masterton 1313 Blairstone Road MC: FLTLHO0107 Tallahassee, FL 32301 Phone: (850) 847-0244 Fax: 878-0777 Email: susan.masterton@mail.sprint.com	KMC Telecom III, LLC * Marva Brown Johnson, Esq. 1755 North Brown Road Lawrenceville, GA 30043-8119 Phone: (678) 985-6261 Fax: (678) 985-6213 Email: marva.johnson@kmctelecom.com
Covad Communications Company* Charles E. Watkins 1230 Peachtree Street, NE 19th Floor Atlanta, GA 30309 Phone: (404) 942-3492 Email: gwatkins@covad.com	ITC^DeltaCom * Nanette Edwards 4092 South Memorial Parkway Huntsville, AL 35802 Phone: (256) 382-3856
McWhirter Reeves McGlothlin Davidson* Kaufman & Arnold, PA Vicki Gordon Kaufman 117 South Gadsden Street Tallahassee, FL 32301 Phone: (850) 222-2525 Email: vkaufman@mac-law.com	Verizon Florida Inc. * Mr. Richard Chapkis 201 N. Franklin Street, MCFLTC0007 Tampa, FL 33601 Phone: (813) 483-2606 Fax: (813) 204-8870 Email: richard.chapkis@verizon.com
Allegiance Telecom of Florida, Inc. Charles V. Gerkin, Jr. 9201 North Central Expressway Dallas, TX 75231 Phone: (469) 259-4051 Fax: 770-234-5965 Email: charles.gerkin@algx.com	Allegiance Telecom, Inc. Terry Larkin 700 East Betterfield Road Lombard, IL 60148 Phone: 630-522-6453 Email: terry.larkin@algx.com
FDN Communications	Florida Competitive Carriers Assoc. C/O McWhirter Law Firm

Matthew Feil/Scott Kassman 390 North Orange Avenue, Suite 2000 Orlando, FL 32801-1640 Phone: (407) 835-0460 Fax: (407) 835-0309 Email: mfeil@mail.fdn.com/skassman@mail.fdn.com	Joseph McGlothlin/Vicki Kaufman 117 S. Gadsden Street Tallahassee, FL 32301 Phone: (850) 222-2525 Fax: (850) 222-5606 email: jmcglothlin@mac-law.com/vkaufman@mac-law.com
MCI WorldCom Communications, Inc.(GA) * De O'Roark, Esq. Six Concourse Parkway, Suite 600 Atlanta, GA 30328 Email: de.oroark@wcom.com	Messer Law Firm* Floyd Self/Norman Horton P. O. Box 1876 Tallahassee, FL 32302-1876 Phone: (850) 222-0720 Fax: (850) 224-4359
Moyle, Flanigan, Katz, Raymond & Sheehan, P.A. Jon C. Moyle, Jr. The Perkins House 118 North Gadsden Street Tallahassee, FL 32301 Phone: (850) 681-3828 Fax: 681-8788 Email: jmoylejr@/moylelaw.com	NewSouth Communications Corp. * Jake E. Jennings Two North Main Center Greenville, SC 29601-2719 Phone: (864) 672-5877 Fax: (864) 672-5313 Email: jejennings@newsouth.com
Xspedius Communications Ms. Rabinai E. Carson 5555 Winghaven Blvd., Suite 300 O'Fallon, MO 63366-3868 Phone: (301) 361-4220 Fax: (301) 361-4277 Email: rabinai.carson@xspedius.com	BellSouth Telecommunications, Inc.* Douglas Lackey 675 W. Peachtree Street, Suite 4300 Atlanta, GA 30375
Supra Telecommunications and Info. Systems Jorge Cruz-Bustillo 2620 S.W. 27th Avenue Miami, FL 33133 Phone: (305) 476-4252 Fax: (305) 443-1078 Email: Jorge.cruz-bustillo@stis.com	Supra Telecommunications and Info. Systems Jonathan Audu 1311 Executive Center Drive, Suite 220 Tallahassee, FL 32301-5027 Phone: (850) 402-0510 Fax: (850) 402-0522 Jonathan.audu@stis.com
Nuvox Communications, Inc. Bo Russell 301 North Main Street Greenville, SC 29601	Miller Isar, Inc. Andrew O. Isar 7901 Skansie Avenue, Ste. 240 Gig Harbor, WA 98335

Casey & Gentz, L.L.P. Bill Magness 919 Congress Avenue, Suite 1060 Austin, TX 78701 Phone: 512-225-0019 Fax: 512-480-9200	Sprint (KS) Kenneth A. Schifman 6450 Sprint Parkway Mailstop: KSOPHN0212-2A303 Overland Park, KS 66251-6100 Phone: 913-315-9783
Sprint (NC) H. Edward Phillips, III 14111 Capital Blvd. Mailstop: NCWKFR0313-3161 Wake Forest, NC 27587-5900 Phone: 919-554-7870	

Tracy Hatch/bas

Tracy W. Hatch, Esq.

REQUEST: Staff's Fifth Set of Interrogatories

DATED: February 2, 2004

Interrogatory 27: For the purpose of the following questions, please refer to the direct testimony of Bellsouth witness Tipton, Exhibit PAT-4 and to the direct testimony of Verizon witness Fulp , Exhibit ODF-3.

(a) Considering only UNE Zones 1 and 2 of the markets identified in Staff's Interrogatory 20 (a through f) as AT&T having entered, please identify those markets where AT&T provides service using UNE-L.

(b) For those markets identified in (a), please identify the CLLI for the switches which serve these markets.

(c) For each switch identified in (b), please identify the number of DS0 lines served in each market.

(d) For those DS0 lines served in each market identified in (c), please indicate the number of customer locations being served by those DS0 lines.

(e) Of those customer locations identified in (d), please indicate the number of customer locations with 3 or fewer DS0 lines.

(f) For each switch identified in (b) that provides DS0 service, please state the percent of total capacity used to provide DS0 service.

(g) For each switch identified in (b) that provides DS0 service, please state the percent of spare capacity.

(h) For each switch identified in (b), please identify the ILEC wire centers served.

Response:

(a) See Confidential Attachment Int. 27 and 29.

(b) See Confidential Attachment to Int. 27 and 29

(c) See Confidential Attachment to Int. 27 and 29

(d) AT&T does not have information in the form requested. however, the number of customer locations served may be determined by using the average 2.5 DSO lines per customer location.

(e) AT&T does not have this information.

(f) AT&T measures its switch capacity in terms of the utilization of installed T1 capacity. There is no valid methodology for determining percent of capacity using a mixture of DS0 and T1 information. However, it is possible to determine the number of voice grade equilavent lines in total on the switch and the number of those lines that originate as DS0 loops. The table below was previously provided on page 7 the Rebuttal Testimony of Jay Bradbury filed in this docket on January 7, 2004 provided this information for AT&T's six local switches in Florida. Percent Enterprise equals percent used for DS1 service and therefore the difference between that and 100% equals % DS0.

***BEGIN CONFIDENTIAL—SUBJECT TO PROCTECTIVE AGREEMENT

Switch Name	Switch CLLI	Number of voice grade equivalent lines (VGE)	Of VGE lines, number of DSO Lines		Percent Enterprise	
			AT&T Records	ILEC Records	AT&T	ILEC
Miami 1	NMIAFLAYDS0	26,334	3,164	3,652	88%	86%
Miami 3	OJUSFLTLDS3	7,434	0	0	100%	100%
Miami 2	FTLDFLOVDS3	12,600	3,942	4,380	69%	65%

Jacksonville	JCVLFLCLDS6	6,031	160	188	97%	97%
Orlando	ORLEFLGVDS0	15,242	2,323	1,835	85%	88%
Tampa	TAMQFLRYDSO	18,705	274	393	98%	98%
STATE		83,346	9,863	10,448	88%	87%

END CONFIDENTIAL—SUBJECT TO PROTECTIVE AGREEMENT***

g. The percent of spare capacity, measured in terms of installed T1 capacity for each of AT&T's local switches in Florida is identified in the following table: (NOTE: BellSouth's Response to Staff's 4th Set of Interrogatories on January 23, 2004 reported as "Aggregate Excess Capacity" for these switches in aggregate, a number that was in fact the average percent utilization in its response to Item 75b. This error grossly overstates available spare capacity.)

***BEGIN CONFIDENTIAL—SUBJECT TO PROTECTIVE AGREEMENT

Switch Name	Switch CLLI	Installed T1 Capacity	Percent Utilization	Percent Spare Capacity*
Miami 1	NMIAFLAYDS0	4,529	72%	8%
Miami 3**	OJUSFLTLDS3	1,619	38%	42%
Miami 2	FTLDFLOVDS3	3,278	36%	44%
Jacksonville	JCVLFLCLDS6	2,552	53%	27%
Orlando	ORLEFLGVDS0	3,544	43%	37%
Tampa	TAMQFLRYDSO	3,677	52%	28%

Switch capacity is capped at 80% to protect service quality during unexpected peak demand surges.

** **The Miami 3 switch does not provide any DS0 service but has been included for completeness.**

END CONFIDENTIAL—SUBJECT TO PROTECTIVE AGREEMENT***

h. See Confidential Attachment Int. 27 and 29.

BEFORE THE

FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF

DAVID L. TALBOTT

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.
AND TCG SOUTH FLORIDA, INC.

DOCKET NO. 000731-TP

NOVEMBER 16, 2000

FL Docket No. 030851-TP
Late Filed JMB Depo #2
David Talbott Testimony

Exh. 2

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF DAVID L. TALBOTT

ON BEHALF OF

AT&T COMMUNICATIONS OF THE SOUTHERN STATES, INC.

AND TCG SOUTH FLORIDA, INC.

DOCKET NO. 000731-TP

NOVEMBER 15, 2000

Q. PLEASE STATE YOUR NAME, ADDRESS, AND OCCUPATION.

A. My name is David L. Talbott. My business address is 3737 Parke Drive, Edgewater, Maryland 21037. I am a District Manager in the Local Services and Access Management group in AT&T Network Services.

Q. PLEASE PROVIDE YOUR BACKGROUND AND PROFESSIONAL EXPERIENCE AS THEY RELATE TO THE ISSUES IN THIS PROCEEDING.

A. I began my career with the AT&T Long Lines Department in 1976. From 1979 through 1988, I held various management positions in engineering related to the design and implementation of private line services. From 1988 through 1998, I developed and managed numerous business relationships between AT&T and selected Competitive Access Providers and Competitive Local Exchange Carriers. My responsibilities required that I address and resolve both technical and business issues, including the interconnection of

the respective networks. From February through August of 1999, I was the Business Development Manager for AT&T's Internet Protocol Cable Telephony Project. My responsibilities included assessing the technical capabilities of selected vendors and contracting with the best-qualified vendors to assist AT&T in its development of Internet Protocol cable telephony technology. As of September, 1999, I was assigned to my current position, where I am responsible for the development and negotiation of interconnection agreements between AT&T and incumbent local exchange carriers, focusing on network interconnection issues.

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

A. My testimony supports AT&T's proposal as to how AT&T and BellSouth should interconnect their two networks and why AT&T should be permitted to charge BellSouth for tandem switching when completing calls from BellSouth's customers. First, I will explain that the AT&T and BellSouth networks should and can be interconnected on an equivalent basis, even though the two network architectures are substantially different. (Issue 7.) Second, I will describe to the Commission how AT&T's network interconnection solution would benefit AT&T, BellSouth, and Florida consumers. And third, I will demonstrate that the geographic area covered by AT&T's switches is comparable to the geographic area covered by BellSouth's tandem switches. (Issue 12.)

I. NETWORK INTERCONNECTION

ISSUE 7

Q. BRIEFLY DESCRIBE THE ISSUE REGARDING NETWORK ARCHITECTURE.

A. This issue concerns a dispute about who will bear the costs of transporting local traffic between the BellSouth and AT&T networks in Florida. In particular, it concerns the question of whether BellSouth should be responsible for the costs of originating, transporting, and terminating local calls from its own customers to AT&T customers in Florida. BellSouth has inaccurately portrayed this as a question of whether its subscribers should pay for the design of the AT&T network in Florida. I want to dispel that myth at the outset: the AT&T proposal will not in any way impose any additional financial burden on any BellSouth customers in Florida.

Indeed, the real question is whether AT&T should be forced to design its network less efficiently and incur higher costs simply because BellSouth refuses to transport its own originating traffic as it is required to and as it has historically done and continues to do for calls to its own customers and as AT&T does for calls from its customers to BellSouth customers. The focus of this issue should be on the harm to competition and consumers caused by the BellSouth proposal and on the illegality of the BellSouth proposal under the Telecommunications Act of 1996 (the "Act") and FCC regulations.

Q. WHAT HAS GIVEN RISE TO THIS ISSUE?

A. In order to interconnect the BellSouth and AT&T networks, the two parties must deploy Interconnection Facilities between the switches serving AT&T's customers and the end office switches serving BellSouth customers and the subtending BellSouth tandem switches.[1] The parties must then establish trunking between these switches for the efficient routing of interconnection traffic.

As I explain in greater detail below, to effectively compete for local exchange customers in Florida, AT&T has designed and deployed a network architecture that is substantially different than the embedded BellSouth network. This means that some calls from BellSouth customers to AT&T customers must be transported beyond the BellSouth local calling areas to be delivered to the AT&T switch serving the terminating AT&T customers. Despite unequivocal legal obligations requiring each party to bear the cost to transport and terminate its own traffic, BellSouth objects to bearing any costs for Interconnection Facilities beyond the BellSouth local calling areas. This is true even though both parties have agreed that calls within each LATA will be considered local for purposes of reciprocal compensation. This means that BellSouth is proposing that AT&T bear the cost of transporting BellSouth's

[1] Interconnection Facilities are the physical transmission channels that transport traffic between the AT&T and BellSouth switches that are used for local and intraLATA toll traffic. Facilities should be differentiated from trunks or trunk groups, which are the logical connections between two switches permitting traffic to be routed in an efficient manner. Trunks are established over working facilities.

originated intraLATA and Extended Area Calling from BellSouth's existing calling areas to AT&T's switch for completion of such calls.

Q. WHAT IS BELLSOUTH'S POSITION ON THIS ISSUE?

A. BellSouth's position is that it is not responsible for all of the costs of originating, transporting, and terminating its own traffic for calls from its customers to AT&T customers. Rather, BellSouth asserts that it should have the unilateral and arbitrary right to designate a point within each of its Florida local calling areas where its responsibilities will end. Instead of transporting its own calls to their terminating (switch) destinations, BellSouth will only deliver its local and intraLATA traffic to the points designated by BellSouth and will require AT&T (and its customers) to bear the cost of transporting and terminating BellSouth's traffic beyond those points. Meanwhile, BellSouth wants AT&T to be financially responsible for delivering AT&T's originating traffic to each and every BellSouth end office and BellSouth also wants AT&T to be financially responsible for picking up BellSouth's originating traffic on each and every BellSouth local calling area. Thus, according to BellSouth, AT&T is financially responsible for delivering its own originating calls (calls from its customers to BellSouth customers) into every BellSouth end office, but BellSouth is not financially responsible for delivering its originating beyond the boundaries of its local calling areas to the location of the AT&T switch.

Q. WHAT IS AT&T'S POSITION ON THIS ISSUE?

A. AT&T's position is that the responsibility for originating, transporting, and terminating traffic should be mutual and that each party should be financially responsible for transporting its own originating traffic to a comparable point on the terminating party's network (i.e. the other party's switch serving the terminating customer). AT&T, and all ALECs, should be permitted to choose the most efficient interconnection point, as the law allows. ALECs should not have to design their networks less efficiently and their customers should not shoulder the burden of higher costs simply because BellSouth refuses to transport its own originating traffic as it is required to.

Q. WHAT SHOULD THE COMMISSION DO?

A. The Commission should adopt AT&T's network interconnection proposal. This proposal imposes on both parties the same relative obligations to transport and terminate traffic (i.e., equivalent interconnection). The Commission should thus continue to incorporate the longstanding policy that the originating party pays the cost of its own traffic. Unlike BellSouth's proposal, which places unequal obligations on the parties, substantially advantaging BellSouth, AT&T's proposal establishes equivalent interconnection, giving no party any advantage over the other.

Q. YOU MENTIONED THAT BELLSOUTH'S AND AT&T'S NETWORK ARCHITECTURES ARE SUBSTANTIALLY DIFFERENT. WHAT DO YOU MEAN BY THIS STATEMENT?

A. AT&T's and BellSouth's networks are similar in the sense that the two networks cover comparable geographic areas. This matter is discussed in greater detail later in my testimony under Issue 12. Beyond this one similarity, however, the two networks are substantially different with respect to their architecture.

BellSouth's network is a multi-layer or tiered network. BellSouth has many end office switches spread out over its service area and installed in the neighborhoods populated by its customers. These end office switches are interconnected by an overlying network of tandems. When certain volume levels are achieved and it is cost effective, BellSouth uses high-capacity trunks that directly link certain end office switches (bypassing the tandems). BellSouth's network architecture is depicted in Exhibit DLT-1 to my testimony. This hierarchical or layered network was deployed when there were limited transport options on the end-user side of the switch, resulting in many switches deployed in the neighborhood (thus, keeping loop lengths relatively short), as was dictated by the technology of the times. As I understand it, BellSouth finds the use of its tandem switches to be the least costly method of interconnecting many end offices until certain traffic thresholds are achieved between two end offices, and only then is it more efficient for BellSouth to directly connect the two end offices. This

arrangement recognizes that BellSouth's tandem facilities (both switch and common shared transport) are less expensive to utilize for occasional use than the capacity commitment associated with dedicated transport, until enough traffic is develops to fill the dedicated transport.

Q. WHAT ABOUT AT&T'S NETWORK?

A. AT&T, in contrast to BellSouth, began its local telephony deployment only recently. Therefore, AT&T's switches[2] are deployed consistent with the costs and efficiencies of today's technology. Currently, AT&T has a menu of options that are capable of economically connecting end users located relatively far from a switch. These options include: (1) high capacity fiber optic rings to commercial buildings and multiple dwelling units; (2) hybrid fiber coax plant being deployed by AT&T's cable TV properties; (3) fixed wireless technology now being beta tested (although this technology would likely come under a different (CMRS) interconnection agreement), (4) UNE loop resale through AT&T collocation in BellSouth end offices, and (5) dedicated high-capacity facilities (in some cases using special access services purchased from BellSouth but more appropriately through combinations of UNEs). Due to the very high initial cost of switching platforms as compared to the lower incremental cost of high-capacity facilities, AT&T has chosen to deploy fewer switches and more transport on the end-user side of the switch.

[2] Although AT&T switches normally provide both an end office and tandem function and are really multi-function switches, I will refer to them in this testimony simply

(Even where AT&T has determined the need for multiple switches within a LATA, they are often collocated within the same building.) The distinction between the two networks is that while BellSouth deploys tandems first and then grows into high use dedicated trunking between offices, AT&T deploys a single switch combined with long transport on the end-user side of the switch, because that combination is incrementally less costly than adding a new switch in each part of a market. AT&T's network architecture is depicted in Exhibit DLT-2 to my testimony.

Consistent with AT&T's architecture, there are certain LATAs in which AT&T has not deployed a switch physically within the LATA. AT&T has agreed that in such cases, AT&T will establish at least one physical Point of Interconnection (POI)[3] within the LATA, and AT&T will provide all of the facilities (for both originating and terminating traffic) between its switch and such POI. Where AT&T has chosen not to deploy a switch within a LATA, the POI will be treated as if it were an AT&T switch (i.e., AT&T has virtually extended its switching functionality into the LATA to the POI). The AT&T architecture, therefore, provides a switch (or switching presence) in every BellSouth LATA. Further, although AT&T believes it has the legal right to establish a POI at the most efficient, technically feasible point, AT&T is willing, under its proposal, to establish at least two physical POIs

---

as "switches." In AT&T's proposed Interconnection Agreement, they are referred to as "switch centers."

[3] As used in this testimony POI means the point at which the two networks are interconnected for the mutual exchange of traffic.

within each LATA where BellSouth provides service today unless there is a de minimus volume of traffic across the LATA.

Q. WHY DIDN'T AT&T DEPLOY A NETWORK ARCHITECTURE THAT IS SIMILAR TO BELLSOUTH'S?

A. Considering the number of customers AT&T serves, the volume of AT&T's traffic these customers generate, and the geographic dispersion of these customers, the BellSouth network architecture would be highly inefficient for AT&T. Yet, that is exactly what BellSouth proposes: that AT&T be required to replicate the BellSouth network architecture for network interconnection, or at least be required to incur the cost that would be associated with replicating the BellSouth architecture.

Q. WHY WOULD BELLSOUTH'S PROPOSAL REQUIRE AT&T TO REPLICATE BELLSOUTH'S NETWORK?

A. BellSouth has a sufficient volume of traffic within and between each its local calling areas to cost justify trunking to that area and had designed its network accordingly. AT&T may or may not have a sufficient volume of traffic between each BellSouth local calling area to cost justify trunking to that area. As AT&T enters a new market, it starts with few or no customers. In such circumstances, AT&T certainly would not have a sufficient volume of traffic to cost justify end office trunking to such a local calling area or justify the capital needed to build out AT&T's network. In these areas, the most

efficient method for AT&T to interconnect to the BellSouth network for AT&T's traffic would be through a BellSouth tandem switch, where AT&T may establish a POI. It would be highly inefficient for AT&T to establish trunk groups or build network where the volume of AT&T traffic does not justify such. AT&T should be permitted to determine the most cost efficient method of interconnection for itself, regardless of the volumes of traffic that BellSouth may have with or between certain local calling areas.

Q. WHAT WOULD BE THE CONSEQUENCES OF REQUIRING AT&T TO INTERCONNECT WITHIN EACH LOCAL CALLING AREA?

A. Such a requirement would have two adverse affects on AT&T. First, AT&T would lose the benefits of its efficient network architecture, incurring higher network costs. Second, it would shift to AT&T the transport costs that BellSouth is required to lawfully bear under the Act. The interconnection arrangement proposed by BellSouth would be extremely unfair to AT&T, substantially more favorable to BellSouth and would suppress investment in competitive facilities. The higher costs that AT&T would be forced to bear under BellSouth's proposal would make those Florida markets that would have been marginally profitable under AT&T's interconnection proposal, uneconomic to serve. Simply put, BellSouth's interconnection proposal is harmful to competition in Florida. AT&T has proposed, and my testimony explains, that the interconnection arrangement adopted by the Commission should be neutral to either party's network architecture (i.e., each party

should have the same relative obligations when it is in the role of originating carrier) and require each party to bear the costs to transport and terminate its own traffic.

Q. DO YOU HAVE DIAGRAMS THAT DEPICT THE COSTS ASSOCIATED WITH ORIGINATING, TRANSPORTING AND TERMINATING TRAFFIC AS YOU DESCRIBE IN YOUR TESTIMONY?

A. Yes. Exhibit DLT- 3 to my testimony depicts the costs that an ILEC incurred to complete a call prior to the Act. Exhibit DLT- 4 to my testimony depicts the costs that an originating carrier is expected to incur to compete a call between competing LECs under the Act.

Exhibit DLT-4 also depicts AT&T's proposed interconnection arrangement. Please note that in DLT-4 the costs are allocated between the parties in the exact same manner when each party is in the position of originating carrier and again as the terminating carrier.

Exhibit DLT-5 depicts BellSouth's interconnection proposal. If you compare how the transport costs are allocated to each party in this diagram, it cannot be more clear that the BellSouth interconnection proposal is not reciprocal and that it is BellSouth that has shifted a large potion of its interconnection costs to AT&T. Exhibit DLT-5 shows that AT&T would bear all of the costs to deliver its traffic to the BellSouth network when AT&T is the originating

carrier and that AT&T again would bear all of the costs to carry BellSouth 's traffic back to the AT&T network when BellSouth is the originating carrier.

Q. WHY IS BELLSOUTH'S PROPOSED INTERCONNECTION ARRANGEMENT UNFAIR TO AT&T?

A. Under BellSouth's proposed interconnection arrangement, AT&T and BellSouth would have substantially inequitable obligations to provide interconnection facilities. AT&T would be financially responsible for the delivery of its traffic to each BellSouth end office, and BellSouth would deliver its traffic to AT&T no further than its own local calling area. This situation is unfair to AT&T, because the parties do not have reciprocal interconnection obligations even though the BellSouth and AT&T networks cover geographically comparable areas and have symmetrical compensation rates.

Q. WHY SHOULD THE COMMISSION REQUIRE AT&T AND BELLSOUTH TO INTERCONNECT ON AN EQUIVALENT BASIS?

A. First of all, as I discuss below, the law requires it. Moreover, as I have previously stated, AT&T's network covers a comparable geographic area to BellSouth's network. This is supported by the evidence provided under Issue 12. If an ALEC has only a small network and only offers services over a small geographic area or only to an exclusive group of customers, then that ALEC's network would not be comparable to BellSouth's network. But

AT&T has made substantial network investments in Florida and AT&T offers its local exchange services without regard to location. Therefore, the Commission should require that the BellSouth and AT&T networks be interconnected on an equivalent basis.

BellSouth's interconnection proposal completely disregards the geographic comparability of the two networks. Ignoring the legitimacy of AT&T's network architecture, BellSouth proposes that the two networks be interconnected solely on the basis of *BellSouth's* network architecture. In other words, BellSouth is asking the Commission to ascribe an arbitrary primary status upon BellSouth's network. BellSouth may believe that its network is entitled to this arbitrary status because it pre-existed local telephone competition or is based on a traditional hierarchical network architecture, but the Commission should not be led into making such a decision.

Q. SHOULD THE BELLSOUTH LOCAL CALLING AREA BE THE BASIS FOR INTERCONNECTING THE TWO PARTIES NETWORKS?

A. No. BellSouth's local calling areas should not be the basis of network interconnection. First, there is no logical reason to use local calling areas. BellSouth's original local calling areas were established for the purpose of setting rates solely for BellSouth's customers. They bear no relationship to the capacity of switches and other facilities deployed by ALECs or

BellSouth. Moreover, there is no such thing anymore as "a" local calling area. For some time BellSouth has offered EAS plans and now even offers LATA-wide local calling areas. These various calling plan options dispel any suggestion that there is any real significance to the geographic scope of any given local calling area. Moreover, BellSouth's local calling areas may be subject to substantial changes as BellSouth and its competitors seek competitive advantages for their respective local service offerings. More fundamentally, interconnection based solely on BellSouth's local calling areas does not foster competition and does not benefit consumers. To interconnect based on BellSouth's local calling areas would completely disregard the legitimacy of a competitor's local calling areas, would discourage competitors from expanding local calling areas for the benefit of customers and competition, and certainly would not be reciprocal. Moreover, using BellSouth's local calling areas as the basis of network interconnection substantially compromises the network efficiencies of the alternative network architectures deployed by AT&T, forcing AT&T into an inefficient BellSouth-look-a-like interconnection arrangement, and forcing ALEC customers to bear the burden of those inefficiencies.

Q. IS AT&T IMPROPERLY ATTEMPTING TO SHIFT FACILITY COSTS FROM AT&T TO BELLSOUTH FOR AT&T'S CUSTOMERS' TRAFFIC THAT TERMINATES ON BELLSOUTH'S NETWORK?

A. No. AT&T believes that it is responsible for the costs to originate, transport and terminate its traffic. Accordingly, AT&T proposes that it should provide

(either lease or build) all of the facilities for its originating traffic between the AT&T switch and the POI selected by AT&T and that AT&T should compensate BellSouth for any transport and switching functions provided by BellSouth for the completion of AT&T's traffic in the form of reciprocal compensation. Regardless of any claims by BellSouth to the contrary, AT&T agrees to bear the full financial costs of its traffic.

Contrary to AT&T's fair, reciprocal and lawful position, BellSouth is trying to shift its interconnection facility costs to AT&T. BellSouth retains the vast majority of end users and the revenue these customers produce, yet BellSouth seeks to avoid compensating AT&T for AT&T's costs in terminating traffic from BellSouth's end-users. This provides BellSouth with an unlawful competitive advantage. Accordingly, the Commission should reject the BellSouth proposal and adopt the AT&T proposal.

Q. BUT DOESN'T THE BELLSOUTH PROPOSAL REFLECT THE ADDITIONAL COSTS THAT BELLSOUTH MUST INCUR TO PROVIDE FACILITIES FROM ITS LOCAL CALLING AREA TO THE AT&T SWITCH?

A. No. The BellSouth proposal is nothing more than an anticompetitive proposal to unilaterally designate interconnection points for BellSouth-originated traffic. If BellSouth designates interconnection points at end offices some distance from the AT&T point of presence, the

intercarrier compensation will not be symmetrical. Indeed, BellSouth's proposal confirms the FCC's conclusion that:

> Because an incumbent LEC currently serves virtually all subscribers in its local serving area, an incumbent LEC has little economic incentive to assist new entrants in their efforts to secure a greater share of that market. An incumbent LEC also has the ability to act on its incentive to discourage entry and robust competition by not interconnecting its network with the new entrant's network or by insisting on supracompetitive prices or other unreasonable conditions for terminating calls from the entrant's customers to the incumbent LEC's subscribers.[4]

[4] First Report and Order, *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996*, 11 FCC Red. 1J499 (1996) at ¶ 10 (footnote omitted), hereinafter "FCC Local Competition Order".

Q. HOW DOES THE ACT APPLY TO THIS ISSUE?

A. Prior to the passage of the Act, unless a call was directed to the operating territory of another local carrier, the originating carrier was responsible for the costs of originating, transporting and terminating each call, simply because the call never left the originating carrier's territory or network. Consistent with the originating carrier's overall financial responsibility, the originating carrier collected and retained the applicable revenue.

With the passage of the Act, the originating carrier continues to collect and keep the local exchange revenue, and where a competing LEC is used to terminate the call (because the terminating customer belongs to a competing LEC), the Act establishes reciprocal compensation to compensate the terminating carrier for its costs. However, in so doing, the Act did not alter the long-standing economic model under which the originating carrier collects the local exchange revenue and is responsible for the costs of originating, transporting and terminating its traffic. Section 252(d)(2)(A) of the Act states:

> ... a state commission shall not consider the terms and conditions for reciprocal compensation to be just and reasonable unless... such terms and conditions provide for the mutual and reciprocal recovery by each carrier of costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities on the other carrier.

If the parties have unequal interconnection obligations, as proposed by BellSouth, then the parties should have non-symmetrical reciprocal compensation rates, so that each party would recover its respective costs to transport and terminate the other party's traffic. To meet the "just and reasonable" test under Section 252(d)(2)(A), the parties must have comparable obligations to deliver traffic to the other party's network. If it is found that one party to the Agreement is not compensated for "costs associated with the transport and termination on each carrier's network facilities of calls that originate on the network facilities on the other carrier", then the resulting Agreement would be neither "just" nor "reasonable".

Q. IF AT&T CHOOSES TO PLACE ONE SWITCH PER LATA, SHOULDN'T BELLSOUTH BE ALLOWED TO PLACE ITS INTERCONNECTION POINT AT ITS DESIRED LOCATION?

A. No. The Act and FCC orders clearly allow new entrants to interconnect at any technically feasible point. The single switch presence per LATA allows new entrants to grow their business economically without having to duplicate the ILECs existing network. If Congress had wanted ILECs to have the ability to designate interconnection points and ALECs to bear the same duty in establishing interconnection points that incumbent LECs have, it would have specifically stated that outcome, rather than separating out the interconnection obligations to apply only to incumbent LECs under Section 251(c)(2).

Q. HAS THE FCC PROVIDED ANY GUIDANCE ON THIS ISSUE?

A. Yes. This issue has two sub-parts. First, should BellSouth have the right to designate the point on BellSouth's network within its own local calling area where it will deliver its local and intraLATA traffic to AT&T? Second, how should the costs of Interconnection Facilities be allocated between the parties? The FCC has spoken on both of these issues.

Q. DO EXISTING FCC RULES ALLOW BELLSOUTH TO DISIGNATE THE POINT ON ITS NETWORK WHERE AT&T MUST ACCEPT BELLSOUTH'S TRAFFIC?

A. No. FCC regulations do not allow BellSouth or any ILEC the right to designate the point at which the other party must "pick up" the ILEC's traffic. To the contrary, Rule 51.305(a)(2) obligates BellSouth to allow interconnection by an ALEC at any technically feasible point. In its Local Competition Order, the FCC explained:

> The interconnection obligation of section 251(c)(2), discussed in this section, allows competing carriers to choose the most efficient points at which to exchange traffic with incumbent LECs, thereby lowering the competing carriers' costs of, among other things, transport and termination of traffic.[5]

[5] FCC Local Competition Order at ¶ 172 (emphasis added).

The FCC identified the Act as the source of these differing obligations:

> Section 251(c)(2) does not impose on non-incumbent LECs the duty to provide interconnection. The obligations of LECs that are not incumbent LECs are generally governed by sections 251(a) and (b), not section 251(c). Also, the statute itself imposes different obligations on incumbent LECs and other LECs (i.e., section 251(b) imposes obligations on all LECs while section 251(c) obligations are imposed only on incumbent LECs).[6]

Q. DOES THE FACT THAT THERE IS NO PROHIBITION AGAINST ILECS DETERMINING TECHNICALLY FEASIBLE INTERCONNECTION POINTS GIVE THEM THE RIGHT TO DO SO?

A. No. As noted above, the interconnection obligations of LECs and ILECs are specifically identified in the Act. BellSouth may not assume some authority that is not provided for in the Act. BellSouth has claimed in other proceedings that its should be permitted to designate the point where AT&T must pick up BellSouth's traffic so that BellSouth may avoid the transport costs at issue. However, the FCC's statement is clear. The competing carrier has the right to designate the point at which traffic is exchanged, "thereby

---

[6] Id. at ¶ 220.

lowering the competing carriers' costs." The FCC reiterated its reasoning in connection with an interconnection dispute in Oregon, where the FCC intervened and urged the court to reject US West's argument that the Act requires competing carriers to interconnect in the same local exchange in which it provides local service. The FCC explained:

> Nothing in the 1996 Act or binding FCC regulations require a new entrant to interconnect at multiple locations within a single LATA. Indeed, such a requirement could be so costly to new entrants that it would thwart the Act's fundamental goal a opening of opening local markets to competition.[7]

More recently, in its order on SBC's 271 application for Texas, the FCC made clear its view that under the Telecommunication Act, ALECs have the legal right to designate the most efficient point at which to exchange traffic. As the FCC explained:

> New entrants may select the most efficient points at which to exchange traffic with incumbent LECs, thereby lowering

[7] Memorandum of the FCC as Amucus Curiae at 20-21, *US West Communications Inc. v. AT&T Communications of the Pacific Northwest, Inc.*, (D. Or. 1998) (No. CV 97-1575- JE) (emphasis added).

the competing carriers' cost of, among other things, transport and termination.[8]

The FCC was very specific:

> Section 251, and our implementing rules, require an incumbent LEC to allow a competitive LEC to interconnect at any technically feasible point. This means that a competitive LEC has the option to interconnect at only one technically feasible point in each LATA.

Q. WHAT HAS THE FCC PROVIDED ON HOW COSTS OF INTERCONNECTION FACILITIES SHOULD BE ALLOCATED BETWEEN THE PARTIES?

A. 47 C.F.R. § 51.703(b) very clearly provides:

> A LEC may not assess charges on any other telecommunications carrier for local telecommunications traffic that originates on the LEC's network.

Further, 47 C.F.R. § 51.709(b) reads:

> The rate of a carrier providing transmission facilities dedicated to the transmission of traffic between two carriers' networks shall recover only the costs of the

[8] Memorandum Report and Order, *Application of SBC Communications Inc., Southwestern Bell Telephone Company and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance, Pursuant to Section 271 of the Telecommunications Act of 1996 To Provide In-Region InterLATA Services in Texas*, CC Docket No. 00-65 at ¶ 78 (June 30, 2000).

> proportion of that trunk capacity used by an interconnecting carrier to send traffic that will terminate on the providing carrier's network.

In its Local Competition Order, the FCC explained:

> The amount an interconnecting carrier pays for dedicated transport is to be proportional to its relative use of the dedicated facility. For example, if the providing carrier provides one-way trunks that the inter-connecting carrier uses exclusively for sending terminating traffic to the providing carrier, then the inter-connecting carrier is to pay the providing carrier a rate that recovers the full forward-looking economic cost of those trunks. The inter-connecting carrier, however, should not be required to pay the providing carrier for one-way trunks in the opposite direction, which the providing carrier owns and uses to send its own traffic to the inter-connecting carrier.[9]

A simple hypothetical example should make the application of this rule clear. If there were a sufficient volume of traffic between an AT&T switch and a certain BellSouth end office, AT&T would elect to establish one-way trunks between the two switches to deliver AT&T's originating traffic. The least

[9] FCC Local Competition Order at ¶ 1062 (emphasis added).

costly method for AT&T to obtain the transport needed for such trunks may be to lease the capacity from BellSouth as dedicated transport. BellSouth would also need to establish one-way trunks between the same two switches for its originating traffic. BellSouth almost certainly will establish such trunks on its own facilities. What we end up with is a single BellSouth facility system between the AT&T and BellSouth switches that is used to carry both AT&T's one-way trunks and BellSouth's one-way trunks. What the FCC is saying in C.F.R. 51.709(b) is that BellSouth may only recover the cost of the proportion of that trunk capacity used by AT&T between the two switches to send traffic that will terminate on BellSouth's network. AT&T agrees that it would pay for the transport for its one-way trunks. However, contrary to 47 C.F.R. 51.709(b), what BellSouth proposes is to recover the costs of both AT&T's portion *and* the costs of the proportion of that trunk capacity used by BellSouth to send traffic that will terminate on AT&T's network. This would be especially onerous to AT&T when the volume of traffic originated on BellSouth's network far exceeds the volume of traffic that is originated on AT&T's network.

The situation is identical when AT&T elects to route traffic via a BellSouth tandem switch rather than via direct end office trunks. Again, AT&T agrees to pay BellSouth for the one-way trunk capacity needed to transport AT&T's traffic between the AT&T switch and the BellSouth tandem, however, AT&T should not be required to pay BellSouth for one-way trunks in the opposite direction, which BellSouth owns and uses to send its own traffic to AT&T.

Q. HAS THE FCC ISSUED ANY DECISIONS ON THIS ISSUE?

A. Yes. In *In re TSR Wireless, LLC, et. al., v. U.S. West,* file Nos. E-98-13, et. al., FCC 00-194 (June 21, 2000), several paging carriers alleged that US West and other ILECs had improperly imposed charges for facilities used to deliver LEC-originated traffic. The paging carriers based their complaint on 47 C.F.R. § 51.703(b) and sought an order from the FCC prohibiting the ILECs from charging for dedicated and shared transmission facilities used to deliver LEC-originated traffic. The FCC agreed with the paging carriers. In its Order, after finding (1) that paging carriers provide telecommunications and are thus included within the scope of the rules governing reciprocal compensation (47 C.F.R. § 701(e)) and (2) that paging carriers "switch" and "terminate" traffic within the meaning of those rules, the FCC determined that "any LEC efforts to continue charging CMRS or other carriers for delivery of such [LEC-originated] traffic would be unjust and unreasonable." Accordingly, the FCC concluded that the ILECs "may not impose upon Complainants charges for the facilities used to deliver LEC-originated traffic to Complainants."

Q. WHY SHOULD THE COMMISSION ADOPT AT&T'S SOLUTION?

A. AT&T's network interconnection solution would benefit AT&T, BellSouth and Florida consumers in the following ways:

1. AT&T's solution is fair to both parties.

First, both parties would establish equivalent interconnection between the respective networks. Neither party would gain a substantial advantage over the other, as BellSouth proposes. Second, both parties would provide interconnection facilities in proportion to the interconnection traffic that it delivers to the other party. Considering the geographic parity of both parties' networks, it would clearly be unfair to AT&T to adopt the practice of disproportional, unequal interconnection.

2. AT&T's solution promotes competition.

AT&T's proposal allows competing callers to use alternative network architecture without any penalty. Additionally AT&T's proposal does not require ALECs to duplicate the network already established by BellSouth. Less costly and more efficient solutions are promoted, not discouraged.

3. AT&T's solution provides flexibility to the parties.

Each party would have a variety of methods that it may employ to deliver its traffic to the other party's terminating switch. Parties can lease facilities from one another, they can lease facilities from third parties, implement a mid-span meet, or they can deliver their traffic using AT&T's facilities. Under AT&T's proposal, even though not obligated to do so, AT&T is even willing to offer BellSouth space, power, and site services in its switching centers, compensated appropriately, so that BellSouth may use its own facilities to deliver its interconnection traffic to such AT&T locations. In this

way, each party may determine for itself the most efficient method of interconnection under the terms of the Agreement.

4. AT&T's solution allows AT&T to use scarce collocation space for interconnection to UNEs.

BellSouth's proposed interconnection arrangement jeopardizes AT&T's local market entry plans, because it allows BellSouth to "hand-off" its traffic at a BellSouth location that may have limited or no additional collocation space. AT&T has found that the smaller AT&T collocation arrangements in certain BellSouth end offices are being prematurely exhausted by the transport of BellSouth's interconnection traffic through such collocation space. AT&T requires collocation space within BellSouth end offices so that AT&T may interconnect to BellSouth's UNEs in order to fulfill its market entry plans. Because of this duel need for collocation space, BellSouth's proposal forces AT&T to choose between essential uses of scare collocation space; where there is an equal priority on using collocation space for network interconnection and UNE combination. The result of BellSouth's proposal is that in many areas AT&T's local market entry may be delayed or thwarted. AT&T's solution provides for a joint transition plan that would require that BellSouth's interconnection traffic to be transitioned from any existing POI in jeopardized AT&T collocation space to a new POI. The Commission should adopt AT&T's network interconnection solution, because, otherwise, consumers served by a BellSouth end office for which AT&T's collocation

space is exhausted would not enjoy the same level of local exchange competition as customers in unaffected areas.

5. AT&T's solution is consistent with law and regulation.

The FCC has made clear that ILECs do not have the right to determine where ALECS must interconnect to pick up ILEC traffic. ALECs can interconnect at any technically feasible point, and can select a point which is most efficient to lower costs. AT&T's proposal clearly meets these requirements.

II. TANDEM SWITCH RATE

ISSUE 12

Q. WHAT DO THE FCC REGULATIONS PROVIDE ABOUT ALEC SWITCHES AND TANDEM RATES?

A. The FCC recognizes that there is parity between a competitive carrier's end office switch and an ILEC tandem switch. The FCC regulations, 47 C.F.R. § 51.711 (a)(3), provide:

> Where the switch of a carrier other than an incumbent LEC serves a geographic area comparable to the area served by the incumbent LEC's tandem switch, the appropriate rate for the carrier other than an incumbent LEC is the incumbent LEC's tandem interconnection rate.

Q. HAS THE FCC PROVIDED ANY ADDITIONAL GUIDANCE REGARDING THE ESTABLISHMENT OF TRANSPORT AND TERMINATION RATES?

A. Yes, it has. In the Local Competition Order, the FCC stated:

> We find that the "additional costs" incurred by a LEC when transporting and terminating a call that originated on a competing carrier's network are likely to vary depending on whether tandem switching is involved. We, therefore, conclude that states may establish transport and termination

rates in the arbitration process that vary according to whether the traffic is routed through a tandem switch or directly to the end-office switch. In such event, states shall also consider whether new technologies (*e.g.*, fiber ring or wireless networks) perform functions similar to those performed by an incumbent LEC's tandem switch and thus, whether some or all calls terminating on the new entrant's network should be priced the same as the sum of transport and termination via the incumbent LEC's tandem switch. Where the interconnecting carrier's switch serves a geographic area comparable to that served by the incumbent LEC's tandem switch, the appropriate proxy for the interconnecting carrier's additional costs is the LEC tandem interconnection rate.[10]

Q. DO AT&T'S SWITCHES IN FLORIDA COVER A GEOGRAPHIC AREA COMPARABLE TO THE AREA COVERED BY BELLSOUTH SWITCHES?

A. Yes. AT&T offers local exchange service in Florida via 4ESS switches, which function primarily as long distance switches, and 5ESS switches, which act as adjuncts to the 4ESS switches. AT&T has the ability to connect

[10] FCC Local Competition Order at ¶ 1090 (emphasis added).

virtually any qualifying local exchange customer in Florida to one of these switches through AT&T's dedicated access services.

TCG provides local exchange services using Class 5 switches. TCG is able to connect virtually any customer in a LATA to the TCG switch serving that LATA either through (1) TCG's own facilities built to the customer premises, (2) UNE loops provisioned through collocation in BellSouth end offices, or (3) using dedicated high-capacity facilities (in special access services or combinations of UNEs purchased from BellSouth).[11]

AT&T requests that the Commission order BellSouth to pay AT&T BellSouth's tandem interconnection rate for the termination of local traffic at any AT&T Communications switch and any TCG switch. AT&T is justified in its request because the geographic area covered by each switch is comparable to the area covered by BellSouth's tandem switches.

Q. HAVE YOU PREPARED ANY MATERIALS THAT WILL ASSIST THE COMMISSION IN DETERMINING THE GEOGRAPHIC COVERAGE OF AT&T'S AND TCG'S SWITCHES?

A. To assist the Commission in understanding this issue, I have prepared a series of maps that are marked as Exhibit DLT-6. Exhibit DLT-6 contains both

---

11 AT&T and TCG are separate legal entities, are separately certified in Florida, and should be treated as separate entities under the completed agreements. Moreover, their local service networks provide entirely distinct services and products to distinct classes of customers and are not integrated in any way. Accordingly, each entity should be examined separately for purposes of determining whether that entity meets the requirements under 47 C.F.R. § 51.711 (A)(3).

color transparency maps and color copies (of the same maps). The transparent maps are supplied so that the reader can "overlay" the maps and compare the geographic area served by AT&T and TCG switches and BellSouth switches.

Exhibit DLT-6a[12] provides the number of switches AT&T currently operates in Florida on a LATA by LATA basis. It is important to note that in some cases, the AT&T switch serving a LATA is not physically located in the LATA.

Exhibit DLT-6b[13] shows the number of switches TCG currently operates in Florida on a LATA by LATA basis. Like AT&T's switches, it is important to note that in some cases, the TCG switch serving a LATA is not physically located in the LATA.

Exhibit DLT-6c[14] shows the number of tandem switches BellSouth Florida currently operates in Florida on a LATA by LATA basis. When 6a, 6b, and 6c are superimposed over each other, it becomes clear that both AT&T's and

---

[12] On the AT&T maps, green shading depicts the areas covered by AT&T's switches.

[13] On the TCG maps, blue shading depicts the areas covered by TCG's switches.

[14] On the BellSouth maps, various color shading depicts areas covered by BellSouth's tandems.

TCG's switches cover the same (or a comparable) geographic area as that covered by BellSouth's tandem switches.[15]

Q. WHAT ABOUT THE FUNCTIONALITY OF THE SWITCHES?

A. The relevant FCC rule does not focus on tandem functionality[16] for purposes of determining whether an ALEC meets the requirements under 47 C.F.R. § 51.711(a)(3). However, each AT&T and TCG switch performs certain tandem functions for the respective AT&T entity. First, each of these switches acts as an access tandem routing the preponderance of interLATA traffic directly to the applicable interexchange carrier. Second, with respect to traffic between any AT&T customer and any BellSouth customer within the same LATA, AT&T has direct trunking to each BellSouth tandem in the LATA so that such traffic may be completed without transiting multiple AT&T switches or multiple BellSouth tandems. In other words, AT&T uses

---

[15] Statewide and LATA-specific maps were created by using data contained in the Local Exchange Routing Guide (LERG). The LERG, produced by Telcordia Technologies, contains routing data that supports the current local exchange network configuration within the North American Numbering Plan (NANP) as well as identifying reported planned changes in the network. The LERG data in conjunction with MapInfo V-4.1.1.2, a commercial mapping software package, was used to prepare the state-wide and LATA-specific maps attached herein.

[16] The primary function of a tandem is the aggregation of traffic between customers calling outside their immediate exchange. As described in the preceding discussion of network architecture, the BellSouth network is comprised of a large number of end offices each serving a relatively small area. Rather than connect every end office to every other end office, BellSouth routes certain traffic to tandem switches which serve groups of end offices. Thus, a call from a BellSouth customer to someone in another rate center often will travel to a tandem switch which has a connection to the end office switch serving the called customer. Under the BellSouth network architecture, the tandem switches aggregate traffic to be sent to other switches. Under AT&T's network architecture, AT&T's switches also

its switches in the same functional manner that BellSouth uses its tandem switches.

Q. DO AT&T'S SWITCHES PROVIDE TANDEM FUNCTIONALITIES IN THE MANNER DESCRIBED IN THE FCC'S DISCUSSION IN THE LOCAL COMPETITION ORDER?

A. As the foregoing description of AT&T switch function indicates, AT&T's switches do indeed perform both end office and tandem switch functions. Tandem switches generally aggregate traffic from a number of end office switches for purposes of passing that traffic to other offices for termination elsewhere on the network. The tandem switch is also used for aggregation and processing of operator services traffic, routing traffic that is to be transferred between the trunk groups of two separate carriers, and measuring and recording traffic detail for billing. While BellSouth employs two separate switches to accomplish these tandem and end office functions; as I have shown above, AT&T's switches perform all of these functions within the same switch.

Thus, AT&T and TCG have not only met the geographic requirements of 47 C.F.R. §51.711(a)(3), but also meets a higher standard by virtue of its substantial investments in physical plant and deployment of an architecture comprised of network components comparable to BellSouth.

---

perform a substantial amount of traffic aggregation and, therefore, are performing the primary function of a tandem switch.

The Commission should, therefore, conclude that AT&T should receive the tandem interconnection rate as BellSouth's reciprocal compensation for the termination of its local calls by AT&T and TCG.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

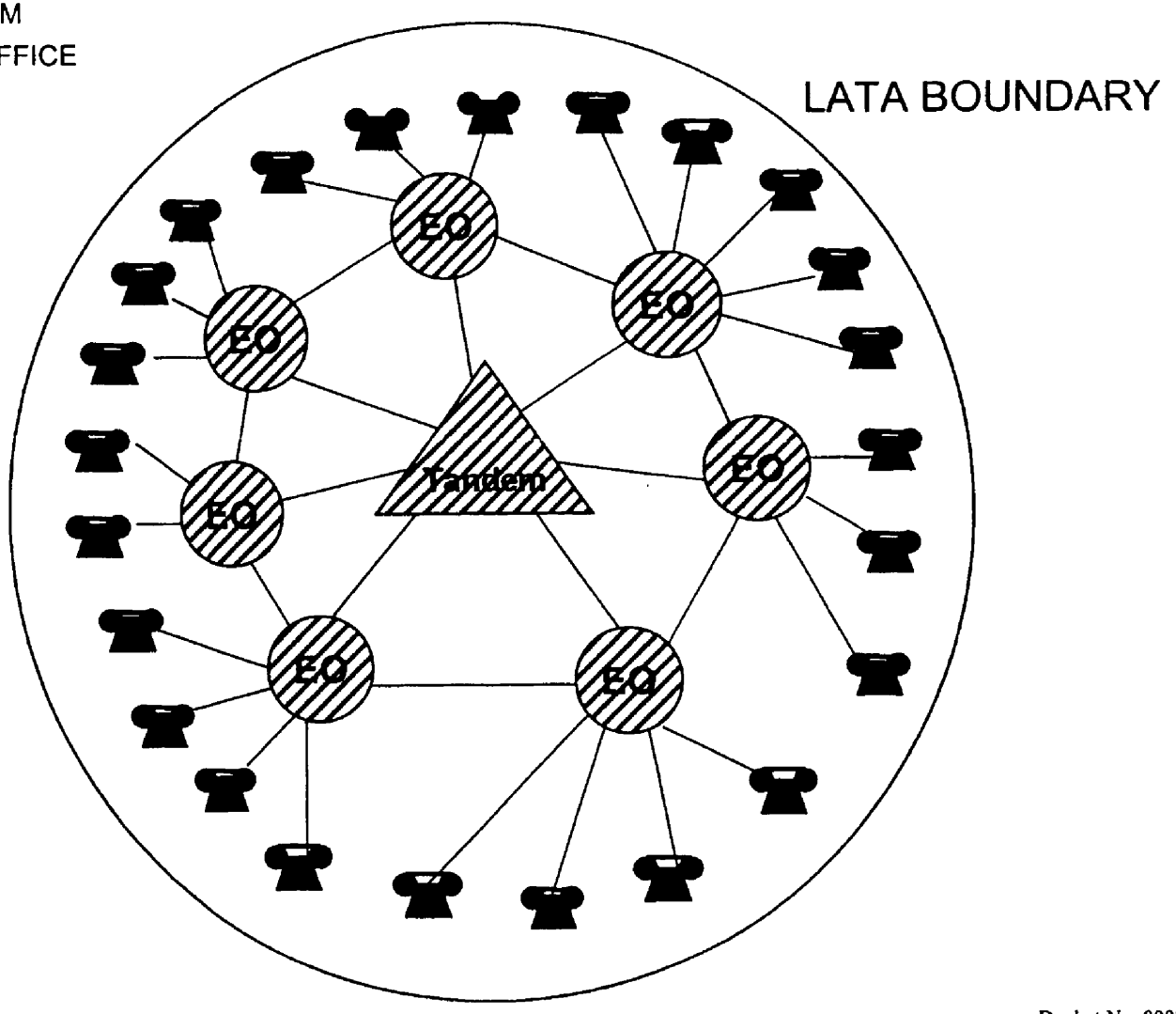
A. Yes.

ATTACHMENT 1 - BST NETWORK ARCHITECTURE

= BST TANDEM

= BST END OFFICE

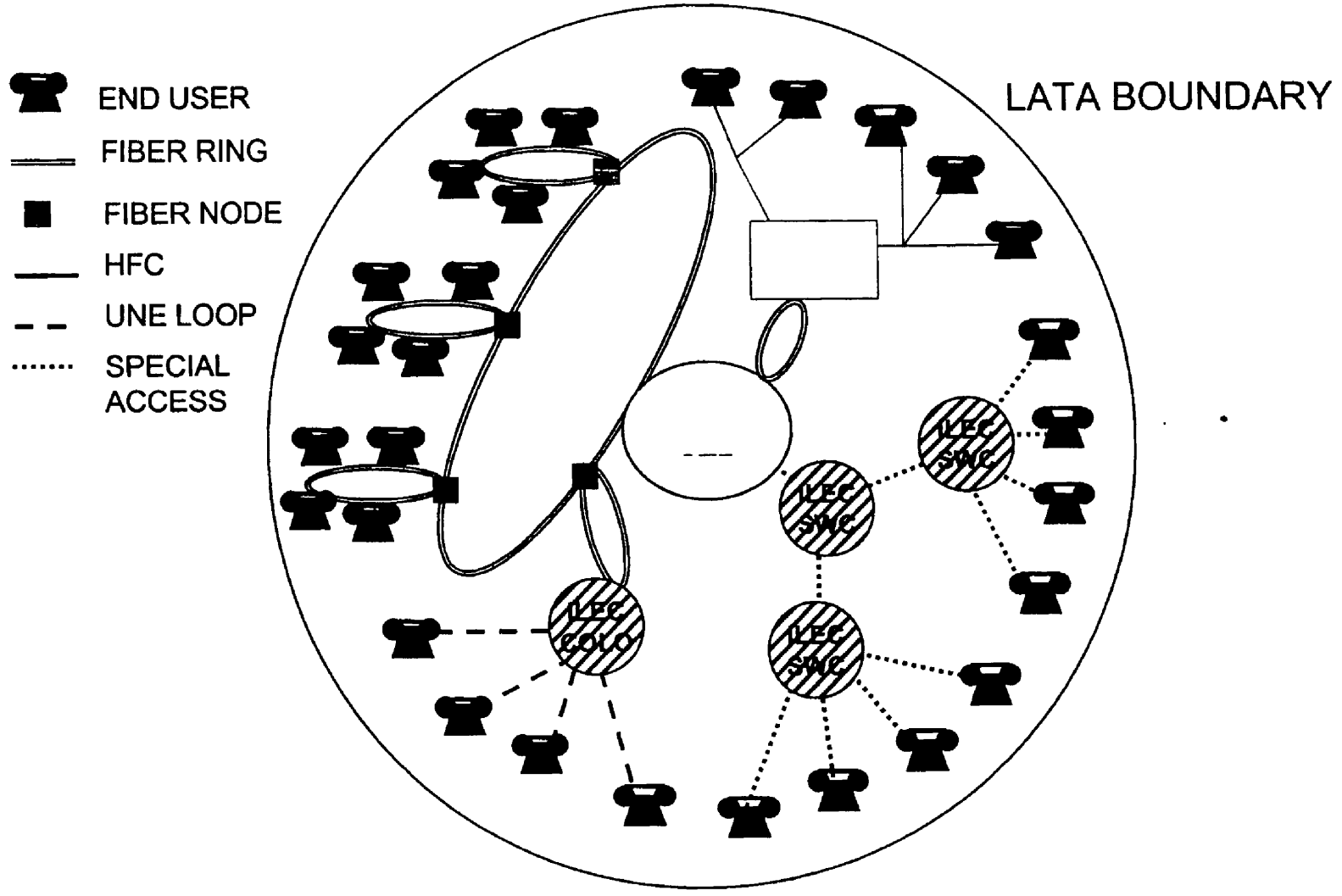
= END USER



Docket No. 000731-TP

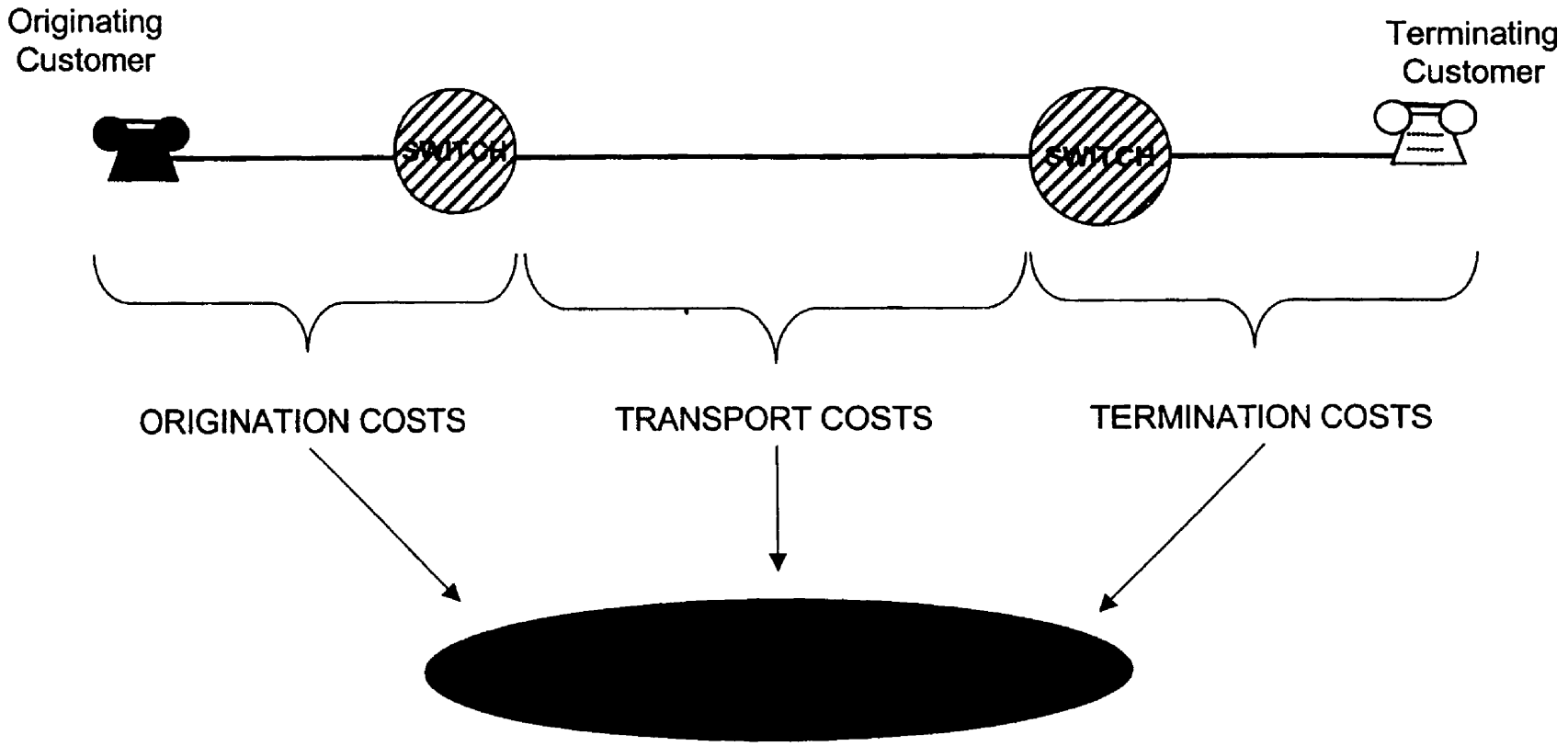
DLT-1

ATTACHMENT 2 - AT&T NETWORK ARCHITECTURE



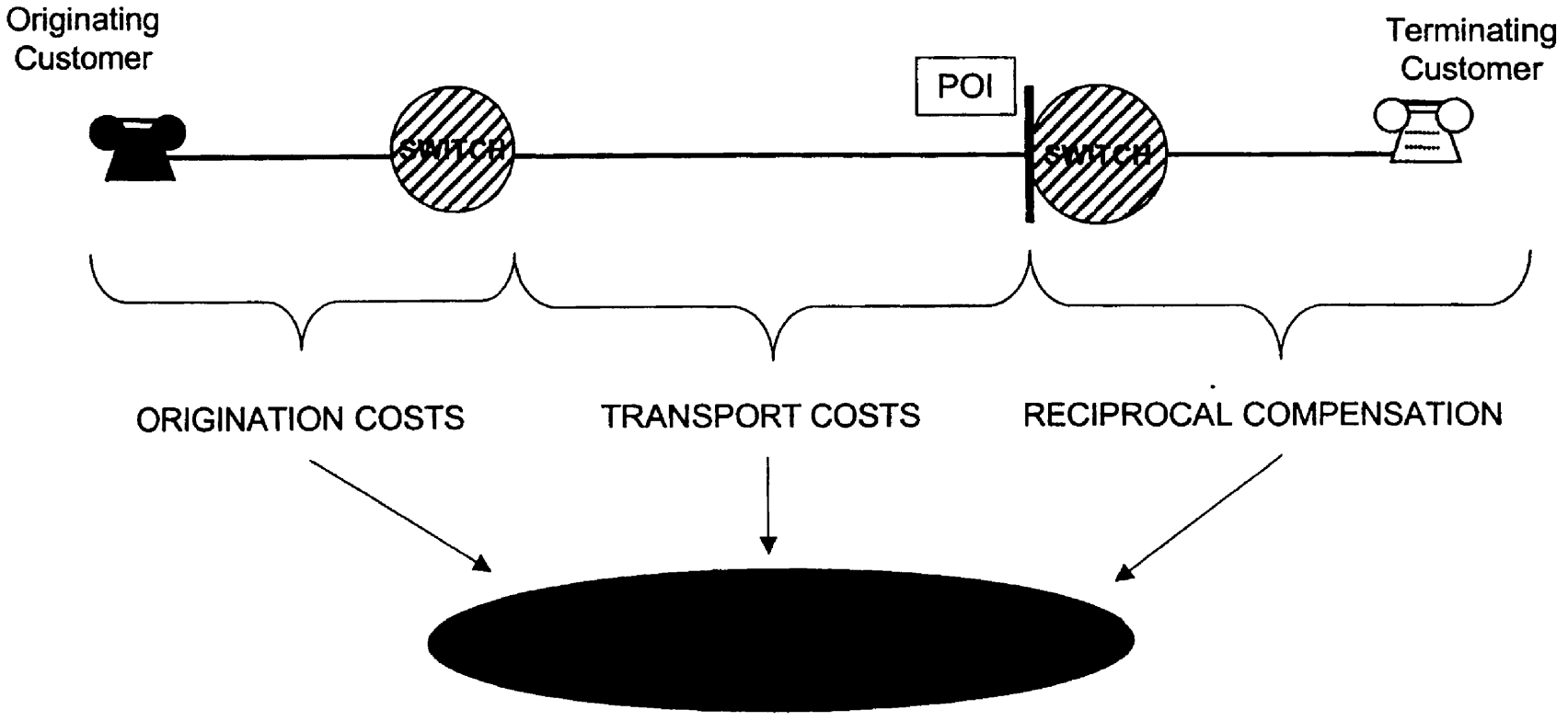
Docket No. 000731-TP
DLT-2
Page 1 of 1

ATTACHMENT 3 - PRE-TRA COST MODEL



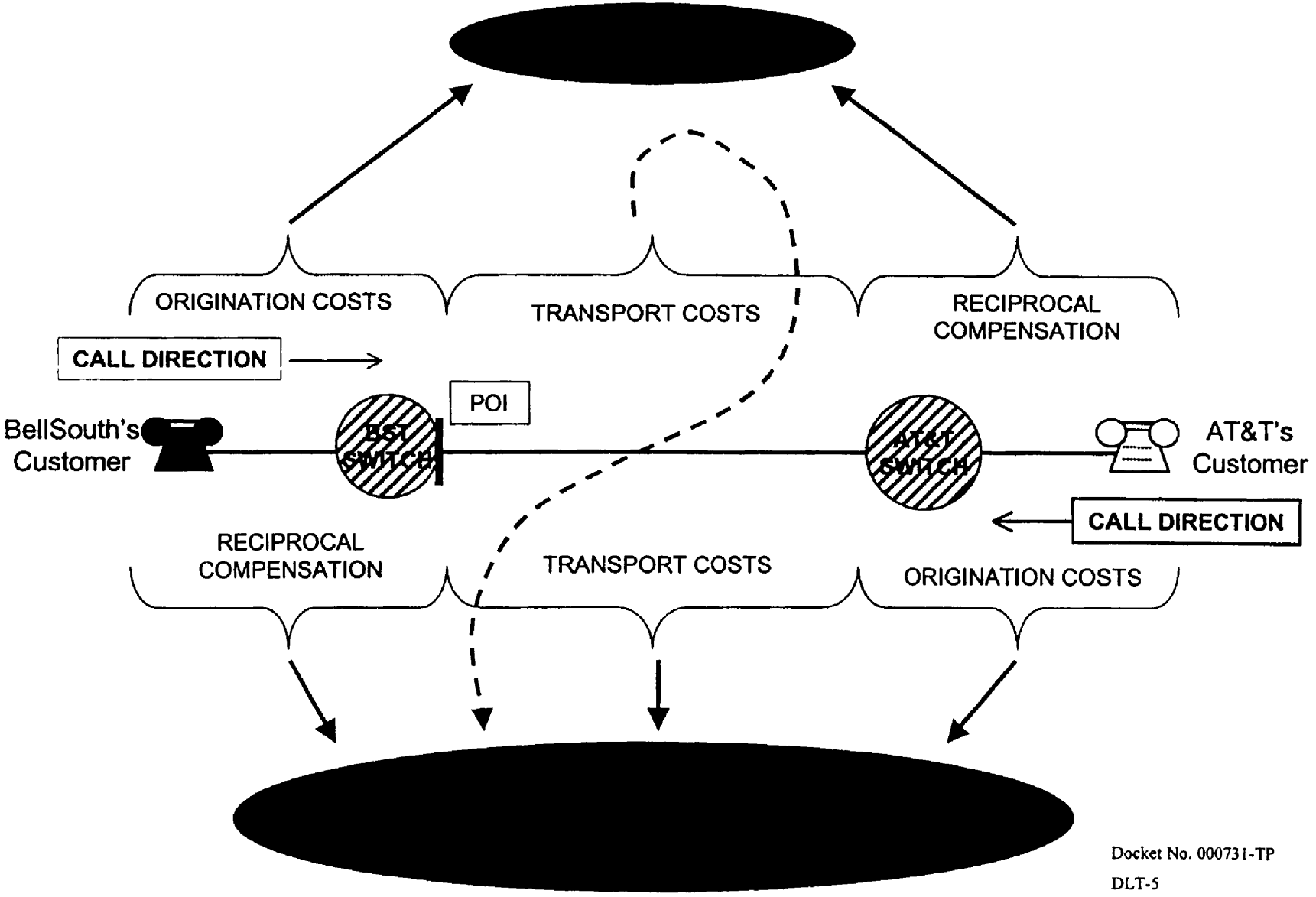
Docket No. 000731-TP
DLT-3
Page 1 of 1

ATTACHMENT 4 - TRA COST MODEL AND AT&T PROPOSAL



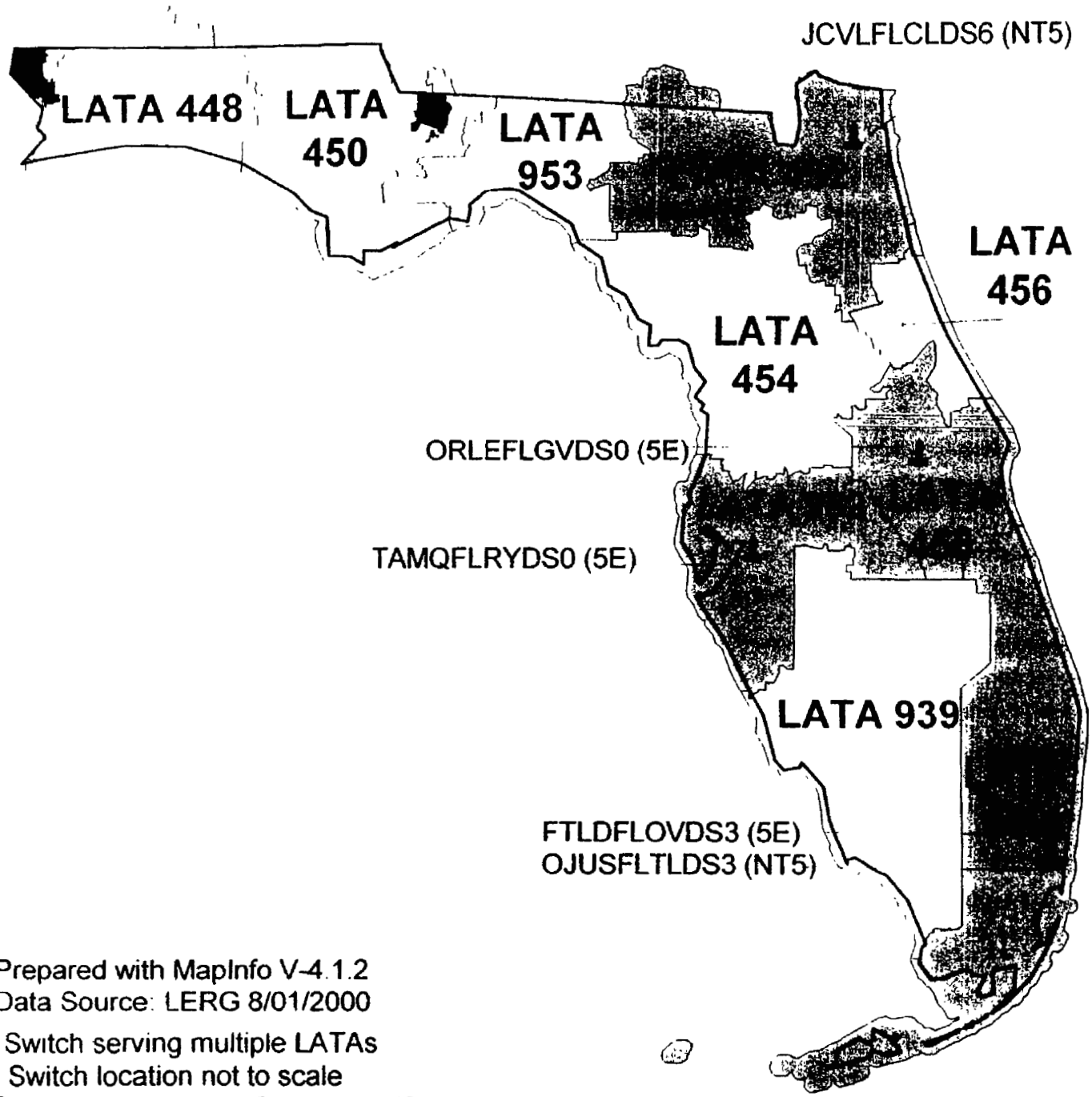
Docket No. 000731-TP
DLT-4
Page 1 of 1

ATTACHMENT 5 - BELLSOUTH PROPOSAL



Docket No. 000731-TP
DLT-5
Page 1 of 1

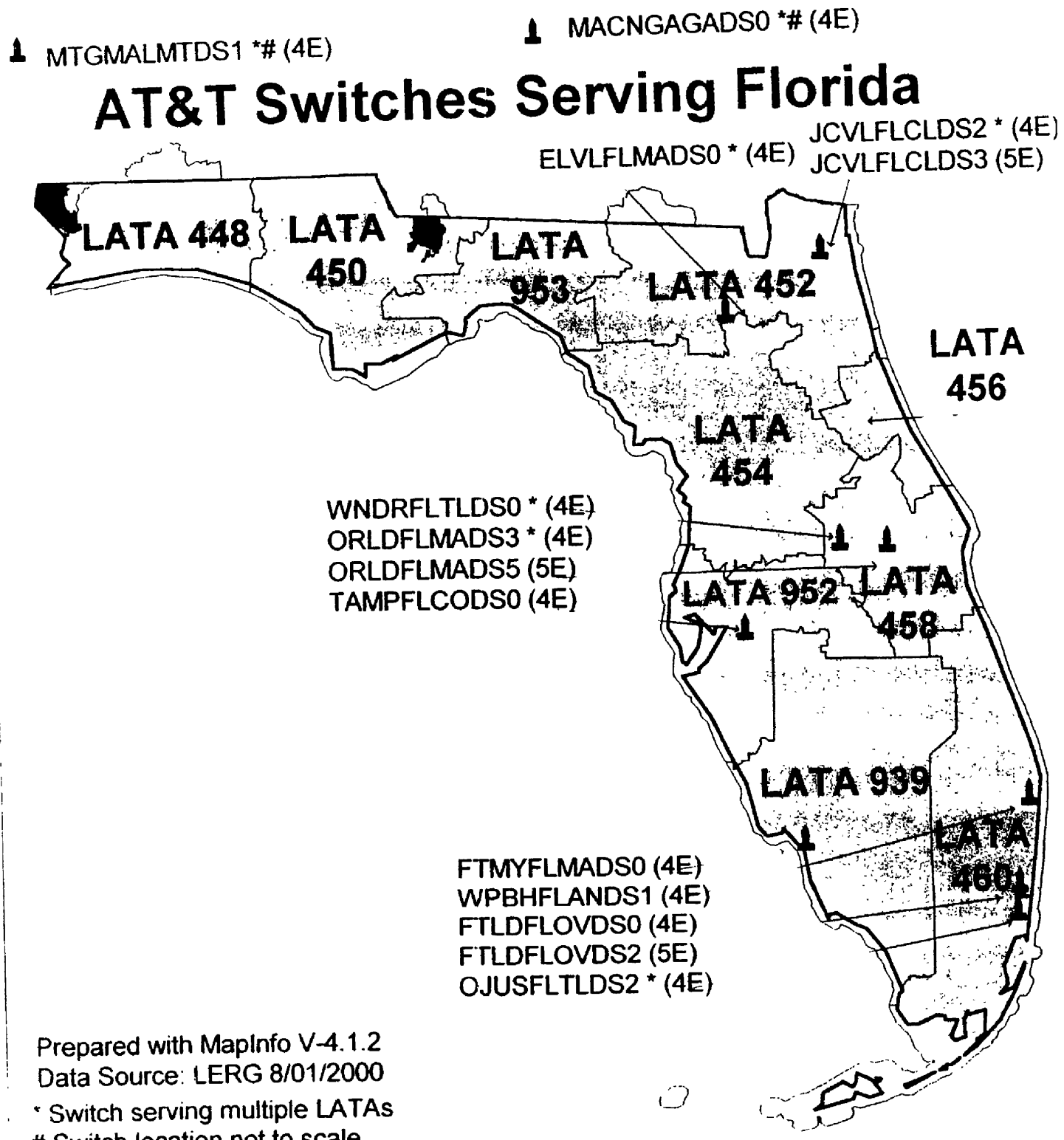
TCG Switches Serving Florida



Prepared with MapInfo V-4.1.2
Data Source: LERG 8/01/2000

* Switch serving multiple LATAs
# Switch location not to scale
Geographic Area's Served by TCG
Geographic Area's NOT Authorized to provide Serviced by TCG

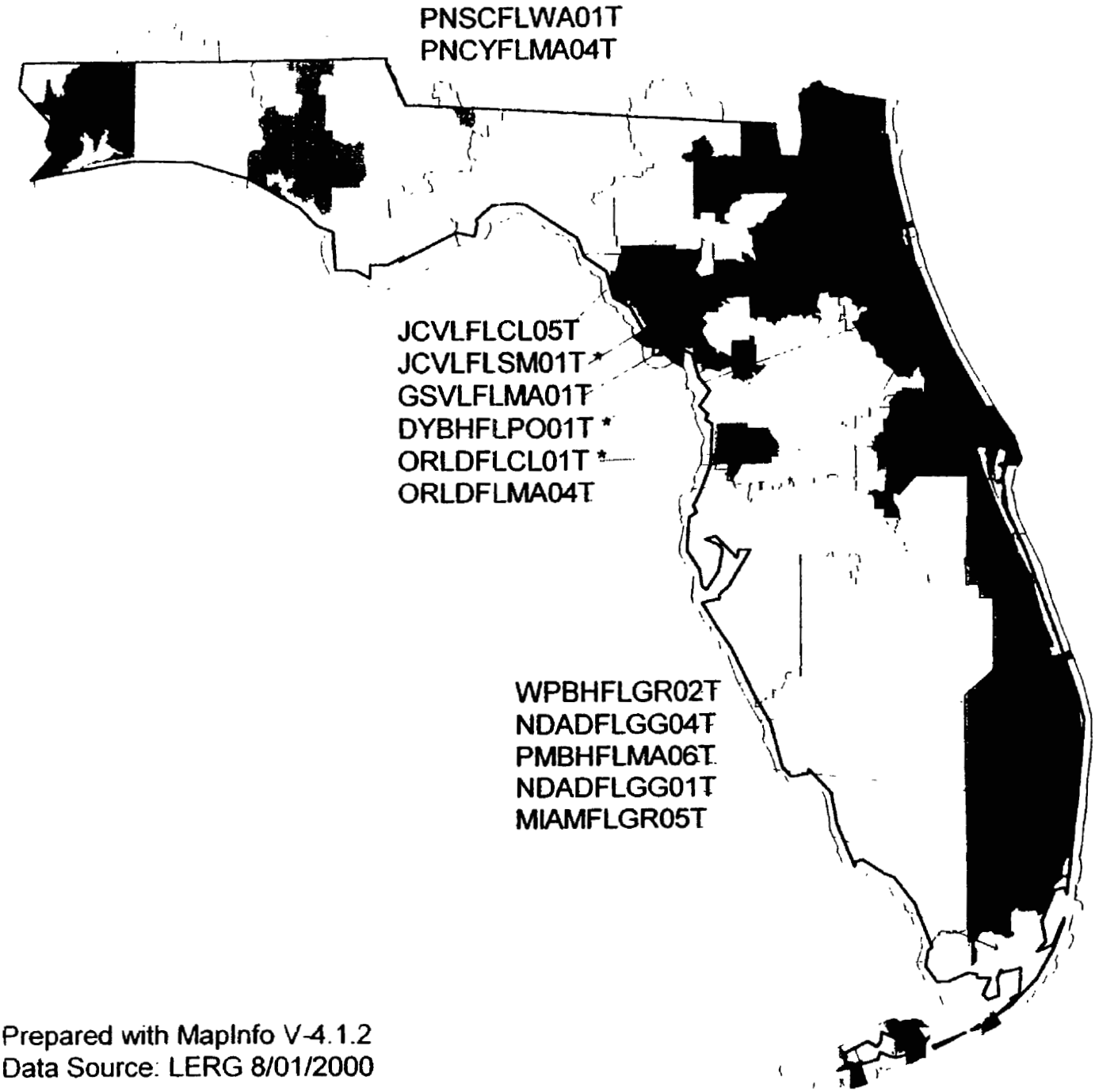
AT&T Switches Serving Florida



Prepared with MapInfo V-4.1.2
Data Source: LERG 8/01/2000

* Switch serving multiple LATAs
\# Switch location not to scale
Geographic Area's Served by AT&T
Geographic Area's NOT Authorized to provide Serviced by AT&T

BellSouth Tamdems Serving Florida



Prepared with MapInfo V-4.1.2
Data Source: LERG 8/01/2000

* Switch serving multiple LATAs
# Switch location not to scale

Dark Fiber Practices

Dark fiber is optical fiber through which no light is transmitted and no signal is carried. It is unactivated deployed fiber that is left dark, *i.e.*, with no necessary equipment, *i.e.*, "opto-electronics" or "optronics" attached to light the fiber to carry a signal to serve customers. *See* NEWTON'S TELECOM DICTIONARY 201 (18th ed. 2002) (definition of Dark Fiber); *see also UNE Remand Order*, 15 FCC Rcd at 3771, para. 162 n.292. Once the optronics are attached to the fiber to make signal transmission possible the dark fiber becomes "lit." *See* NEWTON'S TELECOM DICTIONARY 538-39 (18th ed. 2002) (definition of Opto-Electronics and Optronics). (TRO footnote 628)

Several carriers comment that the difficulties in accessing facilities includes access to dark fiber loops and transport, as well as to lit DS1 loops.[1933] The requirement we establish for incumbent LECs to modify their networks on a nondiscriminatory basis is not limited to copper loops, but applies to all transmission facilities, including dark fiber facilities. For example, several state commissions have rejected incumbent LEC attempts to deny competitive access to dark fiber where a competitive LEC seeks access to the network in the same manner as the incumbent LEC.[1934] Incumbent LECs must make the same routine modifications to their existing dark fiber facilities for competitors that they make for their own customers – including the work done on dark fiber to provision lit capacity to end users. Although the record before us does not support the enumeration of these activities in the same detail as we do for lit DS1 loops, we encourage state commissions to identify and require such modifications to ensure nondiscriminatory access. (TRO ¶638)

See, e.g., Dominion Jan. 28, 2003 Aamoth *Ex Parte* Letter at 5 (claiming that incumbent LECs change their standard loop provisioning practice by laying new loop fiber without terminating it in order to avoid compliance with unbundling obligations). (TRO footnote 1933)

See, e.g., New England Telephone and Telegraph Company d/b/a NYNEX, Decision D.P.U./D.T.E. 96-73/74, 96-75, 96-80/81, 96-83, 96-94 – Phase 3, at 48 (Mass. DTE Dec. 4, 1996) ("We therefore see little distinction between a splice performed on behalf of NYNEX and that performed for another carrier."). (TRO footnote 1934)

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking on the Commission's Own Motion Into Competition for Local Exchange Service.	R.95-04-043
Order Instituting Investigation on the Commission's Own Motion Into Competition for Local Exchange Service.	I.95-04-044

Direct Testimony of Scott J. Alexander

On Behalf of SBC California

Regarding Dedicated Transport

ON BEHALF OF

SBC CALIFORNIA

REDACTED ATTACHMENTS

November 20, 2003

TABLE OF CONTENTS

Schedule of Attachments

ATTACHMENT	DESCRIPTION
1	Illustration of Dedicated Transport
2	List of Competing Transport Providers
3	Maps of Competitive Fiber
4	Excerpts from Competing Provider's Website
5	Excerpts from Competing Provider's Website
6	Illustration of Fiber-Based Collocation
7	Excerpts from Competing Provider's Website
8	Excerpts from Competing Provider's Website
9	Excerpts from Competing Provider's Website
10	Excerpts from Carrier Hotel Website
11	List of Routes Satisfying Self-Provisioning Trigger
12	Illustration of Self-Provisioning Trigger
13	Map of Routes Satisfying Self-Provisioning Trigger
14	List of Routes Satisfying Wholesale Trigger
15	Map of Routes Satisfying Wholesale Trigger

DIRECT TESTIMONY OF SCOTT J. ALEXANDER ON BEHALF OF SBC CALIFORNIA

I. INTRODUCTION

A. Witness Qualification and Purpose of Testimony

Q1. Please state your name and business address.

A1. Scott J. Alexander, 2000 W. Ameritech Center Drive, Room 4G46, Hoffman Estates, Illinois 60196.

Q2. By whom are you employed and in what capacity?

A2. I am currently employed by SBC as Director - Regulatory Policy.

Q3. What are your duties and responsibilities in that capacity?

A3. My responsibilities include supporting the development and implementation of products, processes, and related policies for competing local exchange carriers ("CLECs") in various SBC regions. I work with and advise managers with respect to the products and support functions required to meet SBC's obligations under the Telecommunications Act of 1996 ("1996 Act") and various related FCC and state requirements. In addition, I represent SBC operating companies (including SBC California, hereinafter "SBC") with regard to wholesale regulatory and policy issues before regulatory bodies and in other forums.

Q4. What is your telecommunications experience?

A4. Prior to assuming my current position in October 2003, I held similar responsibilities as Director Wholesale Marketing for SBC Midwest (formerly known as "Ameritech"). In that position, I represented SBC Midwest with regard to wholesale marketing and policy

issues, in particular those issues related to state and federal proceedings under section 271 of the 1996 Act. Prior to the SBC/Ameritech merger in 1999, I was Senior Product Manager for Ameritech's wholesale collocation, structure access, and Bona Fide Request offerings. My prior work assignments include management positions in Network Engineering (where I served as overall process manager for the development of unbundled loop product offerings) and Wholesale Marketing Product Management. I have worked with issues related to interconnection, collocation and network unbundling for more than 9 years. Overall, I have approximately 20 years of experience in telecommunications with Indiana Bell, SBC Midwest, and SBC. I have experience in network planning, design, and engineering, as a technical regulatory liaison, and in wholesale marketing. I have previously testified on wholesale issues before the Federal Communications Commission ("FCC") and before the state commissions of Illinois, Indiana, Michigan, Ohio and Wisconsin. I have also participated in various state commission workshops and industry collaboratives related to the implementation of unbundling obligations with respect to SBC's operating companies.

Q5. What is your educational background?

A5. I earned a Bachelor of Science in Engineering (BSEE) from Purdue University (1983) and a Master of Business Administration (MBA) from Northern Illinois University (2003).

Q6. What is the purpose of your testimony?

A6. I will address SBC's *prima facie* showing that there is no impairment, and thus no basis for unbundling of local dedicated transport, with respect to the dedicated transport routes identified in Attachments 11 and 14. The FCC's *Triennial Review Order* directs state commissions to assess impairment for certain dedicated transport "routes" of incumbent local exchange carriers such as SBC. The FCC's order establishes three alternative

methods to show non-impairment: (1) a "self-provisioning trigger" based on existing transport facilities that competing carriers use to serve their own customers; (2) a "wholesale trigger" based on existing facilities that carriers offer to other carriers; and (3) a "potential deployment" analysis, which considers existing facilities and local engineering factors to determine whether carriers would not be impaired without unbundled access.

This Commission's scheduling order of October 8, 2003 directs SBC and other incumbent LECs ("ILECs") to file opening testimony and "identify the . . . transport (by route) where the ILECs seek to challenge the national findings of impairment." The parties are then to proceed to a collaborative workshop, and any unresolved issues on transport routes "for which a *prima facie* case has been made of no impairment" are to be the subject of rebuttal testimony. Accordingly, my testimony identifies the routes for which SBC seeks to challenge the FCC's national finding of impairment based on the self-provisioning trigger (Attachment 11) and the wholesale trigger (Attachment 14). As discussed below, SBC will be seeking non-impairment determinations for approximately 160 transport routes which satisfy the "self-provisioning" trigger and approximately 500 transport routes which satisfy the "wholesale" trigger. In this testimony, I provide the *prima facie* basis for these routes.

Although there is a significant amount of competitive deployment of transport facilities, which is a key factor in the FCC's potential deployment analysis, SBC is not seeking a non-impairment determination based on a potential deployment analysis at this time. Much of the information pertinent to such an analysis is not within the control of SBC, but rather in the hands of the competing carriers. For example, SBC has requested through discovery that competitive carriers identify all locations where they have a presence, including POPs, carrier hotels, or hubs, locations where facilities are connected to the facilities of another carrier, wire centers between which access has been obtained from non-ILEC suppliers, and installation costs. SBC has only recently begun receiving

responses to the discovery requests issued by the Commission and the parties. SBC received partial discovery responses to the Commission's data requests on the date of this filing and has yet to receive complete discovery responses from any parties in response to its own requests. SBC is in the process of analyzing the data it has received in light of the considerations set forth by the FCC for potential deployment. Further, the upcoming workshop should be an additional source of competitive carrier information.

Q7. How is your testimony organized?

A7. First, in Section I.B, I provide background information about dedicated transport and generally describe the development and extent of competitive transport facilities. Next, I discuss in Section I.C the pertinent provisions of the FCC's *Triennial Review Order*. In Section II, I apply the FCC's "triggers" for self-provisioned and wholesale transport (which are based on existing competitive facilities). Overall, I describe the evidence of competitive facilities that I considered, and demonstrate that such evidence supports (at a minimum) a *prima facie* showing of "non-impairment" for the dedicated transport routes I identify.

B. Background

Q8. What is dedicated transport?

A8. Dedicated transport facilities connect two points within a communications network, so that information can be transmitted between those two points. "Dedicated" transport means all or part of the facility is dedicated to a particular carrier or use and that there is no switching interposed along the transport route.

Q9. How are transport facilities classified?

A9. Transport facilities are classified by the capacity of traffic they can carry. The basic building block of interoffice transport is the "DS-1" transmission level, which is equivalent to 24 voice-grade circuits (a voice-grade circuit is equivalent to a "DS-0" level circuit). A group of 28 DS-1 circuits (or "channels") forms a DS-3 level channel. DS-3 channels are typically the highest level of electrical signal processing deployed in SBC's network. To achieve higher capacity and greater efficiencies over longer distances, dedicated transport is generally provided over transmission facilities that use fiber optic cables. Fiber optic transmission systems use components, such as multiplexers and lasers, that are capable of transmitting digital signals as pulses of lightwave energy at very high transmission speeds. These components are sometimes referred to as "optronics."[1] Optical fiber transmission systems are often described as "OC-n"facilities, with "OC" standing for "Optical Carrier" and the "n" serving as a placeholder for the applicable transmission level. For example, an OC-3 can carry three DS-3s of traffic (or 2,016 DS-0s), OC-12 can carry 12 DS-3s, OC-48 can carry 48 DS-3s, and OC-192 can carry 192 DS-3s (the equivalent of over 129,000 voice-grade circuits).

Once a fiber optic system is deployed, it can be "channelized" into separate DS-1, DS-3, and higher level channels that operate simultaneously. The amount of total capacity, and the number and capacity of the different channels, can be determined simply by adjusting the optronic equipment connected to the fiber. Optronic equipment is commercially available and provides a tremendous range of transmission speeds and bandwidth options. Such equipment is relatively inexpensive compared to the total cost of constructing fiber optic facilities.

[1] Although various other telecommunications technologies are used by carriers and other entities to provide high-speed telecommunications transport (*e.g.*, microwave radio, infrared point-to-point laser, direct satellite transmission), my testimony focuses on dedicated transport provided over fiber optics.

Q10. How does SBC use dedicated transport within its own network?

A10. SBC's network architecture has traditionally used "central offices" (also known as "end offices" or "wire centers") which link end users in a given area to the network, and "tandem" offices, which connect central offices. Dedicated transport facilities run between SBC's central offices, between central offices and tandem offices, and between tandem offices. Such transport facilities are generally referred to as "interoffice transmission facilities" because they connect two of SBC's offices. Attachment 1 illustrates dedicated transport in SBC's network. Dedicated transport, as discussed in my testimony, consists of dedicated interoffice transmission facilities that are dedicated to a particular customer or carrier. "Shared" transport, which consists of transmission facilities shared by more than one carrier, is not at issue in this case.

Q11. What is "dark" fiber?

A11. Dark fiber is deployed fiber optic cable (or fiber strands within an existing fiber optic cable) between two points. It is called "dark" fiber because the cable (or some of the fiber strands in the cable) have not been "lit" by optronic equipment (which transmits information in the form of lightwave pulses, as I described above) on either end of the fiber. Dark fiber *transport* is unlit fiber cable (or strands) between two SBC central offices. A dark fiber *loop* (which I discuss in separate testimony on high-capacity loops) is unlit fiber between a customer location and an SBC central office.

Q12. Have carriers other than SBC deployed transport facilities?

A12. Yes. Nationwide, competing carriers of all sizes have deployed over 184,000 miles of fiber optic cable. The Association for Local Telecommunications Services ("ALTS"), an

industry organization that includes numerous CLECs, estimates that the total is over 339,500 fiber route-miles.[2]

There has been significant growth in competitive fiber over the last 20 years, and in particular since the 1996 Act. The increase in competition in the long distance market following the 1984 divestiture of AT&T led to the development of several competing fiber networks, and to the expansion of transport facilities between and within those networks. The increase in local competition under the 1996 Act led to the emergence of still more fiber networks, and increased traffic brought about by that competition led to the expansion of existing networks as well. Between 1999 and 2002, the scope of competitive fiber networks almost doubled, increasing from approximately 100,000 route-miles to at least 184,000 route-miles. During that same time period, in the 150 largest MSAs, the number of fiber networks increased from approximately 1,100 to nearly 1,800.[3]

Q13. Have competing carriers deployed transport facilities in California?

A13. Yes. There has been extensive deployment of fiber optic transport facilities by competing carriers in California, including carriers who "self-provision" fiber transport to carry their own traffic, wholesale providers who offer transport services to other carriers, and carriers who use fiber transport facilities for both self-provisioning and wholesale purposes. Attachment 2 lists the principal competing providers in California. As I will discuss in more detail in Section II of this testimony, these carriers have extensively deployed fiber optic facilities, particularly in urban and suburban high-density corridors. They provide a wide range of high-capacity, fiber-based transmission services and they serve a variety of customers, including other carriers and "enterprise" business customers.

---

2 *Triennial Review Order*, ¶ 378.
3 UNE Fact Report, III-6 and III-7.

Attachment 3 graphically depicts the extent of fiber transport facilities in Los Angeles and the San Francisco Bay Area. The red lines represent fiber optic networks deployed by SBC's competitors. The colored symbols denote SBC central offices to which competing networks have connected their own transport facilities via "fiber-based collocation" which I describe below. The colored circles denote "carrier hotels" – points outside of SBC's central offices where competing networks connect with each other, which I describe in more detail below. Clearly, there is already a robust infrastructure in place, with at least 16 competing providers and with competing fiber routes that cover much of these metropolitan areas.[4]

Q14. Do the transport facilities of competing providers follow the same physical paths as SBC's network?

A14. No. Competing carriers generally design their own network routes, although there is a certain amount of overlap between their networks and that of SBC, especially in dense urban areas. As I discussed above, SBC's interoffice transport network was originally designed to carry traffic between SBC's central and tandem offices. On the other hand, competing carriers and wholesale providers have developed their own business plans and have deployed their fiber facilities to meet those needs and to serve their customers. In addition, competing carriers determine their own locations for aggregating traffic in a particular area, which are typically called points-of-presence ("POPs"), "hubs" or "gateways."[5]

Thus, competing carriers do not duplicate SBC's central offices or wire centers, nor do they parallel SBC's transport routes, nor do they design their own routes entirely

---

[4] SBC obtained the information used to prepare these maps from two independent third parties, GeoResults and GeoTel, which provide information to assist telecommunications carriers and other buyers and sellers of fiber optic equipment and facilities. These companies are described in more detail in my separate testimony on High-Capacity Loops.

[5] The POP usually is the location where the carrier has installed its switch or router. The POP can be at a building owned or leased by the carrier, or at some other location designated by the carrier, such as a carrier "hotel," which I describe below.

around SBC central offices. For example, OnFiber Communications, Inc. ("OnFiber") has deployed a fiber optic network that centers around its own POPs. Attachment 4 is an excerpt of information provided on OnFiber's public Internet website. OnFiber's maps show that it has deployed fiber facilities in "rings" which encircle areas in San Francisco, San Jose, Los Angeles, and Sacramento. Another example is Sprint, which has recently completed a "Large Metro Network" in the "Bay Area" that will "broaden the company's local transport infrastructure." See Attachment 5.

Q15. How do competing carriers and providers of wholesale transport services connect their transport facilities to SBC's network?

A15. This can be accomplished in several ways. Many carriers use physical or virtual collocation of their transmission equipment in SBC's central offices. The carrier uses that transmission equipment to aggregate its traffic from the SBC central office location for transmission or "backhaul" to its hub or POP over an "entrance facility." In that circumstance, the collocating carrier may choose to provide its own entrance facility using a fiber optic cable. For example, the carrier can route its fiber optic cable to the nearest designated manhole outside SBC's central office. The fiber cable is then routed through the central office cable vault (which is also where SBC's own fiber and other cables enter the central office building). SBC then pulls the CLEC's fiber into the cable vault and routes a fiber cable up to the CLEC's collocation space. A collocation arrangement that is "fed" with a fiber optic cable as its entrance facility is referred to as a "fiber-based collocation." Attachment 6 illustrates a typical fiber-based collocation arrangement.

Q16. Can you provide an example of a carrier that has deployed its own fiber transport network and collocated in SBC's central offices?

A16. Yes. Edison Carrier Solutions, a division of Southern California Edison ("Edison"), has a 2,500 route-mile fiber optic network, which it claims is the largest competing network in Southern California (Attachment 7). Edison has established fiber-based collocation in numerous SBC central offices, and its network provides transport to other carriers' POPs, to "carrier hotels," to data centers, and to tandem offices and end-offices spanning both SBC California and Verizon service areas. (See: http://www.edisonconnect.com/pages/faqs1.htm). Edison uses its transport network to serve its own end users and it is also a wholesale provider of transport services to other carriers. A number of other carriers, including AT&T, ICG, Level 3, MCI, and XO, have also collocated in SBC's central offices, as detailed in Section II below.

Q17. In addition to bringing its own fiber entrance facility into SBC's central office, are there other ways for a competing carrier to connect its collocation arrangement to fiber optic transport facilities?

A17. Yes. First, a collocated carrier may obtain the entrance facility from another carrier, such as a wholesale transport provider or "wholesaler." In that situation, the wholesaler routes its fiber to SBC's manhole to be pulled to the collocating carrier's collocation arrangement. Second, a collocated carrier may interconnect with other collocated carriers in the central office through a "collocation-to-collocation" cross connect. This enables the connected carriers to obtain transport services from each other (*e.g.*, carriers may lease each other's capacity, or make other arrangements such as transport capacity contracts or indefeasible rights of use). Third, a competing provider may connect its facilities via a POP, hub, or "carrier hotel."

Q18. What is a carrier hotel?

A18. A carrier "hotel" is a building where two or more providers have deployed telecommunications equipment in a location other than the premises of the incumbent carrier. It is sometimes called a "collocation hotel" or "carrier-neutral" collocation facility. It allows carriers (as well as other entities like Internet Service Providers and enterprise customers) to install their telecommunications equipment in a centralized location, often near a major "central office" of the incumbent. Carrier hotels are designed to provide a suitable environment for telecommunications equipment (with, for example, heating and cooling to protect the equipment from extreme temperature and moisture), access to AC and DC electrical power, and interconnection to fiber optic transmission equipment and networks. In many cases, a wholesale fiber transport provider offers such "hotel" arrangements for its clients, including other carriers and/or enterprise customers, so that they can connect their own networks directly to the transport provider. Carrier hotels are sometimes located within a carrier's optical backbone "hub" or "gateway" locations. Attachment 8 depicts a typical carrier hotel arrangement.

Q19. Are there any "carrier hotels" or comparable arrangements in California?

A19. Yes, such facilities are abundant in California. For example, Looking Glass Networks, Inc. ("Looking Glass") offers "collocation" services at various metropolitan sites, which it calls "Looking Glass Node/Collocation Facilities." Looking Glass offers "carrier neutral facilities," "an abundance of power, security and system redundancy," "[e]asy access to our high-capacity optical networks and leading edge telecommunications transport services plus proximity to fiber from multiple carriers." See Attachment 8. Looking Glass has such facilities in San Francisco, San Jose, and Los Angeles. *Id.* Another example is Level 3 Communications, Inc. ("Level 3"), which offers "(3) Center ™ Collocation" in Los Angeles, San Francisco, San Jose, Oakland, Sacramento, and San Diego, among other locations. Level 3 "relies on its collocation buildings to operate its

own intercity backbone." See Attachment 9. An independent market has developed for these facilities, operating a website called "carrierhotels.com." See Attachment 10.

Q20. What is the significance of carrier hotels and other alternative collocation facilities?

A20. My analysis of the FCC's "triggers" in Section II below focuses on competitive transport facilities that are connected to SBC's central offices by fiber-based collocation. But as I discussed above, competing providers' transport facilities do not precisely track SBC's network or connect with all of SBC's central offices. Carrier hotels provide competing carriers and wholesale transport providers an alternative to collocating their equipment in the incumbent's central offices. In addition, competing carriers can typically gain access to several (or many) other fiber optic transmission networks that connect with that hotel, thereby gaining direct access to those transport networks and indirect access to any SBC central or tandem offices that are connected to those transport networks. This is illustrated by the diagrams contained on Looking Glass' website (Attachment 8) and Level 3's website (Attachment 9). As these diagrams show, it is also possible for large enterprise users, like businesses or Internet Service Providers (ISPs), to be directly connected via fiber optic "loops" to the fiber transport facilities and to carrier hotels. The availability and prevalence of such alternatives to collocation are important points to consider in assessing the full scope of facilities-based competition.

C. Overview of FCC's Transport Conclusions

Q21. How did the FCC define "dedicated transport" in its *Triennial Review Order*?

A21. The FCC limited its definition of the dedicated transport UNE to "only those transmission facilities *within* an incumbent LEC's transport network, that is, the transmission facilities *between* incumbent LEC switches."[6] Note that this definition has

[6] *Triennial Review Order*, ¶ 366 (emphasis added).

been modified from the one set forth in previous FCC orders, in that it specifically excludes "entrance facilities" (which, as I described above, are the facilities that connect the competing carrier's POP to SBC's central office).[7]

Q22. What "impairment" findings did the FCC make with respect to OC-n dedicated transport?

A22. With respect to dedicated OC-n local transport, the FCC found "on a national level that requesting carriers are not impaired without access to unbundled OCn transport facilities."[8] The FCC determined that a carrier with sufficient traffic to warrant dedicated transport at levels of OC-n, by definition, should also have enough revenue along that route to justify buying or building fiber optic facilities.[9] Accordingly, SBC is not required to offer unbundled access to OC-n level transport.

Q23. What "impairment" findings did the FCC make with respect to other categories of dedicated transport?

A23. With respect to dark fiber and DS-3 transport, the FCC stated that "on a national level . . . requesting carriers are impaired without [unbundled] access," but that finding is "subject to both a granular route-based review by the states to identify available wholesale facilities and to identify where transport facilities can be deployed."[10] As to DS-3 dedicated transport, the FCC added that unbundling is not required beyond 12 DS-3 transport circuits for a given CLEC on a given route.[11]

With respect to DS-1 dedicated transport, the FCC found "on a national level that requesting carriers are impaired without access to unbundled DS1 transport facilities,

---

7 *Id.* ¶ 366 n.1116.
8 *Id.* ¶ 359.
9 *Id.* ¶¶ 388-389.
10 *Id.* ¶ 359.
11 *Id.* ¶ 388.

subject to a granular route-based review by the states to identify available wholesale facilities."[12]

Q24. What reasons did the FCC give for those decisions?

A24. The FCC recognized that "competitive DS1, DS3, and dark fiber transport facilities are available on a wholesale basis in some areas, and that competing carriers have deployed their own transport networks in some areas."[13] However, the FCC stated that "the record is not sufficiently detailed concerning exactly where these facilities have been deployed," and that "the nature of transport facilities requires a highly granular impairment analysis."[14] As a result, the FCC established "specific triggers for states to apply in conducting such an analysis."[15] It also established criteria for states to assess potential deployment of DS-3 and dark fiber transport based on existing facilities-based competition and local engineering and economic conditions.

Q25. What is the purpose of the FCC's analyses?

A25. The FCC stated that its methods are intended to identify "specific point-to-point routes" where (1) "carriers have the ability to use alternatives to the incumbent LEC's network" or (2) "self-provisioning transport facilities is economic."[16]

Q26. What is a specific point-to-point "route" in the context of the FCC's Rule?

A26. The FCC's Rule 51.319(e) states that "a 'route' is a transmission path between one of an incumbent LEC's wire centers or switches and another of the incumbent LEC's wire centers or switches." A "route between two points (*e.g.*, wire center or switch 'A' and wire center or switch 'Z') may pass through one or more intermediate wire centers or

---

12 *Id.* ¶ 359.
13 *Id.* ¶ 360.
14 *Id.*
15 *Id.*
16 *Id.*

switches (*e.g.*, wire center or switch 'X')." However, the FCC stated that "[t]ransmission paths between identical end points (*e.g.*, wire center or switch "A" and wire center or switch "Z") are the same 'route,' irrespective of whether they pass through the same intermediate wire centers or switches, if any."[17] In other words, for the purpose of applying the FCC Rule, a competing provider's transport network need not follow the exact same physical path as SBC's facilities between the two end points, so long as it connects at those same end points.

Q27. What are the methods for establishing non-impairment for DS-3 and dark fiber transport?

A27. The FCC Rule sets forth three alternative methods to establish non-impairment. The first, which is called the "self-provisioning trigger," is satisfied where three or more competing carriers already provide their own transport along the specified route, if those carriers satisfy certain conditions.[18] The second test, called the "competitive wholesale facilities trigger," is met where two or more wholesale transport providers are willing to provide transport on a generally available basis along the specified route, if those providers satisfy certain conditions.[19] If either trigger is satisfied for a particular route, then the state commission "*shall* find that a requesting telecommunications carrier is not impaired without access to dedicated DS3 [or dark fiber] transport on an unbundled basis" along that route.[20]

These first two triggers address *existing* transport facilities that have already been deployed by competing carriers, and that happen to connect to SBC's network (*e.g.*, via collocation). The FCC's Rule also establishes criteria for evaluating *potential* deployment.

---

17 47 C.F.R. § 51.319(e).
18 *Id.* §§ 51.319(e)(2)(i)(A) and 51.319(e)(3)(i)(A).
19 *Id.* §§ 51.319(e)(2)(i)(B) and 51.319(e)(3)(i)(B).
20 *Id.* § 319(e)(2)(i) & (e)(3)(i) (emphasis added).

Q28. Please briefly describe the potential deployment analysis.

A28. The FCC 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 unbundled transport along a particular route" – that is, where engineering and cost considerations are such that carriers could economically build or obtain transport facilities along that route.[21] In other words, the FCC recognized that it might be economic for a requesting carrier to obtain transport between two central offices, even where the number of carriers specified by the trigger have not already deployed fiber facilities into both of the central offices. For example, carriers might have already deployed extensive transport facilities within the SBC serving wire centers but decided not to establish fiber-based collocation (*e.g.*, the carrier may have established a collocation arrangement in SBC's central office, but decided not to extend its fiber as an entrance facility to that collocation arrangement). Such facilities may terminate in carrier hotels, fiber hubs, or POPs. In such cases, the facilities may effectively provide transport between SBC's wire centers, and indeed between SBC's central offices, where they so choose. It's just that competing carriers have established their own alternatives to obtaining transport along a route.

Q29. What methods did the FCC establish for evaluating impairment with respect to DS-1 dedicated transport?

A29. For DS-1 dedicated transport, the FCC applied the same "wholesale" trigger discussed above for DS-3 and dark fiber transport.[22] However, the FCC did not define a "self-provisioning" trigger or a "potential deployment" analysis for DS-1 dedicated transport.[23]

---

21 *Id.* §§ 51.319(e)(2)(ii) and 51.319(e)(3)(ii).
22 *Id.* § 51.319(e)(1)(ii).
23 *Id.* § 51.319(e)(1).

D. Summary of Analysis and Conclusions

Q30. How did you go about applying the FCC's impairment tests?

A30. I began with the "self-provisioning trigger", and identified over 160 transport routes where at least the required number of non-affiliated competing carriers have deployed their own fiber transport facilities and extended them into SBC's central offices. I then applied the "wholesale" trigger for DS-1, DS-3, and dark fiber transport, and determined that a number of providers offer wholesale transport services to competing carriers along more than 500 transport routes. I describe each of these steps in more detail below.

Q31. Please explain how you applied the FCC's self-provisioning trigger.

A31. As I described above, the self-provisioning trigger looks for instances where competing carriers have deployed *existing* transport facilities that connect two SBC central offices to form a dedicated transport "route" (the precise physical paths that the competing facilities take between SBC's central offices are irrelevant). Thus, the logical starting point was to identify those SBC central offices into which competing carriers have extended their fiber transport facilities through collocation. SBC, of course, keeps records in the ordinary course of business regarding collocation arrangements established by competing carriers in SBC's central offices.

The next step was to look for situations where three or more competing carriers have deployed such collocation arrangements in a "pair" of SBC central offices (*e.g.*, central offices "A" and "Z", which identify the end points of a transport "route"). For example, if a given competing carrier has a fiber-based collocation arrangement in both central office "A" and central office "Z", it follows that the carrier has transport facilities connecting A and Z. This is consistent with the FCC's definition of a transport "route" as *any* connection between central offices A and Z; the precise physical path or intermediate

points between A and Z are irrelevant. Finally, I reviewed the data provided by competing carriers on the public record (such as press releases, industry publications, and carrier websites). I describe each of these steps, and the results, in more detail in Section II.B below.

Q32. Please explain how you applied the FCC's wholesale provider trigger.

A32. As with the self-provisioning trigger, I looked for competing providers that have connected to SBC's switch location at both ends of a "route." Under the wholesale trigger, though, the number of competing providers required to meet the trigger is only two (not three as with the self-provisioning trigger). Thus, I again reviewed SBC's collocation records to identify pairs of central offices where at least two of the collocated carriers have established transport connections via fiber-based collocation. Then, I determined whether at least two of those carriers offer wholesale transport services to other carriers. I reviewed information from various public sources (such as the competing providers' own web sites) to determine which carriers offer wholesale transport services in the applicable California markets. I describe each of these steps, and the results, in more detail in Section II.C below.

Q33. Can a competing provider be both a "self-providing" carrier and a wholesale provider?

A33. Yes, competing carriers can and do use their fiber optic networks to carry traffic for their own end users *and* for other carriers. Fiber optic cables have enormous capacity to carry telecommunications traffic, allowing self-providers with sufficient capacity to also serve as wholesalers. Fiber networks are deployed with one or more cables on a route, and each cable consists of multiple fibers (common quantities are 12, 24, 48, 72, or 92 fibers per cable). In fact, the capacity of the fiber itself is generally not a limiting factor in how much information can flow over the fiber; rather, the transmission speed is primarily

determined by the optronics that are connected to the fiber. American Fiber Systems, a wholesale fiber provider, claims that "a single strand of fiber . . . can now carry every phone call, e-mail and web page used by every person in the world." (www.americanfibersystems.com). In many cases, it simply makes a lot of business sense for a carrier to use some capacity on its fiber network to carry traffic for its own end users, and to lease the remaining capacity to other carriers as a "wholesale" offering. Thus, many competing carriers are actively providing wholesale transport, offering a range of specific wholesale options ranging from DS-1 and DS-3 transport, high-speed bandwidth services (OC-3, OC-48 etc), Ethernet-based "gigabit" services, and dark fiber. By "leasing" capacity on their networks, carriers gain additional revenue and increase the efficiency of their networks. The FCC has acknowledged that a carrier may be both a self-providing carrier and a wholesale provider, stating that the self-provisioning trigger is satisfied "when a state commission finds that . . . three competing carriers have self-provided transport facilities on that route *(irrespective of whether they make available wholesale capacity)*.[24]

Q34. Can you provide any examples of wholesale transport carriers that are also "self-providers" in California?

A34. Yes. As I discuss below, there are a number of competing carriers, including AT&T, Allegiance, and Edison, that do just that. Attachment 2 summarizes competing providers and shows whether they are self-providers, wholesalers, or both.

Q35. Please summarize your conclusions.

A35. The data provides at least a *prima facie* showing that: (i) a large number of competing providers have already deployed extensive transport facilities throughout California, and

[24] *Triennial Review Order*, ¶¶ 384 n.1184 & 387 n.1200 (emphasis added).

particularly in major urban corridors; (ii) these existing facilities satisfy the FCC's self-provisioning trigger for 161 specific "routes" (most of which are located in the Los Angeles area) as listed on Attachment 11; and (iii) the FCC's wholesale trigger is satisfied for 502 routes, as listed in Attachment 14. The 502 routes satisfying the wholesale trigger include all 161 routes satisfying the self-provisioning trigger.

II. TRIGGER ANALYSES

A. Overview of FCC Trigger Rules

Q36. Please review the FCC's "triggers."

A36. As I discussed, the FCC's rules contain two "trigger" tests: a "self-provisioning" trigger and a "wholesale" trigger. The self-provisioning trigger applies to determining non-impairment as to DS-3 and dark fiber transport. The wholesale trigger applies to determining non-impairment for DS-1, DS-3, and dark fiber transport.

B. Application of Self-Provisioning Trigger

Q37. Please describe in more detail the "self-provisioning trigger" for unbundled DS-3 and dark fiber transport.

A37. The "self-provisioning trigger" is satisfied if the Commission finds "that three or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC" satisfy two conditions:

(a) that each provider "has deployed its own transport facilities and is operationally ready to use those facilities" to provide dedicated transport along that route; and

(b) that the competing provider's facilities terminate either "at a collocation arrangement" (if the transport route ends at the incumbent's premises) or at "a

similar arrangement" (if the end of the transport route is not located at an incumbent LEC's premises).[25]

Q38. Have you examined SBC's transport routes to determine if the self-provisioning trigger has been met?

A38. Yes.

Q39. What have you concluded from your examination?

A39. As shown in my Attachment 11, the self-provisioning trigger has been satisfied along at least 161 routes – 135 in the Los Angeles LATA, 19 in the San Francisco LATA, and 7 in the San Diego LATA. While other routes may pass this test, I have not determined conclusively that they do, as SBC only recently began to receive discovery responses. It is also possible that additional information, possessed by the CLECs but not yet provided in discovery (for example, information possessed by providers who are not parties to this proceeding), would reveal additional routes that meet the trigger.

Q40. How did you apply the FCC's self-provisioning trigger?

A40. As I discussed above, first, I identified where competing providers have established fiber-based collocation arrangements in SBC's central offices. A "route" is defined by its end points – a pair of two central offices (*e.g.*, A and Z). Thus, if at least three (3) competing providers have transport links at both central offices, and if they all satisfy certain other requirements (*e.g.*, the carriers are not affiliated with each other and they have established collocation at each central office end point), then the self-provisioning trigger has been satisfied for that route between those central offices and there is no impairment to warrant

[25] 47 C.F.R. § 319(e)(2)(i)(A) & (e)(3)(i)(A).

unbundled access. Attachment 12 depicts a route for which the self-provisioning trigger is satisfied.

Note that some collocated carriers lease transport services from SBC pursuant to state or federal "special access" tariffs, in lieu of extending their own fiber into SBC central offices. I did not include these arrangements in my analysis.

Q41. Please illustrate this with an example.

A41. Let's say that SBC has four central offices, A, B, C and D. A review of the collocation records shows that three non-affiliated, self-provisioning carriers have established fiber-based collocation at central office A, and that the same three self-provisioning carriers also have fiber-based collocation at central offices B and C. That means that each carrier's fiber transport network connects to A, B, and C. If those three carriers satisfy the FCC's other "trigger" criteria (*e.g.*, they are not affiliated with each other), then the self-provisioning trigger would be satisfied for the routes between A and B, A and C, and B and C.

Now let's look at central office D, and assume that there are less than three fiber-based collocation arrangements there. In that case, the routes involving central office D (*i.e.* routes A-D, B-D, and C-D) would not meet the self-provisioning trigger, because there must be at least three fiber carriers collocated at *both* ends of the route, and in our example, end point (D) has less than three such carriers. We would then proceed to the wholesale trigger for those routes, which I discuss further below in subsection C.

Q42. Please describe the layout of Attachment 11.

A42. Each line of Attachment 11 represents a transport route that satisfies the self-provisioning trigger. To facilitate review, the routes are grouped by the metropolitan area in which they are located: the first 135 routes are in Los Angeles, the next 19 routes are in the San Francisco Bay Area, and 7 routes are in San Diego. The next two columns, labeled

"Route A-Z," provide the SBC central offices at each end of the route, identified by the Common Language Location Identifier ("CLLI") code that corresponds to each office: for example, the first route runs between SBC's central offices ANHMCA01 (in Anaheim) and IRVNCA11 (in Irvine). The subsequent columns, labeled "Competing Providers," list the self-provisioning carriers that have established fiber-based collocation at both central offices. As the Attachment shows, there are at least three competing providers on each route, and even more than three for some routes.

Attachment 13 graphically depicts the Los Angeles routes on a map. The colored squares denote the SBC central offices at the end of each route. The colored lines represent transport facilities connecting those offices. For ease of illustration, the routes are depicted by straight lines, as the precise physical path is irrelevant under the FCC rule.

Q43. How do you know that these carriers are "self-providers"?

A43. Generally, these carriers' websites contain advertisements regarding the types of telecommunications services they offer to customers and end users. Additionally, at each end of the transport route, these carriers have deployed a fiber based collocation arrangement in the SBC central office. To obtain collocation at an SBC central office, the competing carrier must either request interconnection with SBC's network and/or request unbundled access for the purpose of providing telecommunications services (as noted above, SBC did not include collocation arrangements associated with "special access" service). It follows that any carrier that has applied for and deployed fiber-based collocation must be a "self-provider" to some extent. Now, that carrier might also provide wholesale transport service to *other* carriers *in addition to* using transport facilities to serve its own end users – and in fact, I show below and on Attachment 2 that several carriers are both self-providers and wholesalers – but at a minimum it must be a "self-provider." Additionally, as the Commission is aware, extensive discovery has been

issued in this matter. SBC only began to receive responses to some of that discovery from CLECs shortly before the filing of this testimony. SBC will work with the CLECs at the upcoming workshop to further confirm carriers' status as "self-providers" on the routes identified.

Q44. What data have you relied on to support your self-provisioning trigger analysis?

A44. The primary source of information for this portion of the analysis is SBC's own business records. SBC maintains information regarding collocation requests and the existence and type of collocation arrangements it provides to requesting carriers. SBC compiled a list of fiber-based collocation arrangements, sorted by central office, from its business records, and I used this information to determine which central offices had at least three competing carriers connected by fiber-based collocation arrangements.

Q45. How did you determine whether the competitive providers are operationally ready to provide transport at a DS-3 level along each route, in accordance with Rule 51.319(e)(2)(i)(A)(1)?

A45. In support of its petitions seeking pricing flexibility from the FCC for SBC's access services, SBC physically verified all fiber collocation arrangements throughout its 13-state service area (including the California arrangements referenced above) in late 2002. SBC's collocation field managers inspected each arrangement to verify that the collocation arrangement has been completed and the competing provider's fiber entrance facility has been pulled into the collocation arrangement.

Where a carrier has deployed fiber optic transport facilities, it is capable of providing virtually any transmission level – including DS-3. In fact the DS-3 level is one of the building blocks of digital transmission – three DS-3s are combined to form an optical OC-3 – and a fiber cable is capable of carrying several if not many times the capacity of a DS-3. As I mentioned earlier, the optronic equipment used to "channelize"

fiber optic facilities into DS-3 transport is commonly available and inexpensive. Thus, several of the carriers referenced in Attachment 11 expressly include DS-3 in the transport offerings and capabilities listed on their websites. See Attachment 2. For example, ICG advertises on its website that it offers bandwidth in increments of DS-1, DS-3, OC-3, OC-12 and C-48.

Q46. Do competing carriers' fiber transport facilities also contain "dark" fiber?

A46. Yes. It is likely that competing carriers have deployed spare "dark" fibers where they have placed fiber optic cables. Dark fiber is fiber optic cable "that has not been activated through connections to optronics that light, and thereby render it capable of carrying communications."[26] Further, it simply makes engineering and economic sense that competing carriers' fiber transport facilities would also contain at least some "dark" fiber because the fiber cable itself is relatively inexpensive as compared to the overall cost of deploying a fiber-based system along a route. Put another way, it is simply cheaper to put in extra fibers to begin with, than to do so later. Thus, where competing carriers have self-provisioned "lit" fiber transport, those carriers have most likely deployed some "dark" fiber along that same route.

Q47. Can the self-provisioning trigger also be satisfied by competitive transport facilities that do not connect to collocation arrangements at SBC's central offices?

A47. Yes. The FCC Rule states that the self-provisioning trigger can also be satisfied by competitive facilities that terminate *outside* of SBC's premises, in an arrangement "similar" to collocation.[27] Although some information is publicly available via the carriers' websites, the bulk of the information on such alternative facilities resides with SBC's competitors, not SBC. My analysis focused on transport facilities that terminate

[26] *Triennial Review Order*, ¶ 381.
[27] 47 C.F.R. §§ 51.319(e)(1)(ii)(C), (e)(2)(i)(A)(2), (e)(2)(i)(B)(3).

in collocation arrangements on SBC premises, because SBC has access to the information it maintains in the normal course of business regarding such collocation arrangements. For purposes of analyzing the self-provisioning and wholesale triggers, I did not consider "similar" arrangements that terminate outside of SBC's premises. Thus, my analysis is quite conservative.

Q48. Based on the above analysis of self-provisioning, what should the Commission decide?

A48. Based on the evidence of self-provisioned transport, the Commission should hold that SBC is not required to provide DS-3 or dark fiber dedicated transport along the routes listed in Attachment 11.

C. Application of Wholesale Trigger

Q49. Please describe in more detail the "wholesale trigger" for unbundled DS-1, DS-3 and dark fiber transport.

A49. The "competitive wholesale facilities trigger" or "wholesale trigger" for short is satisfied if the state commission finds "that two or more competing providers not affiliated with each other or the incumbent LEC, including intermodal providers of service comparable in quality to that of the incumbent LEC" each satisfy four conditions:

- they have deployed their own transport facilities (including certain "dark fiber" facilities obtained on an unbundled or leased basis) and are operationally ready to use those facilities;
- they are willing immediately to provide, on a widely available basis, dedicated transport along the route;
- their facilities terminate in a collocation or similar arrangement, as appropriate; and

- requesting carriers may obtain reasonable and nondiscriminatory access to the provider's facilities through a cross-connect.[28]

Q50. Which routes has SBC identified that satisfy the wholesale trigger?

A50. The wholesale trigger has been satisfied for the 502 routes identified in Attachment 14. As with the self-provisioning trigger, the vast majority of these routes are in the Los Angeles and San Francisco LATAs. Attachment 15 graphically depicts the Los Angeles and San Francisco routes. As with Attachment 13, the colored squares represent SBC central offices and the colored lines connecting them represent transport routes.

Q51. How did you determine that these routes satisfy the wholesale trigger?

A51. I looked at several sources of information. As with the self-provisioning trigger, the first step is to identify which transport routes have carriers with fiber-based collocation at both ends. For the wholesale trigger, though, the number of carriers required is only two, not three. I reviewed SBC's collocation records to determine which pairs of central offices (the "ends" of a transport route) have at least two such carriers. I then determined that those carriers are also wholesale transport services providers.

Q52. How did you determine whether a collocated carrier was also a provider of wholesale transport services?

A52. I looked at information from the carriers themselves: carriers' websites and press releases describe their wholesale service offerings and the geographic areas in which they offer transport services. In addition, we are in the process of reviewing information that SBC has begun to receive from competing carriers and wholesale providers in discovery to confirm my findings.

---

[28] 47 C.F.R. 51.319(e)(1), (e)(2)(i)(B), (e)(3)(i)(B).

The results of these analyses are summarized on Attachment 2. A "yes" under the column labeled "wholesale provider" shows that at least one of the sources listed above identifies the carrier as a wholesale provider. In many cases, this fact was confirmed by several sources.

Q53. Please describe the layout of Attachment 14.

A53. The layout of Attachment 14 is similar to that of Attachment 11, which listed the routes satisfying the self-provisioning trigger. Each line of Attachment 14 corresponds to a route that satisfies the trigger, and the routes are grouped by metropolitan area. The attachment provides the CLLI code for the SBC central office at each end of the route, and then identifies the wholesale carriers on that route.

Q54. Do any of the routes that satisfy the wholesale trigger also satisfy the self-provisioning trigger?

A54. Yes. In fact, the wholesale trigger is satisfied on all of the 161 routes that satisfied the self-provisioning trigger (and for many additional routes). These 161 routes have at least three self-providers and at least two wholesale providers (as I described earlier, many carriers are both self-providers and wholesale providers). For purposes of DS-3 and dark fiber transport, satisfaction of *either* trigger is sufficient to show non-impairment so it doesn't matter which trigger is met. For purposes of DS-1 transport, however, only the wholesale trigger can be applied to show non-impairment.

Q55. How did you verify that the competitive providers are operationally ready to provide transport at dark fiber, DS-1 and DS-3 capacity along each route?

A55. Plainly, a carrier would not publicly offer transport services along a route, and go to the time and expense of establishing and maintaining collocation arrangements at both ends, if it is not operationally ready to fulfill its offer. And as I described above, the existence

of optical fiber facilities (which even in the most minimal case have capacity equal to at least 3 DS-3s or 84 DS-1s) certainly enables that carrier to provide either DS-3 or DS-1 transport. Also, carriers can and do offer excess unlit fiber on a wholesale basis.

Q56. Are the wholesale providers collocated in SBC's central offices?

A56. Yes. My analysis looks only at providers that are collocated in SBC's central offices, so by definition that requirement of the trigger is satisfied.

Q57. How did you determine that the wholesale providers are "willing immediately to provide" dedicated transport "on a widely available basis"?

A57. As I noted above, I have reviewed whether the competing providers' own websites advertise their wholesale transport offerings. For example, on its website, XO states that they provide service using "our extensive intercity and metropolitan network that spans more than 400,000 route miles to 50 cities..." See Attachment 2. Similarly, AT&T's website advertises a comprehensive portfolio of wholesale services. *Id.* Further, we are in the process of reviewing the information that SBC has begun to receive in discovery.

Q58. How did you verify that requesting carriers may obtain "reasonable and nondiscriminatory access" to the competing provider's facilities through a cross-connect?

A58. Where the provider is collocated in SBC's central office, it can request a connection to other collocated carriers in that same central office (*i.e.*, a collocator-to-collocator connection). SBC makes such connections available pursuant to Advice Letter 20412B, and through interconnection agreements. My review indicated that some collocated carriers have requested and obtained such connections in California.

Q59. Based on the above analysis, what should the Commission decide?

A59. Based on the evidence of wholesale transport, the Commission should hold that SBC is not required to provide DS-1, DS-3, or dark fiber transport along the routes listed in Attachments 11 and 14.

D. "Intermodal" Providers

Q60. Please define "intermodal provider" in the context of the market for dedicated transport.

A60. In this context, the term essentially describes methods of transporting telecommunications that use technologies and/or network architectures that are different from those in the traditional wireline, circuit-switched telephone network. Basically, in the context of interoffice transport, the traditional technologies have been metallic facilities, microwave radio and fiber optic carrier systems. Some carriers may use other methods, such as wireless technologies or satellite transmission.

Q61. Does your analysis of competing transport providers include "intermodal providers of service comparable in quality to that of [SBC]"?

A61. Although carriers have deployed intermodal transport alternatives, SBC has not yet examined this in detail, due to (i) the scope, complexity, and short timetable of this initial nine-month proceeding, and (ii) the fact that much of the information on intermodal providers resides with those providers, not with SBC. However, as additional information becomes available SBC intends to present that information in the subsequent proceedings called for by the *Triennial Review Order*.

III. CONCLUSION

Q62. Please summarize the conclusions you have reached.

A62. As shown above, there is at least *prima facie* evidence of non-impairment along the 502 routes identified in Attachments 11 and 14 to my testimony.

Q63. How should the Commission proceed?

A63. The Commission and SBC have already issued discovery to the various competing providers, seeking information about their existing facilities and their potential to extend those facilities or deploy new facilities. In the upcoming collaborative workshop, the parties can review the information presented by SBC and other ILECs in this filing, along with information provided in discovery. They can then seek to reach agreement as to some or all of the transport routes identified in Attachments 11 and 14, and as to any additional routes for which discovery yields *prima facie* evidence of non-impairment. After the workshop report is issued, the parties can address any routes for which impairment is in dispute in rebuttal testimony, and in any hearings, briefs, or further proceedings that the Commission deems necessary.

Q64. Does this conclude your testimony?.

A64. Yes.