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Telephone, L.P., d/b/a/ SBC Missouri
Case No: TO-2005-0336

SOUTHWESTERN BELL TELEPHONE, L.P.,

d/b/a SBC MISSOURI

CASE NO. TO-2005-0336

DIRECT TESTIMONY

OF

JAMES HAMITER

Dallas, Texas
May 9, 2005

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of Southwestern Bell Telephone, L.P.,
d/b/a SBC Missouri's Petition for Compulsory) Case No. TO-2005-0336
Arbitration of Unresolved Issues for a Successor)
Agreement to the Missouri 271 Agreement ("M2A"))

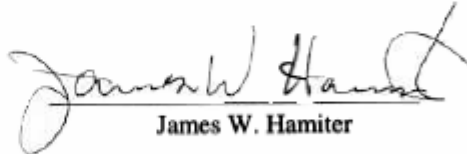
AFFIDAVIT OF JAMES W. HAMITER

STATE OF TEXAS)

COUNTY OF DALLAS)

I, James W. Hamiter, of lawful age, being duly sworn, depose and state:

1. My name is James W. Hamiter. I am presently Area Manager-Interconnection for SBC Operations, Inc.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.


James W. Hamiter

Subscribed and sworn to before me this 4th day of May, 2005.




Notary Public

My Commission Expires: October 5, 2008

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1 **INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. My name is James W. Hamiter. My business address is Three SBC Plaza, 308 Akard
4 Street, Dallas, Texas 75202.

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

6 A. I am employed by SBC Operations, Inc. ("SBC Ops"). Since May 2000, my title has been
7 Area Manager, Network Regulatory- Interconnection.

8 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?**

9 A. My primary responsibility is to represent the SBC-owned incumbent local exchange
10 carriers ("ILECs") in the development of network policies, procedures, and plans from a
11 regulatory perspective. I also represent those companies' network organizations'
12 interests in negotiations with competing local exchange carriers ("CLECs"). I present,
13 explain, and justify SBC's network interconnection positions before regulatory and
14 legislative authorities. From June 2000 through May 2002, I presided over the CLEC and
15 Southwestern Bell Telephone Company ("SWBT") Trunking Forum in Dallas, Texas.
16 My current responsibilities still include the support of this forum.

17 **Q. PLEASE OUTLINE YOUR WORK EXPERIENCE.**

1 A. I have more than 28 years of network-related experience in the telecommunications
2 industry. This experience includes more than 23 years with Southwestern Bell (“SWB”)
3 in Houston, Texas, before I transferred to my present position. I began my career with
4 SWB in January 1977. During my tenure with SWB, I held management positions in the
5 Traffic, Network Planning, Circuit Administration Center, Network Operations, and
6 Trunk Planning and Engineering departments. Some of my duties included inter-
7 departmental and inter-company coordination, in various capacities, on major
8 telecommunications projects, network and dial administration, inter-office facility
9 planning, special service forecasting, and inter-office message trunk servicing and
10 forecasting. Previously, I have provided pre-filed and/or direct testimony in the following
11 dockets:

- 12 1. August 2002, Public Utility Commission of Ohio, Case No. 02-796-TP-CSS,
13 Time Warner Telecom (Complainant) vs. Ohio Bell Telephone Company dba
14 Ameritech Ohio (Respondent);
- 15 2. December 2002, Michigan Public Service Commission, Case No. U-13526,
16 TelNet Worldwide, Inc., The Iserv Company, Fiskars, Inc., and Robert Tatay
17 (Complainants) against Michigan Bell Telephone Company dba Ameritech
18 Michigan (Respondent).
- 19 3. July 2004, Public Utilities Commission of Nevada, Docket No. 02-8016,
20 Autotel (Complainant) against Nevada Bell Telephone Company
21 (Respondent).
- 22 4. November 2004, Public Service Commission of Wisconsin, Docket No. 05-
23 MA-135, Level 3 Communications LLC (Complainant) against SBC
24 Wisconsin Bell, Inc. d/b/a SBC Wisconsin.
- 25 5. January 2005. Public Utilities Commission of Nevada, Docket No. 04-5032,
26 Level 3 Communications LLC (Complainant) against Nevada Bell Telephone
27 Company, d/b/a SBC Nevada.
- 28 6. January 2005, Public Service Commission of Wisconsin, Docket No. 05-MA-
29 136, Wisconsin Bell Telephone Company, Incorporated d/b/a SBC Wisconsin
30 (Petitioner) against AT&T Communications of Wisconsin, GP.

1 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?**

2 A. In 1977, I graduated from the University of Houston in Houston, Texas, with a Bachelor
3 of Science Degree in Technology. As an SBC employee, I have received training on
4 switch operations and translations, transmission and facility equipment operations, and
5 special service and message trunk forecasting and provisioning. I have developed and
6 held training seminars for my subordinates and other employees on various network,
7 trunking, and network administration processes.

8 **II. EXECUTIVE SUMMARY**

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. I will explain and support the technical aspects of SBC Missouri's position with respect to
11 disputed issues in the Network Interconnection Methods ("NIM") Appendix, the
12 Interconnection Trunk Requirements ("ITR") Appendix, AT&T's Network Architecture
13 Appendix, and several network terms and definitions proposed in various appendices.

14 **Q. IN SUMMARY, WHAT ARE THE IMPORTANT ISSUES SBC MISSOURI**
15 **WANTS HIGHLIGHTED?**

16 A. The following list provides a summary of highlights by section that are central to SBC
17 Missouri's position:

18 **GENERAL NETWORK / TYPES OF TRAFFIC / DEFINITIONS:**

19 SBC Missouri believes its proposed definitions are important and should be included in
20 the ICA. SBC Missouri's definitions are reasonable, just, proper, and accepted industry-
21 wide. Some CLECs attempt to alter or omit time-honored definitions for the purpose of
22 delivering traffic inappropriately, to avoid access charges, or to connect unconventional
23 types of equipment to SBC Missouri's network for establishing improper
24 interconnections. These attempts must be rejected.

1 **COMBINING TRAFFIC:**

2 SBC Missouri is very concerned about CLECs combining one type of traffic, which is
3 subject to rates governed by tariffs, with another type of traffic that is subject to
4 reciprocal compensation rates governed by an Interconnection Agreement (ICA), over the
5 same trunk group. Due to software limitations, SBC Missouri cannot accurately
6 distinguish, track, and bill two types of traffic combined on one trunk group. Just as
7 important, if a carrier combines more than one type of traffic over a single trunk, SBC
8 Missouri cannot accurately create full detailed records to be used by other carriers, such
9 as the small ILECs, for billing purposes. Additionally, if allowed to do so, CLECs might
10 deliver certain types of traffic improperly to the wrong trunk group in order to avoid
11 proper access charges. Separate trunk groups for each type of traffic type solve all of
12 these problems.

13 **TRUNK REQUIREMENTS:**

14 SBC Missouri is not opposed to Single POI architecture within the LATA. The CLECs
15 have mischaracterized SBC Missouri's request to trunk to each Local Calling Area in
16 SBC Missouri's network as a request for additional Points of Interconnection. SBC
17 Missouri's proposal provides that it will be financially responsible for facilities on its side
18 of the POI whenever a CLEC trunks to another Local Calling Area within the LATA.
19 Trunking to other Local Calling Areas does not alter Single POI - in fact it works with it
20 hand-in-hand.

21 **ONE-WAY VERSUS TWO-WAY TRUNKING:**

1 I explain the difference between one-way and two-way trunks , and how two-way trunks
2 are more efficient than one-way trunks. SBC Missouri, in an effort to maximize the
3 efficiency of its network, wants to convert from a one-way trunk architecture to a two-
4 way trunk architecture. MCI, Pager Company, CLEC Coalition, and Charter propose
5 language that pays lip service to two-way trunking, but does not insure it will ever come
6 about. SBC Missouri's proposed language allows those CLECs with existing one-way
7 architecture to transition to a two-way architecture. SBC Missouri proposes that new
8 trunks be two-way.

9 **MEET-POINT TRUNKS, MASS CALLING, ANCILLARY TRUNKS:**

10 I explain in my discussion how ancillary trunks do not benefit SBC Missouri's end users.
11 They are solely for the benefit of the CLECs' end users. Therefore, CLECs should
12 continue to bear the responsibility for the facilities over which those trunks ride. I
13 discuss how call gapping is not an acceptable method of protecting the network from
14 media stimulated mass calling- in fact, it can be life threatening. Call gapping is a
15 temporary fix, while SBC Missouri's proposal is a permanent fix. SBC Missouri proposes
16 that CLECs must not be allowed to use Meet Point facilities for ancillary trunks.

17 **TRUNK SPECIFICATIONS / TRUNK UTILIZATION AND RE-SIZING:**

18 SBC Missouri proposes standard intervals for normal, planned trunk augments and
19 Servicing. The CLEC Coalition wants all orders expedited – worked immediately
20 without intervals whether planned or for a blocking situation. SBC Missouri's proposed
21 language allows expedited orders for service-affecting (blocking) situations. SBC
22 Missouri uses Neal Wilkinson and Erlang B traffic formulas, rather than less accurate

1 trunk formulas, to determine trunk quantities needed to carry offered traffic loads on
2 trunk groups. SBC Missouri cannot guarantee a 30-day completion on all trunk orders -
3 equipment availability and vendor schedules may limit SBC Missouri's ability to
4 complete the order within 30 days. However, SBC Missouri agrees to work orders for
5 which sufficient equipment exists within 30 days.

6 **TRUNK FORECASTING:**

7 SBC Missouri forecasts future trunk quantities in order to plan for future equipment
8 needs before these needs actually arise. The traffic exchanged with other carriers affects
9 the trunk requirements on SBC Missouri's network. SBC Missouri receives trunk
10 forecasts from all carriers that interconnect to SBC Missouri's network. CLEC forecasts
11 are an important part of SBC Missouri's trunk forecasting process. In the trunk
12 forecasting section of this testimony, SBC Missouri shows that a 20-day average Busy
13 Season/Busy Day busy hour is more accurate than the method proposed by the CLECs.
14 SBC Missouri contends that expediting all orders will lead to hoarding and will
15 ultimately cause equipment shortages. SBC Missouri has provided methods for actual
16 service jeopardizes and large projects.

17 **EXPENSIVE INTERCONNECTION- SINGLE VERSUS MULTIPLE POI:**

18 A Point of Interconnection ("POI") is the point where the CLEC's network and SBC
19 Missouri's network are linked together for the mutual exchange of traffic. Transport and
20 termination are not included in this definition, as the CLECs want the Commission to
21 believe.

22 **INTERCONNECTION WITHIN SBC MISSOURI'S NETWORK:**

1 SBC Missouri proposes language that defines the POI as being within SBC Missouri's
2 network. This is consistent with Section 251(c)(2) of the federal telecommunications Act
3 of 1996 ("the Act"). The CLEC Coalition's proposals suggest POIs outside of SBC
4 Missouri's network, which is counter to Section 251(c)(2) of the Act. In my testimony,
5 SBC Missouri shows how its language complies with and agrees with Section 251(c)(2)
6 of the Act, and with the FCC's Triennial review Order ("TRO"), whereas the CLEC
7 Coalition's proposal does not.

8 **DIRECT END OFFICE TRUNK GROUPS (DEOTS) REQUIREMENTS:**

9 In order to eliminate the costly and inefficient routing of traffic between two end offices
10 through a tandem, SBC Missouri establishes a DEOT between two of its offices when
11 traffic levels between those offices reach 24 trunks. SBC Missouri expects all carriers to
12 build a DEOT when the traffic levels between two offices reach and maintain a 24 trunk
13 level for one month, in the same manner that SBC Missouri does for itself. Additionally,
14 SBC Missouri requires CLECs, after having established a DEOT, to route traffic between
15 the respective end offices only over that DEOT. The 24 trunk threshold has been
16 reviewed and upheld by Commissions in other states – specifically, in Oklahoma Cause
17 No. 200000587, in Texas Docket # 21791, and in the Texas Mega Arbitration Docket #
18 28821 – and should be upheld by this Commission as well.

19 **MUTUAL AGREEMENT OF TECHNICALLY FEASIBLE METHODS OF**
20 **INTERCONNECTION:**
21

1 The language proposed by AT&T and MCI would allow each of those carriers to make
2 the sole determination of technical feasibility. However, CLECs and SBC Missouri
3 should mutually agree on a determination. The parties may, and should, utilize the
4 provisions of the dispute resolution section of this contract to resolve issues on which
5 they cannot agree.

6 **INTRABUILDING CABLING:**

7 AT&T wants to take advantage of those locations in which it “pre-divestiture” shares
8 office space with SBC Missouri. However, this type of interconnection would give
9 AT&T an unwarranted advantage over all other CLECs because no other CLEC shares
10 office spaces with SBC Missouri. SBC Missouri also has safety and building integrity
11 concerns related to AT&T’s wanting to designate riser additions in those shared
12 locations.

13 **LEASING OF CLEC FACILITIES:**

14 As a matter of policy, SBC Missouri does not lease facilities from CLECs. Therefore,
15 including the CLECs’ proposed language in any interconnection agreement is
16 unnecessary.

17 **INFORMATION REQUIREMENTS:**

18 SBC Missouri only sends a Trunk Group Service request (“TGSR”) when there is a
19 service-affecting issue. Noting “Service Affecting” on the TGSR is unnecessary. The
20 language that the CLEC Coalition has proposed in Sections 13.0, 13.1, and 13.2 is
21 unnecessary because the Parties have agreed to language in Sections 5.3, 5.4, 6.1.2 and
22 6.1.3 regarding the issuance of TGSRs and ASRs. The Commission should reject the

CLEC Coalition’s language due to its contradictory nature and its attempt to impose undue obligations upon SBC Missouri.

Q. DOES THIS CONCLUDE YOUR EXECUTIVE SUMMARY?

A. Yes, it does.

III. GENERAL NETWORK / TYPES OF TRAFFIC / DEFINITIONS

MCIm NIM/ITR Issue 2:

Should SBC Missouri’s definition of “Access Tandem” be included in the Agreement?

MCIm NIM/ITR Issue 3:

Should SBC Missouri’s definition of “Local Tandem” be included in the Agreement?

MCIm NIM/ITR Issue 4:

Should SBC Missouri’s definition of “Local/Access Tandem” be included in the Agreement?

MCIm NIM/ITR Issue 5:

Which Parties’ definition of “Local Interconnection Trunk Group” should be included in the Agreement?

CLEC Coalition Attachment 11b, Appendix ITR Issue 3b:

(b) Should the ICA use the defined term “Local Interconnection Trunk Groups?”

MCIm NIM/ITR Issue 6:

Should SBC Missouri’s definition of “Local/IntraLATA Tandem” be included in the Agreement?

MCIm NIM/ITR Issue 7:

Should SBC Missouri’s definition of “Offers Service” be included in the Agreement?

MCIm NIM/ITR Issue 8:

Which party’s definition of points of interconnection should be included in the Agreement?

AT&T Attachment 11: Network Architecture Issue 1:

Should Attachment 11 include definitions of terms used in SBC Missouri’s proposed language? If so, are SBC Missouri’s proposed definitions appropriate?

Pager Company Appendix NIA Issue 2a:

(a) Should the definition of “Local Tandem” be included in the Agreement?

Pager Company Appendix NIA Issue 2b:

(b) Should the agreement utilize the term “Local Only Tandem Switch?”

Charter Appendix GT&C Issue 6a, 6b and 6c:

(a) Should this definition extend beyond Local 251 services? (Local Exchange Services)

(b) and include Telephone Exchange Service?

(c) and include Telephone Exchange Service instead of local Exchange Service?

Charter Appendix GT&C Issue 12:

Which Party’s definition is correct? (Interconnection- in the Act)

Charter Appendix GT&C Issue 17:

Should this definition be included in the ICA? (“POTS”)

Charter Appendix GT&C Issue 19:

Which Party’s definition is correct? (Trunk Side)

Charter Appendix GT&C Issue 20:

Which Party’s definition is correct? (Line Side)

Sprint Attachment NIM Issue 3b:

(b) Should SBC’s term Section 251(b)(5)/IntraLATA Toll Traffic be included in this Attachment?

MCIm Appendix Definition Issue 7:

Which Party’s definition of “Rate Center” should be included in the Agreement?

1 **Q. WHAT IS THE PURPOSE OF THIS SECTION OF YOUR TESTIMONY?**

2 A. SBC Missouri is in dispute with AT&T, Charter, the CLEC Coalition, MCI Metro, Pager
3 Company, and Sprint (hereafter collectively referred to as “the CLECs”) over the
4 inclusion of the definitions of certain network components and terms in respective parts
5 of the agreements between SBC Missouri and the CLECs. I will identify and define each
6 of those components in this section. I will explain why these terms need to be in the
7 respective appendices in the agreement with each CLEC in this arbitration. In doing so I
8 discuss SBC Missouri’s network in general, and the various traffic types that cross SBC
9 Missouri’s network.

10 **Q. WHAT ARE THE DISPUTED TERMS IN THIS ARBITRATION?**

11 A. I have divided the disputed terms into five categories. Each of the disputed terms, the
12 category in which the terms fall, and the name of the CLEC involved in the dispute, are
13 as follows:

14 **Switch Types (Begins on page 18):**

15 “Access Tandem Switch”	AT&T, MCI
16 “End Office” or “End Office Switch”	AT&T, Charter
17 “Local/Access Tandem Switch”	AT&T, MCI
18 “Local/IntraLATA Tandem Switch”	AT&T, MCI
19 “Local Only Tandem Switch”	AT&T, Pager Co.
20 “Local Tandem”	AT&T, MCI, Pager Co.
21 “Remote End Office Switch”	AT&T

22
23 **Trunk Group types (Begins on Page 25):**

24 “Local Interconnection Trunk Groups”	AT&T, MCI, CLEC Coalition
25 “Local Only Trunk Groups”	AT&T
26 “Meet Point Trunk Group”	AT&T
27 “IntraLATA Toll Trunk Group”	AT&T

28
29 **Traffic types (Begins on Page 28):**

30 “IntraLATA Toll Traffic”	AT&T
31 “ISP-Bound Traffic”	AT&T
32 “Section 251(b)(5) Traffic”	AT&T
33 “Section 251(b)(5)/IntraLATA Toll Traffic”	AT&T, Sprint

Calling Areas (Begins on Page 31):

"Local Calling Area" or "LCA"	AT&T
"Tandem Serving Area" or "TSA"	AT&T

Services (Begins on Page 31):

"Offers Service"	AT&T
"Local Exchange Services"	Charter
"Plain Old Telephone Service" or "POTS"	Charter

Miscellaneous Network Terms (Begins on Page 33):

"Facility-Based Provider"	AT&T
"Points of Interconnection"	MCI
"Interconnection"	Charter
"Trunk-Side"	Charter
"Line-Side"	Charter

Q. WHY IS IT IMPORTANT TO DEFINE THE TERMS IN THE "SWITCH TYPES" CATEGORY?

A. It is important to define the different types of switches mentioned in the various agreements. These terms appear throughout SBC Missouri's proposed language in all of its agreements with the CLECs. Because not all tandem provisions within the CLEC agreements apply to all types of tandems that SBC uses in Missouri or other states, defining each type of tandem referred to in an agreement is important. In other words, to ensure that all concerned have a clear understanding of the parties' relative rights and duties, a definition of each switch type must be included in the agreement.

Q. WHY IS IT IMPORTANT TO DEFINE THE TERMS IN THE "TRUNK GROUP TYPES" CATEGORY?

A. Identifying and defining the various trunk group types used in its network is necessary. By defining the types of traffic a trunk group can carry, CLECs are not as likely, or as able, to route traffic improperly over the wrong trunk group type to avoid SBC Missouri's and small ILEC's access charges. Defining trunk groups can also avoid confusion with other network components, such as facilities.

Q. WHY IS IT IMPORTANT TO DEFINE THE TERMS IN THE "TRAFFIC TYPES" CATEGORY?

1 A. In its definition of each trunk group type, SBC Missouri identifies the appropriate type of
2 traffic handled by each type of trunk group-each trunk group handles a specific type of
3 traffic-therefore, a definition of the traffic types is in order. The underlying importance
4 of this is there is a particular type of compensation that applies to each type of traffic.
5 SBC Missouri proposes, in its contract language, to define traffic according to the method
6 of compensation that applies. These definitions are crucial because the agreement does
7 not handle all types of traffic in the same way. Additionally, the definitions proposed by
8 SBC Missouri avoid confusion over terms like "Local" or "Intra-LATA" that may have
9 appeared in previous agreements between SBC Missouri and some of the other parties.

10 **Q. WHY IS IT IMPORTANT TO DEFINE THE TERMS IN THE "CALLING**
11 **AREAS" CATEGORY?**

12 A. It is necessary to identify these terms because the scope of calling areas and a tandem's
13 service area are important in determining which types of traffic SBC Missouri's tandem
14 switches can accept or will deliver.

15 **Q. WHY IS IT IMPORTANT TO DEFINE THE TERMS IN THE "SERVICES"**
16 **CATEGORY?**

17 A. Although some of these terms, such as Plain Old Telephone Service or "POTS," have
18 been around for a long time, some CLECs appear to want to alter the meaning of these
19 terms to facilitate adding other types of services or traffic that should not be included in
20 the service. Memorializing the true and appropriate definitions is import to prevent such
21 games.

22 Finally, some of the terms SBC Missouri proposes are very useful, as
23 communications tools, in describing a type of service offered or an action taken by a
24 carrier. In one phrase, the term describes an activity or service that might otherwise take
25 several sentences to document. One cannot properly use a term to communicate an

1 intended meaning unless the parties involved in the communication agree on that term's
2 meaning.

3 Not including these definitions in the Agreement would cause the parties to write
4 additional language into the agreement with each mention of the service or activity. This
5 could inadvertently add confusion and perhaps internal inconsistency to the agreement or
6 render the language so complex that the provision might become undecipherable. A
7 single definition for the same term, applicable in all contexts, would alleviate if not
8 altogether eliminate such problems.

9 **SWITCH TYPES CATEGORY:**

10 **Q. IN WHAT PART OF THE SBC MISSOURI AGREEMENTS WITH CLECS ARE**
11 **TERMS ASSOCIATED WITH SWITCH TYPES AND NETWORK**
12 **ARCHITECTURE DEFINED?**

13 A. The terms appear in the Appendix Network Architecture/ITR, as in the case of AT&T
14 and in the Appendix Interconnection Trunking Requirements of other agreements. Some
15 terms appear throughout the agreements.

16
17 **Q. IN SUMMARY, WHAT IS SBC MISSOURI'S POSITION REGARDING**
18 **DEFINITIONS IN THE AGREEMENT?**

19 A. SBC Missouri proposes various definitions to be included in the ITR Appendix. These
20 include definitions for terms and phrases used to describe various types of traffic, various

1 switch types and trunks, service offerings and network terms. Including definitions for
2 terms used in a contract is a standard practice and should be encouraged. Definitions
3 provide certainty and are critical to interpreting a contract – which, in turn, helps avoid
4 disputes between the parties. Moreover, SBC Missouri’s proposed definitions are
5 accurate. Many of the CLECs opposing SBC Missouri’s proposed definitions do not
6 propose alternative definitions. Rather, they argue that no such definitions should be
7 included in the ICA.

8 **Q. WHAT IS AN “ACCESS TANDEM SWITCH”?**

9 A. An Access Tandem switch is a tandem switch that SBC Missouri designs and engineers
10 to provide access between its Local Exchange Carrier (“LEC”) Network and the Inter-
11 exchange Carrier Network of an interexchange carrier (“IXC”). An Access Tandem
12 provides end users in the LEC Network with access to an IXC that they have chosen to
13 handle their Inter-LATA long distance calls. An Access Tandem also provides the IXCs
14 access to the end users in the LEC network for terminating calls from end users in other
15 LATAs. Sometimes, the phrases “Feature Group D tandem”, “Equal Access Tandem”, or
16 “Inter-LATA Tandem” are used to identify an “Access Tandem”

1 **Q. WHAT IS A “LOCAL/ACCESS TANDEM SWITCH”?**

2 A. A Local/Access Tandem switch is a tandem switch that handles Local traffic as well as
3 Intra-LATA and Inter-LATA IXC traffic. Throughout the thirteen states in which SBC
4 Missouri and its affiliated SBC ILECs operate, SBC employs many different types of
5 tandems, some of which either cannot handle IXC traffic or cannot effectively
6 accommodate interconnection with CLECs. My testimony later provides detail of the
7 respective functions of the tandems utilized and deployed by SBC Missouri.

8

9 **Q. WILL ANY TANDEM SWITCH HANDLE ANY TYPE OF TRAFFIC?**

10 A. No, tandems handle specific types of traffic and are often unable to handle other types of
11 traffic. For example, SBC 13-State’s “Local Only” tandems deployed among its 13 states
12 cannot handle IXC calls. Because of this, and because a “Local/Access Tandem” is a
13 tandem that handles Local traffic as well as Intra-LATA and Inter-LATA IXC traffic, the
14 definition proposed by SBC Missouri is appropriate.

15 For this same reason, it is appropriate to have specific definitions of “Local
16 Interconnection Trunk Groups,” “Local/Intra-LATA Tandem Switch,” “Local Only
17 Tandem Switch,” and “Local Only Trunk Groups,” as SBC Missouri has proposed.

1 **Q. WHAT IS A “LOCAL ONLY TANDEM SWITCH” AND DOES SBC MISSOURI**
2 **HAVE ANY?**

3 A. A Local Only Tandem switch is a switching machine within SBC’s network that is used
4 to connect and switch trunk circuits between and among other central office switches for
5 Section 251(b)(5) and ISP Bound Traffic. Simply stated, a “Local Only” tandem switch
6 is a tandem that handles only Local traffic. It does not handle Intra-LATA or Inter-
7 LATA IXC carried traffic. SBC Missouri does not have any Local Only tandem switches
8 in its network at this time. However, if any such switches were to be placed into service
9 in Missouri, SBC Missouri would provision them to handle only 251(b)(5) and ISP-
10 bound traffic exchanged between SBC Missouri and CLECs. I identify how many and the
11 specific types of tandems SBC Missouri utilizes in its network at the end of this section
12 of my testimony.

13 **Q. IF SBC MISSOURI DOES NOT HAVE A “LOCAL ONLY TANDEM SWITCH”**
14 **IN ITS NETWORK, WHY DOES IT WANT THIS DEFINITION INCLUDED IN**
15 **THE AGREEMENT?**

16 A. SBC Missouri may later add a Local Only tandem switch (or any other type of tandem) to
17 its network, to maintain the efficiency and effectiveness of its network. Because SBC
18 Missouri conceivably could obtain a Local Only tandem switch and place it in service, it
19 is appropriate to include this definition in the Agreement.

20 **Q. WHAT IS A “LOCAL TANDEM” OR A “LOCAL TANDEM SWITCH” AND**
21 **DOES SBC MISSOURI HAVE ANY?”**

22 A. The term “Local Tandem” or “Local Tandem Switch” identifies any type of tandem that
23 performs a local function (i.e. handles local traffic) and serves a specific Local Calling
24 Area (“LCA”). A Local Tandem can be a Local Only Tandem, a Local/Intra-LATA
25 Tandem or a Local/Access Tandem. This term Local Tandem is used to easily refer to all
26 three of the tandem types that handle local traffic (Section 251(b)(5) and ISP-Bound)
27 when only referring to the local function of the tandem.

1 SBC Missouri employs three tandems to which the term Local Tandem or Local Tandem
2 Switch applies. These three tandems are STLMO0501T, STLMO2101T, and
3 KSCYMO5503T. A list showing SBC Missouri's 13 tandems and the traffic type(s) each
4 tandem handles, including Local (or "LCL"), appears after the present discussion.

5 **Q. WHAT IS A "LOCAL/INTRALATA TANDEM SWITCH" AND WHAT**
6 **TRAFFIC DOES IT HANDLE?**

7 A. SBC Missouri defines "Local/IntraLATA Tandem Switch" as a switching machine within
8 the public switched telecommunications network that is used to connect and switch trunk
9 circuits between and among other central office switches for Section
10 251(b)(5)/IntraLATA Traffic.

11 **Q. WHAT TYPES OF TANDEMS DOES SBC MISSOURI EMPLOY?**

12 A. SBC Missouri employs three Combined Local, Intra-LATA, and Inter-LATA Tandems in
13 its network. There are six Intra-LATA/Inter-LATA Access tandems in the SBC Missouri
14 network - these tandems do not provide Local tandem functionality. SBC Missouri has
15 two 800/End Office Host tandems, which do not possess Local, Intra-LATA, or Inter-
16 LATA functionality. There is one Intra-LATA/800 Tandem, which does not have local
17 or Inter-LATA capabilities. Finally, there is one single purpose remote operator tandem.

18 **Q. HOW DOES SBC MISSOURI CATEGORIZE ITS TANDEMS?**

19 A. SBC categorizes its tandems according to the function each tandem performs. The type
20 of traffic that a tandem handles determines the category type of the tandem. There are
21 single purpose tandems such as Local Only tandems, Operator Tandems, and Inter-LATA
22 Tandems (referred to as Access Tandems) throughout SBC's thirteen state territory.
23 There are also multi-purpose or Multi-function Tandems such as: Combined Local and
24 Intra-LATA Tandems; Combined Intra-LATA and Inter-LATA Tandems; and Combined
25 Local, Intra LATA, and Inter-LATA Tandems.

1 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION OF "ACCESS**
2 **TANDEM" SWITCH?"**

3 A. SBC Missouri's proposed definition for the term "Access Tandem Switch" is:

4 **6.1"Access Tandem Switch" is defined as a switching machine within the**
5 **public switched telecommunications network that is used to connect and**
6 **switch trunk circuits between and among other central office switches for**
7 **IXC-carried traffic.¹**
8

9 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND**
10 **AT&T OVER THE TERM "ACCESS TANDEM SWITCH?"**

11 A. AT&T does not offer any specific objection to the way SBC Missouri defines the term
12 "Access Tandem Switch". AT&T simply objects to including a definitions section in the
13 ICA. Even though AT&T uses the term "Access Tandem" in its proposed language and
14 the term "Access Tandem Switch" in its preliminary position statements, it has not
15 proposed a definition for this term.

16 **Q. WHAT IS AN ACCESS TANDEM?**

17 A. An Access Tandem is a switch, designed and engineered to provide access between a
18 LEC's Network and an IXC Network. An Access Tandem provides end users in the LEC
19 Network with access to an IXC they have chosen to handle Inter-LATA long distance
20 calls. An Access Tandem also provides the IXC access to the end users in the LEC
21 Network for terminating calls from end users in other LATAs. The terms "Feature Group
22 D" tandem, "Equal Access" tandem, and "Inter-LATA" tandem also describe an Access
23 Tandem. In the same manner as the term "Local Tandem," the term "Access Tandem" is
24 sometimes used to refer to any tandem that handles IXC-carried traffic.

25 **Q. WHAT IS THE BASIC FUNCTION OF A TANDEM SWITCH?**

¹ AT&T Network Architecture/Interconnection, Section 6.1

1 A. The basic function of a tandem switch is to switch calls or traffic between other switches
2 - that is, calls from one switch to another switch for which there is no available direct
3 trunk path connecting those switches. A tandem switch accomplishes this by connecting a
4 trunk, which comes from one switch, to a trunk that goes to another switch. A tandem
5 switch does this for all types of traffic.

6 **Q. WHAT IS AN “END OFFICE” OR AN “END OFFICE SWITCH?”**

7 A. An “End Office” or “End Office Switch” is “a switching machine that directly terminates
8 traffic to and receives traffic from end users purchasing local exchange services. The end
9 office “serves” the end users. The end users “reside in” or are “served by” the end office
10 switch. The end office switch also connects to other switches within the network, by way
11 of trunks or trunk groups, in order to provide its end users access to other end users
12 outside of their resident switch. A PBX is not an “End Office Switch.” Because the terms
13 “End Office” and “End Office Switch” appear in the interconnection agreement in both
14 agreed and disputed provisions, this proposed definition is necessary and accurate.

15 **Q. WHAT IS SBC MISSOURI’S PROPOSED DEFINITION FOR “END OFFICE”**
16 **OR “END OFFICE SWITCH?”**

17 A. SBC Missouri proposes the following language for its definition of “end office” or “end
18 office switch”:

19 **“‘End Office’ or ‘End Office Switch’ is a switching machine that directly**
20 **terminates traffic to and receives traffic from end users purchasing local**
21 **exchange services. A PBX is not considered an End Office Switch.”**
22

23 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND**
24 **CHARTER OVER THE LANGUAGE IN GT&C SECTION 1.1.26.1 WHICH**
25 **DEFINES THE TERMS “END OFFICE” AND “END OFFICE SWITCH” IN**
26 **ISSUE GT&C 6(A)?**

1 A. SBC Missouri and Charter agree on the definition of “End Office” for all but one phrase.
2 SBC Missouri uses the term **“local exchange services”** in its definition of “End Office”,
3 while Charter uses the term “Telephone Exchange Service.” I discuss “local exchange
4 services” in my discussion of Services later in this section of my testimony.

5 **Q. WHY DOES SBC MISSOURI DISAGREE WITH CHARTER AND WHY DOES**
6 **SBC MISSOURI BELIEVE ITS TERM, “LOCAL EXCHANGE SERVICES”, IS**
7 **BETTER?**

8 A. SBC Missouri’s position is that the agreement currently under negotiation is an
9 interconnection agreement that is subject to sections 251/252 of the Act. As such, it
10 should be exclusive to services encompassed by these provisions. Charter’s proposed
11 language, “Telephone Exchange Service,” does not describe a service as defined in these
12 sections of the Act, while SBC Missouri’s term “local exchange services” does. If
13 Charter’s language is allowed, SBC Missouri might be forced to exchange traffic with
14 Charter that is not 251(b)(5) type traffic.

15 **Q. WHAT IS A “REMOTE END OFFICE” OR A “REMOTE END OFFICE**
16 **SWITCH?”**

17 A. A “Remote End Office Switch” is an SBC Missouri switch that serves SBC Missouri end
18 users. A remote switch does not have the same equipment and processing capabilities as
19 a Class-5 end office switch. Therefore, it is not as expensive as a full-blown end office
20 switch. SBC Missouri uses remote switches to serve end users in remote areas or small
21 communities. Typically, these areas have too few residents to warrant a Class-5 end
22 office, so SBC Missouri utilizes remote switches to serve these areas. An umbilical
23 connects each remote switch to a Host switch, which is normally an end office switch or
24 a tandem switch. A remote switch accesses the host switch equipment and processor
25 through the umbilical. This arrangement allows a remote switch to provide its end users
26 the same features and capabilities of an end office switch.

1 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION FOR A "REMOTE END**
2 **OFFICE" OR A "REMOTE END OFFICE SWITCH?"**

3 A. SBC Missouri's definition for "End Office" or "End Office Switch", as proposed in the
4 AT&T Network Architecture Section 6.16 is:

5 **"Remote End Office Switch' is an SBC Missouri switch that directly**
6 **terminates traffic to and receives traffic from end users of local Exchange**
7 **Services, but does not have full feature, function and capability of an SBC**
8 **Missouri End Office Switch. Such features, function, and capabilities are**
9 **provided to the SBC Missouri Remote End Office Switch from an umbilical**
10 **to the SBC Missouri Host End Office."**
11

12 **Q. PLEASE SUMMARIZE SBC'S POSITION ON THE DISPUTE OVER DEFINING**
13 **TERMS IN THE SWITCH TYPE CATEGORY.**

14 A. SBC Missouri proposes, as stated above, the agreement should include definitions for the
15 different types of tandem switches: Access Tandem Switch, Local Only Tandem Switch,
16 and Local/Access Tandem Switch. These terms appear throughout SBC Missouri's
17 proposed language in Attachment 11 and other appendices. Defining each type of
18 tandem is important, because not all tandem-related provisions within the agreement
19 apply to all types of tandems. In addition, each type of tandem switch is provisioned to
20 handle specific types of traffic and often do not handle other types of traffic. SBC
21 Missouri proposes that the interconnection agreement into which it enters with any CLEC
22 define each type of tandem switch in SBC Missouri's network in accordance with the
23 type of traffic SBC Missouri provisions the tandem to carry.

24 **TRUNK GROUP CATEGORY:**

25 **Q. ALTHOUGH THESE ARE NOT DISPUTED DEFINITION TERMS,**
26 **REGARDING DEFINING TERMS IN THE "TRUNK GROUP TYPES"**
27 **CATEGORY, FIRST EXPLAIN WHAT A "TRUNK" OR A "TRUNK GROUP"**
28 **IS.**

1 A. A “trunk” is the switch port interface(s) used and the communications path created to
2 connect a carrier’s network with SBC Missouri’s network for the purpose of exchanging
3 traffic. A “trunk group” is a collection of one or more trunks that connect the same two
4 switches in a network, and are designed and provisioned to carry the same type traffic. I
5 discuss trunks in detail later in this section.

6 **Q. OF WHAT IS SBC MISSOURI’S PROPOSED DEFINITIONS FOR “LOCAL**
7 **INTERCONNECTION TRUNK GROUPS” AND “LOCAL ONLY TRUNK**
8 **GROUPS?”**

9 A. SBC Missouri proposes the following definitions for Local Interconnection Trunk
10 Groups” and “Local Only Trunk Groups”:

11 **“Local Interconnection Trunk Groups’ are two-way trunks groups used to**
12 **carry Section 251(b)(5)/IntraLATA Toll Traffic between AT&T end users**
13 **and SBC MISSOURI end users.”²**
14

15 **“Local Only Trunk Groups’ are two-way trunks groups used to carry**
16 **Section 251(b)(5) and ISP-Bound Traffic only.”³**
17

18 **Q. PLEASE EXPLAIN SBC MISSOURI’S POSITION ON ITS PROPOSED**
19 **DEFINITIONS FOR “LOCAL INTERCONNECTION TRUNK GROUP” AND**
20 **“LOCAL ONLY TRUNK GROUP.”**

21 A. Because the terms “Local Interconnection trunk group” and “Local Only trunk group”
22 appear throughout the ICA, it is appropriate for the definitions of these terms to be
23 included in the ICA. SBC Missouri’s proposed definitions are accurate. SBC Missouri
24 does not design all of its trunk groups nor intends for them to carry the same types of
25 traffic. SBC Missouri engineers its Local Interconnection Trunk Groups specifically to
26 handle only Section 251(b)(5)/IntraLATA traffic. SBC Missouri sets up billing for the
27 traffic on Local Interconnection trunk groups solely for Section 251(b)(5)/Intra-LATA
28 type traffic. (Ms. Douglas and Mr. McPhee address compensation issues in their

² AT&T Network Architecture/Interconnection, Section 6.10

³ AT&T Network Architecture/Interconnection, Section 6.13

1 respective testimonies) SBC Missouri does not design and provision Local Only trunk
2 groups to handle Intra-LATA traffic. SBC Missouri engineers Local Only trunk groups
3 to handle only section 251(b)(5) traffic. Because of this distinction between Local
4 Interconnection trunk groups and Local Only trunk groups, the Agreement must include
5 these definitions accordingly.

6 Furthermore, SBC Missouri's definition for Local Interconnection Trunk Groups is
7 necessary to prevent gaming of the sort undertaken by some carriers that seek to avoid
8 appropriate access charges (discussed in detail in Mr. McPhee's direct testimony) by the
9 improper routing of Inter-LATA and Intra-LATA traffic. As a result, a definition of the
10 various traffic types is required. I explain the definitions of these and other traffic types
11 below. In addition, the Agreement must specify the traffic types carried by Local Only
12 trunk groups for the same reasons.

13 The definition of local interconnection trunk groups goes hand in hand with the issue of
14 commingling of traffic on local interconnection trunk groups. I explain, in Section IV
15 Combining Traffic, that jurisdictionally distinct traffic should be routed on separate trunk
16 groups.

17 **Q. WHAT IS AN "INTRALATA TOLL TRUNK GROUP"?**

18 A. An IntraLATA Toll trunk Group is a trunk group that carries traffic between two
19 locations within one LATA where one of the locations lies outside of the SBC Missouri's
20 local calling area as defined in the Local Exchange Tariff on file with the Public Service
21 Commission of Missouri.

22 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION OF AN "INTRALATA**
23 **TOLL TRUNK GROUP?"**

24 A. SBC Missouri's proposed definition of "IntraLATA Toll Trunk Group" is as follows:

1 **“IntraLATA Toll Trunk Group’ is defined as a trunk group carrying**
2 **IntraLATA Toll Traffic as defined above a trunk group carrying IntraLATA**
3 **Toll Traffic as defined above.”⁴**
4

5 **Q. WHAT IS SBC MISSOURI’S PROPOSED DEFINITION FOR “MEET POINT**
6 **TRUNK GROUP?”**

7 A. SBC Missouri’s proposed definition for “Meet Point Trunk Group” is:

8 **“‘Meet Point Trunk Group’ carries traffic between AT&T’s end users and**
9 **Interexchange Carriers via SBC Missouri Access Tandem Switches.”⁵**

10
11 **Q. EXPLAIN SBC’S PROPOSED DEFINITION FOR “MEET POINT TRUNK**
12 **GROUP.”**

13 A. A Meet Point trunk Group provides a CLEC’s end users access to Interexchange Carriers
14 (IXCs), i.e. long distance carriers – and vice versa (from the IXCs to AT&T customers).
15 The meet point trunk group connects the end user’s switch to his pre-selected IXC
16 through the SBC Missouri access tandem switch. SBC Missouri’s proposed definition is
17 necessary because the term appears in the interconnection agreement in both agreed and
18 disputed provisions. SBC Missouri’s proposed definition accurately reflects the type of
19 traffic for which SBC Missouri designs and intends Meet Point trunk groups to carry.

20 **TRAFFIC TYPES:**

21
22 **Q. WHAT IS SBC MISSOURI’S REASONING FOR ITS PROPOSED DEFINITIONS**
23 **FOR THE VARIOUS TYPES OF TRAFFIC?**

24 A. SBC Missouri proposes to define traffic according to the method of compensation that
25 applies: Intra-LATA Toll Traffic, ISP-Bound Traffic, Section 251(b)(5) Traffic, and
26 Section 251(b)(5)/Intra-LATA Traffic. These definitions are crucial because the
27 agreement does not handle all types of traffic in the same way. Additionally, the
28 definitions proposed by SBC Missouri avoid confusion over terms like “Local” or “Intra-
29 LATA” that appeared in previous agreements between the parties.

⁴ AT&T Network Architecture/Interconnection, Section 6.5

1 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITIONS FOR "INTRA-LATA**
2 **TOLL TRAFFIC?"**

3 A. SBC Missouri's proposed definition for IntraLATA Toll Traffic is:

4 **"IntraLATA Toll Traffic' is defined as traffic between one SBC MISSOURI**
5 **local calling area to the local calling area of another SBC MISSOURI or**
6 **another LEC within the same LATA."**⁶

7
8 **Q. WHAT IS SBC'S POSITION REGARDING ITS DEFINITION FOR "INTRA-LATA**
9 **TOLL TRAFFIC?**

10 A. SBC Missouri's definition of Intra-LATA toll traffic is traffic between one SBC Missouri
11 local calling area and another SBC Missouri or LEC calling area within the same LATA.
12 The subscribers within these two calling areas do not enjoy local calling as part of their
13 basic service. This definition is accurate and accepted throughout the
14 telecommunications industry.

15 **Q. WHAT IS SBC MISSOURI'S DEFINITION OF "SECTION 251(B)(5)/INTRA-**
16 **LATA TOLL TRAFFIC?"**

17 A. SBC Missouri proposes the following definition for "Section 251(b)(5)/Intra-LATA
18 traffic":

19 **"Section 251(b)(5)/IntraLATA Toll Traffic' shall mean for purposes of this**
20 **Attachment, (i) Section 251(b)(5) Traffic, (ii) ISP-Bound Traffic, (iii)**
21 **IntraLATA Toll Traffic originating from an end user obtaining local dial**
22 **tone from AT&T where AT&T is both the Section 251(b)(5) Traffic and**
23 **intraLATA toll provider, and/or (iv) IntraLATA Toll Traffic originating**
24 **from an end user obtaining local dial tone from SBC MISSOURI where SBC**
25 **MISSOURI is both the Section 251(b)(5) Traffic and intraLATA toll**
26 **provider."**⁷

27
28 **Q. WHAT IS SBC MISSOURI'S DEFINITION OF "SECTION 251(B)(5) TRAFFIC?"**

29 A. SBC Missouri proposes the following definition for "Section 251(b)(5)/Intra-LATA
30 traffic":

⁵ AT&T Network Architecture/Interconnection, Section 6.14

⁶ AT&T Network Architecture/Interconnection, Section 6.4

⁷ AT&T Network Architecture/Interconnection, Section 6.18

1 **“Section 251(b)(5) Traffic’ is limited to telecommunications traffic**
2 **exchanged between AT&T and SBC Missouri in which the originating end**
3 **user of one Party and the terminating end user of the other Party are:**
4

5 **“(i) both physically located in the same SBC Missouri Local**
6 **Exchange Area as defined by SBC Missouri Local (or “General”)**
7 **Exchange Tariff on file with the applicable state commission or**
8 **regulatory agency; or**
9

10 **“(ii) both physically located within neighboring SBC Missouri Local**
11 **Exchange Areas that are within the same common mandatory local**
12 **calling area. This includes, but it is not limited to, mandatory**
13 **Extended Area Service (EAS), mandatory Extended Local Calling**
14 **Service (ELCS) or other types of mandatory expanded local calling**
15 **scopes.”⁸**

16 **Q. WHAT IS SBC MISSOURI’S POSITION REGARDING ITS DEFINITION OF**
17 **“SECTION 251(B)(5) TRAFFIC”?**

18 A. SBC Missouri’s definition of Section 251(b)(5) traffic is traffic exchanged between a
19 CLEC and SBC Missouri. The location of the originating end user and the terminating
20 end user of both parties is crucial to the definition of Section 251(b)(5) traffic, and,
21 consequently to the compensation of the call. (SBC Missouri witness Scott McPhee
22 discusses Compensation in his testimony.) Either of the two conditions stated in the
23 definition must be met for a call to be a Section 251(b)(5) call. The originating end user
24 of one party and the terminating end user of the other party must be (1) both physically
25 located in the same SBC Missouri Local Exchange Area; or, (2) both physically located
26 within neighboring SBC Missouri Local Exchange Areas that are within the same
27 common mandatory local calling area.

28 **Q. WHAT IS SBC MISSOURI’S DEFINITION OF “ISP BOUND TRAFFIC”?**

29 A. SBC Missouri proposes to define “ISP-bound traffic” as limited to traffic from an
30 originating end user to an ISP located in the same local exchange area.

⁸ AT&T InterCarrier Compensation, Section 1.2

1 **“In accordance with the FCC’s Order on Remand Report and Order, In the**
2 **Matter of Implementation of the Local Compensation Provisions in the**
3 **Telecommunications Act of 1996, Intercarrier Compensation for ISP-Bound**
4 **Traffic, FCC 01-131, CC Docket Nos. 96-98, 99-68 (rel. April 27, 2001)**
5 **(‘FCC ISP Compensation Order’). ‘ISP-Bound Traffic’ is limited to**
6 **telecommunications traffic exchanged between AT&T and SBC MISSOURI**
7 **in which the originating end user of one Party and the terminating ISP of the**
8 **other Party are:**

9
10 (i) both physically located in the same SBC MISSOURI Local
11 Exchange Area as defined by SBC MISSOURI Local (or ‘General’)
12 Exchange Tariff on file with the applicable state commission or
13 regulatory agency; or

14
15 (ii) both physically located within neighboring SBC MISSOURI Local
16 Exchange Areas that are within the same common mandatory local
17 calling area. This includes, but it is not limited to, mandatory
18 Extended Area Service (EAS), mandatory Extended Local Calling
19 Service (ELCS) or other types of mandatory expanded local calling
20 scopes.”⁹

21
22 **CALLING AREAS:**
23

24 **Q. WHAT IS SBC MISSOURI’S PROPOSED DEFINITION OF “TANDEM**
25 **SERVING AREA” OR “TSA”?**

26 A. SBC Missouri’s proposed definition for “Tandem Serving Area” or “TSA” is:

27 **“A ‘Tandem Serving Area’ or ‘TSA’ is an SBC MISSOURI area defined by**
28 **the sum of all local calling areas served by SBC MISSOURI End Offices that**
29 **subtend an SBC MISSOURI tandem for Section 251(b)(5)/IntraLATA Toll**
30 **Traffic as defined in the LERG.”**¹⁰

31
32 **Q. WHAT IS SBC MISSOURI’S PROPOSED DEFINITION OF “LOCAL CALLING**
33 **AREA” OR “LCA”?**

34 A. The following is SBC Missouri’s proposed definition for “Local Calling Area” or
35 “LCA”:

36 **“‘Local Calling Area’ or ‘LCA’ is an SBC MISSOURI local calling area, as**
37 **defined in SBC MISSOURI’s General Exchange Tariff. LCA is synonymous**
38 **with ‘Local Exchange Area’ (LEA).”**¹¹

39
40 **OFFERS SERVICE:**

⁹ Id.

¹⁰ AT&T Network Architecture/Interconnection, Section 6.19

¹¹ AT&T Network Architecture/Interconnection, Section 6.9

1 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION OF "OFFERS**
2 **SERVICE?"**

3 A. SBC Missouri proposes the following definition for "Offers Service":

4 **"Offers Service' – At such time as AT&T opens an NPA/NXX, ports a**
5 **number to serve an end user, or pools a block of numbers to serve end**
6 **users."**¹²
7

8 **Q. EXPLAIN SBC MISSOURI'S PROPOSED DEFINITION FOR "OFFERS**
9 **SERVICE".**

10 A. SBC Missouri proposes the definition of "Offers Service" as an abbreviated description
11 of when a CLEC, for offering service to customers, opens a whole NPA/NXX code, ports
12 a customer's number to their switch, or opens a partial NPA/NXX from a pool of
13 numbers. When a CLEC "offers service," the CLEC is financially responsible for
14 establishing appropriate trunking and facilities. If the definition of "Offers Service" were
15 not included in the Agreement, confusion and disputes could well result.

16 **Q. WHAT IS SBC MISSOURI'S DEFINITION OF "PLAIN OLD TELEPHONE**
17 **SERVICE" OR "POTS" IN CHARTER GT&C ISSUE 17?**

18 A. In Section 1.1.108 in the General Terms and Conditions (GT&C) Appendix, SBC
19 Missouri proposes the following definition of "Plain Old Telephone Service" or "POTS"
20 in Charter GT&C Issue 17:

21 **"Plain Old Telephone Service' (POTS) means telephone service for the**
22 **transmission of human speech."**
23

24 **Q. WHAT IS CHARTER'S DEFINITION FOR "POTS"?**

25 A. Charter has not offered a definition for this term.

26 **Q. WHAT ARE LOCAL EXCHANGE SERVICES?**

¹² AT&T Network Architecture/Interconnection, Section 6.15

1 A. Local exchange services are those services purchased by SBC Missouri end users as part
2 of their local service. These services may include access to ancillary services and access
3 to presubscribed Interexchange carriers for interLATA and IntraLATA calling, in
4 addition to local calling within the local exchange area as defined in the tariff.

5 **MISCELLANEOUS NETWORK TERMS:**

6 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION FOR A "FACILITY-**
7 **BASED PROVIDER" IN AT&T NETWORK ARCHITECTURE ISSUE 1?**

8 A. SBC Missouri proposes the following language for the definition of "Facility-Based
9 Provider" in Section 6 of the AT&T Network Architecture, also known as Attachment
10 11:

11 **"Facility-Based Provider" is defined as a telecommunications carrier that**
12 **has deployed its own switch and transport facilities."**
13

14 **Q. WHAT IS SBC MISSOURI'S DEFINITION FOR THE TERM "POINTS OF**
15 **INTERCONNECTION" OR "POP" IN MCIM NIM/ITR ISSUE 8?**

16 A. SBC Missouri proposes the following definition of "Points of Interconnection" (POI):

17 **"Points of Interconnection" or 'POI' means a physical location on the SBC**
18 **Missouri network at which the Parties' networks meet for the purpose of**
19 **establishing interconnection."**¹³
20

21 **Q. HOW DOES SBC MISSOURI'S DEFINITION OF POI DIFFER FROM MCIM'S**
22 **DEFINITION?**

23 A. MCIm's proposed definition conveniently leaves out the phrase **"on the SBC Missouri**
24 **network."** SBC Missouri objects to MCIm's definition because, if allowed, MCIm could
25 establish a POI anywhere in the LATA, which is contrary to the Act which says the POI
26 should be established on the Incumbent LEC's network.

27 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION FOR**
28 **"INTERCONNECTION" IN CHARTER GT&C ISSUE 12?**

29 A. In regard to Charter GT&C Issue 12, SBC Missouri proposes the definition for the term
30 "Interconnection" should be defined as follows in Charter GT&C Section 1.1.65:

1 **“‘Interconnection’ is as Defined in the Act.”**

2 **Q. WHAT IS SBC MISSOURI’S PROPOSED LANGUAGE FOR THE TERM**
3 **“TRUNK SIDE” IN CHARTER GT&C ISSUE 19?**

4 A. SBC Missouri proposes the following definition for “Trunk Side”:

5 **“‘Trunk-Side’ refers to a Central Office Switch connection that is capable of,**
6 **and has been programmed to treat the circuit as connecting to another**
7 **switching entity (for example another Central Office switch). Trunk-Side**
8 **connections offer those transmission and signaling features appropriate for**
9 **the connection of switching entities and cannot be used for the direct**
10 **connection of ordinary telephone station sets.”¹⁴**

11
12 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND**
13 **CHARTER OVER THE DEFINITION OF THE TERM “TRUNK-SIDE” IN**
14 **CHARTER GT&C ISSUE 19?**

15 A. SBC Missouri and Charter agree on most of the language as proposed by both parties.

16 However, SBC Missouri and Charter disagree over what can be connected on the Trunk-
17 Side of a switch. Charter contends and its proposed language states that a Trunk-Side
18 connection “is not normally used for the direct connection of ordinary telephone station
19 sets”, while SBC Missouri contends that a Trunk-side connection “cannot be used for the
20 direct connection of ordinary telephone station sets”. The phrase “not normally” in
21 Charter’s proposed language for GT&C Section 1.1.161 would allow Charter to connect
22 an ordinary telephone set, a Fax machine, a computer, or a PBX to a switch at a trunk-
23 side connect. SBC Missouri does not allow the connection of ordinary telephone sets or
24 PBXs to its switches on the trunk side of the switch. If Charter’s language is adopted and
25 Charter is allowed to connect a PBX, or any other improper equipment, to the trunk side of SBC
26 Missouri’s switch, its PBX would not be able to communicate properly with the SBC Missouri
27 switch. Additionally, end users being served by their PBX will not have access to ancillary
28 services.

29 **Q. WHAT IS A TRUNK-SIDE CONNECTION?**

¹³ MCI Metro NIM/ITR Section 1.14

¹⁴ Charter Fiberlink Appendix GT&C Section 1.1.161

1 A. Trunk-Side connections are trunks, or more precisely, where trunks connect to a switch.
2 I explained what trunks are earlier in my discussion of Trunk Group Types. Trunks
3 connect switches; not ordinary telephone sets, Fax machines, or PBXs. I include a
4 discussion on PBX at the end of Section III.

5 **WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND**
6 **CHARTER OVER THE DEFINITION OF THE TERM “LINE-SIDE” IN**
7 **CHARTER GT&C ISSUE 20?**

8 A. SBC Missouri and Charter agree on most of the language for GT&C Section 1.3.1
9 proposed by both parties. However, SBC Missouri and Charter disagree over what types
10 of telephone equipment can be connected on the Line-Side of a switch. Charter contends
11 and its proposed language states that a Line-Side connection to a switch connects the
12 switch to a terminating station, such as an ordinary subscriber’s telephone station set, an
13 answering machine, a facsimile machine, or computer, or a PBX. That Charter left out
14 PBX in the list of terminating sets in their proposed language for GT&C Section 1.3.1
15 leads one to believe that it does not want a PBX considered only as line-side equipment.
16 That, coupled with how Charter views the definition of trunk side connections, leads one
17 to suspect Charter might want its PBX to be treated by SBC Missouri as a full-blown
18 Class-5 end office switch.

1 **Q. WHAT IS A “LINE-SIDE” CONNECTION?**

2 A. The term “Line Side” refers to End Office switch connections that have been
3 programmed to treat the circuit as a local line connected to a terminating station (e.g., an
4 ordinary subscriber’s telephone station set, a PBX, answering machine, facsimile
5 machine or computer). Line Side connections offer only those transmission and signal
6 features appropriate for a connection between an End Office and such terminating station.
7 switch.

8 **Q. HOW DOES SBC MISSOURI WANT THE COMMISSION TO RESPOND**
9 **REGARDING THE DEFINITIONS FOR TRUNK-SIDE AND LINE-SIDE?**

10 A. SBC Missouri asks the commission to adopt its proposed definitions for Trunk-Side and
11 Line-Side connections. The Charter language allows Charter to connect PBX equipment
12 to an SBC Missouri switch - along with other equipment never intended to be used on the
13 trunk side of a switch. As mentioned above, a PBX cannot communicate with an SBC
14 Missouri switch, and therefore cannot properly deliver calls to the SBC Missouri PSTN.

15 **Q. WHAT IS THE NATURE OF SBC MISSOURI’S DISPUTE WITH MCIM**
16 **REGARDING THE TERM “RATE CENTER?”**

17 A. SBC Missouri objects to the definition of Rate Center proposed by MCIm, because
18 MCIm wishes to associate the term Rate Center with an NPA-NXX. This is clearly
19 inconsistent with the industry definitions provided in my testimony above in which Rate
20 Center, defined as a physical point in an exchange for determining distance, is not
21 associated with NPA-NXX codes. A Rate Center may have many working NPA-NXXes,
22 but there is only one set of V & H coordinates associated with a Rate Center. The V & H
23 coordinates are used to determine mileage between rate centers. An NPA-NXX is used
24 in the routing and delivery of calls within the PSTN- it cannot be used for to determine
25 mileage.

1 **Q. WHAT IS SBC MISSOURI'S PROPOSED DEFINITION OF "RATE CENTER"**
2 **IN MCIM DEFINITIONS ISSUE 7?**

3 A. SBC Missouri's proposed definition for "Rate Center" in MCIm Definitions is:

4 **"Rate Center" means a uniquely defined geographical location within an**
5 **exchange area (or a location outside the exchange area) for which mileage**
6 **measurements are determined for the application of interstate tariffs."**
7

8 **Q. WHAT IS A "RATE CENTER"?**

9 A. A Rate Center is a point within an exchange area that approximately defines the center of
10 that particular exchange or geographical area for which certain rates for various telephone
11 services may apply. Vertical and Horizontal, or V & H, coordinates define this point.
12 The V & H coordinates facilitate calculating the distance in miles between two rate
13 centers. The distance between rate centers applied to mileage rates determines
14 appropriate toll charges. SBC Missouri witness Sandy Douglas discusses this further in
15 her testimony.

16 Typically, SBC Missouri uses the name of the town or the exchange in which the Rate
17 Center is located to identify a specific Rate Center. Although Rate Center technically
18 refers to the approximate midpoint of the geographical area that identifies an exchange or
19 exchange rate area, many people within the telephone industry use the term to identify
20 the actual geographical area as well.

21 **Q. IS "RATE CENTER" A TERM THAT IS USED THROUGHOUT THE**
22 **TELEPHONE INDUSTRY?**

23 A. Yes. The terms "Rate Center" and "V & H coordinates" and the use of them to determine
24 distance-sensitive toll charges are ubiquitous throughout the telephone industry.

25 **Q. WHAT DEFINITIONS FOR THE TERM "RATE CENTER" DOES THE**
26 **TELECOMMUNICATIONS INDUSTRY USE?**

27 A. I have two examples of definitions provided by authoritative industry sources. Newton's
28 Telecom Dictionary defines the term Rate Center as:

1 **“Telephone company-designated geographic locations assigned vertical and**
2 **horizontal coordinates between which airline mileages are determined for the**
3 **charging of private lines. Or as defined by the telephone industry, rate**
4 **center is that point within an Exchange Area defined by rate map**
5 **coordinates used as the primary basis for the determination of toll rates.**
6 **Rate Center may also be used for the determination of selected local rates.”¹⁵**
7

8 Telcordia defines the term “Rate Center” as:

9 **“A rate center is a specified geographical location within an exchange area.**
10 **Mileage measurements are made from the exchange area, and then used to**
11 **determine interexchange mileage rates.”¹⁶**
12

13 **Q. HOW SHOULD THE COMMISSION RULE ON THIS ISSUE?**

14 The Commission should rule in favor of SBC Missouri’s proposed definition of “Rate
15 Center”. The definition proposed by MCIIm is vague and ambiguous. MCIIm is trying to
16 associate rate center with NPA-NXXs which is not consistent with industry definitions of
17 the term. The definition proposed by SBC Missouri is reasonable, just, fair, and
18 consistent with industry definitions.

19 **Q. IS A TRUNK GROUP THE SAME AS A FACILITY?**

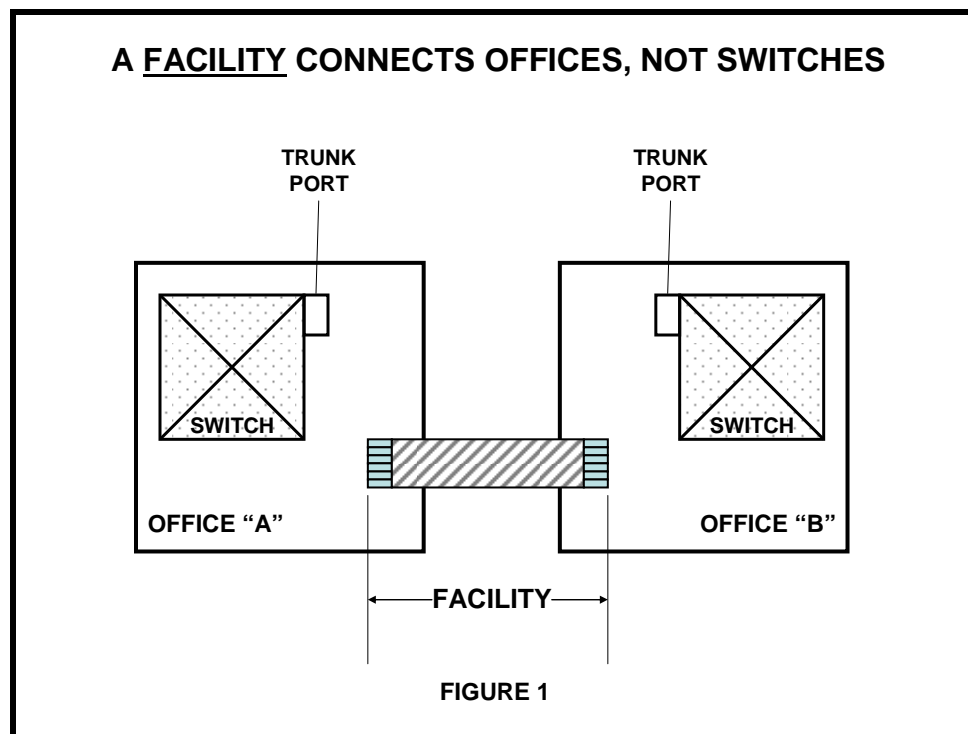
20 A. No, a trunk group is not the same as a facility. Many CLECs mistakenly refer to trunks
21 when they are really describing a facility. They also refer to facilities when trunks are the
22 subject of discussion. My following discussion explains how trunks are different from
23 facilities.
24

¹⁵ 20th Edition of Newton’s Telecom Dictionary

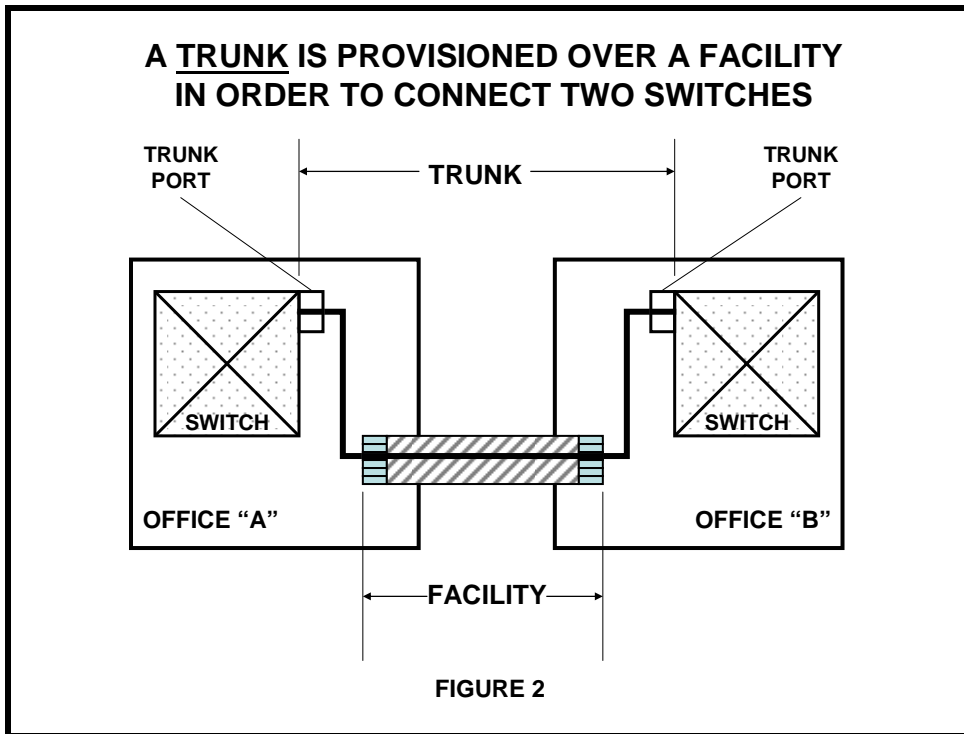
¹⁶ Telcordia Technologies, Bellcore Practice COMMON LANGUAGE®, BR 751–100–160 Issue 3, September 1992

1 **Q. WHAT IS THE DIFFERENCE BETWEEN A TRUNK GROUP AND A**
2 **FACILITY?**

3 A. There is a definite distinction between the two. A facility is a physical medium used to
4 connect two points in a network. Figure 1 illustrates a facility that connects two points in
5 a network- office “A” and office “B”. SBC Missouri predominantly employs fiber or
6 copper cable facilities. It is common to see facilities referred to in terms such as DS0,
7 DS1, DS3, OC3, or OC12.



8
9 While the facilities illustrated in Figure 1 establish physical connectivity between office
10 “A” and office “B”, they do not establish a connection between the switches in office “A”
11 and office “B”. Therefore, the exchange of traffic between these two offices is not
12 possible. To exchange traffic, we must provision a trunk over the facilities, creating a
13 voice path connection between the two switches. Figure 2 illustrates a trunk provisioned
14 over the facilities between office “A” and “B”.
15
16



1
2
3 The exchange of traffic between the two offices in Figure 2 is now possible with the
4 trunk established between switch "A" and switch "B".

Q. HOW MANY TANDEM DOES SBC MISSOURI HAVE?

A. SBC Missouri has thirteen tandems, including Operator Service Tandems. Of these tandem switches, Nortel manufactured eight, Lucent Technologies manufactured four, and Ericsson manufactured one.

Q. WHERE ARE THE THIRTEEN SBC TANDEM IN MISSOURI LOCATED, AND WHAT TYPES OF TRAFFIC DO EACH HANDLE?

A. The following tables identify the LATA in which each SBC Missouri tandem resides, the Common Language Location Identification (“CLLI”) Code applicable to that tandem, brief description - of the types of traffic each SBC Missouri tandem handles. An explanation of the abbreviations used in this table to denote the type of traffic or tandem function follows:

ABBREVIATION	DESCRIPTION
IRL	InterLATA Traffic (IXC Access)
IAL	Intra-LATA Traffic
LCL	Local Traffic
800	8YY Toll-Free Calling Traffic
OPR-H	Operator Services Tandem and a Remote Operator Service Tandem
R-OPR	Tandem that provides OS as a Remote
EO	Host for Remote End Offices

In LATA 520, SBC Missouri has seven tandems:

SECTOR	CLLI CODE	TRAFFIC TYPES
Flat River	FLRVMOGE01T	800, EO
Hannibal	HNBLMOAC01T	800, EO
Mexico	MEXCMOJU01T	IAL,800,EO
Sikeston	SKSTMOGR04T	IRL,IAL,R-OPR, 800, EO
St. Louis	STLSMO05B2T	R-OPR
St. Louis	STLSMO0501T	IRL, IAL, LCL, 800
St. Louis	STLSMO2101T	IRL, IALA, LCL, 800

In LATA 524, SBC Missouri has six tandems:

SECTOR	CLLI CODE	TRAFFIC TYPES
Chillicothe	CHLCMOMI06T	IRL,IAL,R-OPR, 800, EO
Kansas City	KSCYMO5503T	IRL, IAL, LCL, OPR-H, 800, EO
Kirksville	KKVLMOMO1T	IRL,IAL,R-OPR, 800, EO
Moberly	MBRLMOAM06T	IRL, IAL, 800, EO
Springfield	SPFDMOTL02T	IRL, IAL, R-OPR
St. Joseph	STJSMODN03T	IRL, IAL, R-OPR, 800, EO

Q. WHAT IS A PBX?

A. PBX is an acronym that stands for **P**riate **B**ranch **eX**change. A PBX consists of switching equipment that is used by a business customer to switch calls between stations within the branch exchange without sending the call to an end office switch. A PBX connects to an SBC Missouri end office switch by way of lines that are referred to as PBX trunks. PBX trunks are called Direct Outward Dial (“DOD”) trunks or Direct Inward Dial (“DID”) trunks. PBX is sometimes inaccurately referred to as a Private **B**usiness **eX**change. It may not be accurate, but the meaning is generally taken to be the same.

1 **Q. AS IT APPLIES TO A PBX, WHAT IS A DID PBX TRUNK?**

2 A. DID is an acronym that stands for Direct Inward Dialing. A DID PBX trunk is a trunk or
3 group of trunks that connects a PBX to an end office switch. PBX DID trunks are used to
4 deliver calls from outside a branch or business exchange- that is, from an SBC Missouri
5 end office switch- directly to a business station without the need to go through an
6 attendant position. SBC Missouri does not provision DID trunks on a one to one ratio.
7 One DID trunk can serve multiple business stations.

8
9 **Q. AS IT APPLIES TO A PBX, WHAT IS A DOD PBX TRUNK?**

10 A. DOD is an acronym that stands for Direct Outward Dialing. A DOD trunk is actually a
11 line or group of lines connecting a PBX to an end office. DOD PBX trunks are used to
12 deliver calls from a station inside a branch or business exchange to an end user customer
13 that is outside of the branch exchange.

14 **Q. IF A PBX DOD TRUNK IS ACTUALLY A LINE, WHY IS IT CALLED A**
15 **TRUNK, AND HOW DOES IT WORK?**

16 A. The end office provides dial tone to the PBX station over a PBX DOD trunk. In that
17 respect, it is a line. Whenever a person, at a business station working in the PBX, calls
18 out on a DOD trunk, the PBX gives that station the next available DOD trunk in the
19 group. If an outgoing call is made from that same station later, the PBX again acquires a
20 DOD trunk, but it will not necessarily be the same DOD trunk that was seized for that
21 station on the first call. In this respect, it acts like a trunk or trunk group. SBC Missouri
22 does not provision trunks in a one to one ratio- one DOD trunk can serve multiple
23 business stations.

24 **IV. COMBINING TRAFFIC:**

25 **AT&T Attachment 12: Intercarrier Compensation Issue 6e:**

26 *Should Interconnection Trunk Groups only carry Section 251(b)(5)/IntraLATA and ISP*
27 *bound Traffic?*

AT&T Attachment 11: Network Architecture Issue 10:

Should Local Interconnection Trunk Groups carry only Section 251 (b) (5) /IntraLATA Toll Traffic?

CLEC Coalition Attachment 11b- Appendix ITR Issue 3(a):

(a) Should CLECs be able to combine InterLATA Toll Traffic on the same trunks with Section 251(b)(5), ISP Bound and IntraLATA Toll Traffic?

Sprint Attachment ITR Issue 3(a):

(a). May Sprint combine originating 251(b)(5) Traffic, intraLATA toll traffic, and interLATA toll traffic on the same trunk groups?

MCIm NIM/ITR Issue 15(a):

(a) What is the proper routing, treatment and compensation for interexchange traffic that terminates on a Party's circuit switch, including traffic routed or transported in whole or part using Internet Protocol?

MCIm NIM/ITR Issue 15(b):

(b) Should the agreement include procedures for handling interexchange circuit-switched traffic that is delivered over Local Interconnection Trunk Groups so that the terminating party may receive proper compensation?

MCIm NIM/ITR Issue 15(c):

(c) What is the proper routing, treatment and compensation for traffic originated on customer premises equipment of the end user who originated and/or dialed a call in the Internet Protocol format and transmitted to the switch of a provider of voice communication applications or services when such switch utilizes Internet Protocol?

Q. WHAT ARE THE DIFFERENT CATEGORIES OF SWITCHED TRAFFIC ROUTED BY SBC MISSOURI?

A. SBC Missouri routes three categories of switched traffic- "Local," "Intra-LATA" and "Inter-LATA."

Local traffic:

Local Traffic consists of calls originated and terminated between subscribers within the same mandatory local service (or calling) area. These mandatory local service areas are geographical areas established by the Missouri Commission. SBC Missouri's Local Exchange Tariff rates these calls as local rate calls.

Intra-LATA traffic:

1 IntraLATA Traffic consists of calls originated by a subscriber in one mandatory
2 local calling area and terminated to another subscriber in a different mandatory
3 local calling area within the same LATA.

4 **Inter-LATA traffic:**

5 Inter-LATA Traffic consists of calls originated by subscribers in one LATA that
6 are destined to subscribers in another LATA, and outside of any Local Calling
7 Areas.

8 There are additional subcategories of switched traffic that fall into these categories.

9 **Q. WHAT ARE SOME OF THE SUBCATEGORIES OF SWITCHED TRAFFIC**
10 **ROUTED BY SBC MISSOURI?**

11 A. I have defined some of the subcategories of traffic within the above three categories
12 below:

13 Section 251(b)(5) traffic is a type of local traffic, exchanged between SBC Missouri and
14 a CLEC. Section 251(b)(5) traffic is subject to reciprocal compensation [incomplete
15 sentence?], Intra-LATA Toll traffic, Intra-LATA Access traffic and Inter-LATA Access
16 traffic. Intra-LATA Access traffic and Inter-LATA Access traffic is traffic carried by an
17 Inter-exchange Carrier (IXC).

18 **Section 251(b)(5) Traffic (Local)**

19 Local calls between SBC Missouri subscribers and subscribers of other
20 telecommunications carriers who share the same mandatory local service area are defined
21 in the Interconnection Agreement as “Section 251(b)(5)” traffic because they are subject
22 to reciprocal compensation under Section 251(b)(5) of the Act.

23 **Intra-LATA Toll Traffic (Intra-LATA)**

1 The carrier that handles Intra-LATA traffic determines how Intra-LATA traffic is
2 subcategorized. “Intra-LATA Toll Traffic” is intra-LATA traffic carried by SBC
3 Missouri or a CLEC such as AT&T.

4 **Intra-LATA Access Traffic (Intra-LATA)**

5 “IntraLATA Access Traffic” is intra-LATA traffic carried by an Interexchange
6 Carrier (IXC).

7 SBC Missouri routes Access traffic to an IXC for completion. The originating
8 end user pays the IXC for the call. The IXC, in turn, pays access charges to the
9 originating carrier and the terminating carrier for use of their network facilities.

10 Customers can use their Pre-selected Interexchange Carrier (PIC) and dial as a 1+
11 call or use a dial-around code on a per-call basis, *i.e.* 101-XXXX¹⁷ to select an IXC other
12 than the PIC they had chosen as their default IXC.

13 **IntraLATA Traffic**

14 Customers can use their Pre-selected Interexchange Carrier (PIC) and dial as a 1+
15 call or use a dial-around code on a per-call basis, *i.e.* 101-XXXX¹⁸ to select an IXC other
16 than the PIC they had chosen as their default IXC.

17 **InterLATA Toll Traffic**

¹⁷ The breakdown of these digits are as follows: 101 is an access code or prefix digits to instruct a switch that a subscriber is overriding their PIC on a one call basis, XXXX is the Carrier Identification Code (CIC) that is assigned to the particular IXC that will handle the call. CIC is used in a global sense within the entire switch to define an IXC, with the attributes of routing each call type the IXC provides to a particular trunk group, while PIC is used to identify the IXC an individual subscriber has selected.

¹⁸ Id.

1 SBC Missouri delivers InterLATA toll calls to the originating subscriber's chosen
2 IXC. Just as with an IntraLATA IXC carried call, customers can use their PIC and dial
3 as a 1+ call or use a dial-around code on a per-call basis, (*i.e.* 101-XXXX) to select an
4 IXC other than the PIC they had chosen as their default IXC. The IXC delivers the call
5 to the terminating subscriber's telephone service provider in the other LATA.

6 When another carrier (such as a CLEC) interconnects with SBC Missouri, these
7 calls are sent over what is referred to as Meet Point Trunk Groups to allow the CLEC's
8 end users access to IXCs.

9 These three types of traffic are normally referenced by three names;
10 Section 251(b)(5) (Local), IntraLATA, and Access, or InterLATA access.

11 **Q. ARE THERE DIFFERENT METHODS FOR SWITCHING TRAFFIC?**

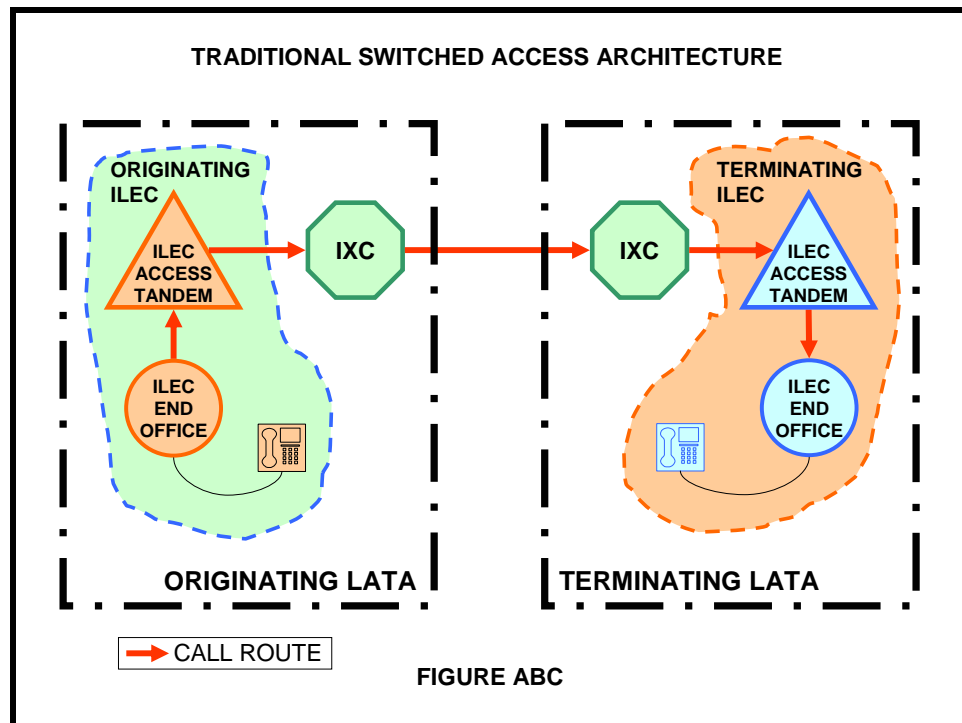
12 A. Yes. While more than one method is used across the country for switching traffic (*e.g.*
13 circuit switched, IP), the most common is the traditional circuit switched method in
14 which calls traverse the Public Switched Telephone Network ("PSTN"). SBC Missouri
15 has traditional circuit switches deployed throughout its network, and my testimony will
16 focus on traditional circuit switching.

17 **Q. HOW IS CIRCUIT SWITCHED ACCESS TRAFFIC TRADITIONALLY**
18 **CARRIED OVER THE PSTN?**

1 A. There are a number of steps. When an end user originates a long distance call (also
2 known as an access or InterLATA access call), the end user's local exchange carrier's
3 (LEC) switch analyzes the dialed digits (NPA-NXX). If the call is an InterLATA call,
4 the LEC switch then transports the call to the end user's PIC either directly or via an
5 Access Tandem allowing them to access the desired IXC. This LEC is the originating
6 carrier for the access call and the IXC compensates the LEC for the use of its network in
7 the completion of the call. The LEC switch typically uses a signaling protocol called
8 Equal Access to format the call and send the appropriate information to complete the call,
9 such as the originating number, Called Party Number (CPN), whether the customer dialed
10 direct or 101-XXXX, as well as billing parameters. This data is expected to be passed
11 along so all carriers handling the call are compensated properly for the use of their
12 respective networks for completing a customer's call request. Tariff FCC No.1 governs
13 the terms and the financial relationship between the ILEC and the IXC for interstate
14 traffic. SBC Missouri witness Sandra Douglas discusses this in her testimony.

15 The IXC transports the call, using the routing information, to the appropriate LEC
16 in the terminating LATA that provides local service to the called end user. The LEC
17 providing local service to the terminating end user delivers the call to the called end user.
18 This LEC is the terminating carrier for the access call and the IXC compensates the
19 terminating LEC for the use of its network in the completion of the call. Again, Federal
20 Access Tariffs govern the terms and the financial relationship between the ILEC and the
21 IXC for this traffic. SBC Missouri witness Sandra Douglas discusses this in her
22 testimony, as well.

In a traditional switched access traffic arrangement, the IXC bills the calling party for the InterLATA call and pays originating access fees to the originating LEC and terminating access fees to the terminating LEC for the use of their respective networks in completing of the call. Figure ABC illustrates the traditional switched access call described above.



Q. HOW DOES SBC MISSOURI PROPOSE TRAFFIC BE SEGREGATED AND ROUTED?

A. SBC Missouri proposes segregating IXC-carried IntraLATA and InterLATA traffic from local and non-IXC carried IntraLATA traffic. Tracking and billing traffic is easier and more accurate when segregated according to the traffic type and the tandem type. The typical end user must have the ability to make, and complete a local call, an IntraLATA call, and an InterLATA call. To carry those calls to end offices beyond the end office serving the end user, the carrier must route each type of traffic to the appropriate tandem, or end office. InterLATA traffic needs to be routed on a segregated trunk group so it can

1 be properly tracked and billed. The type of trunk groups employed depends on the
2 type(s) of tandem(s) from which the end user's serving end office homes. The trunk
3 group types are (1) local only, (2) local/IntraLATA, (3), IntraLATA, and (4) meet point
4 (traffic to an IXC).

5 **Q. WOULD COMBINING TRAFFIC CREATE OTHER POTENTIAL PROBLEMS**
6 **FOR SBC MISSOURI AND/OR AT&T?**

7 A. Yes. Combining traffic creates billing and tracking problems. Because of software
8 limitations, the carrier at either end of the trunk group cannot properly identify the traffic
9 they are receiving over combined trunk groups. SBC Missouri makes terminating billing
10 records on incoming trunk groups. All traffic SBC Missouri receives from another
11 carrier over a single trunk group generates the same type of billing record. This is where
12 the opportunity for fraud or error exists. If a single trunk group includes both (1) traffic
13 subject to reciprocal compensation, and (2) traffic subject to access charges, the
14 originating carrier must tell SBC Missouri what percentage to use for calls billed at a
15 reciprocal compensation rate as opposed to an access rate. Without the ability to identify
16 the traffic, the parties have little choice but to accept each other's word as to the true
17 jurisdictional nature of the traffic. Separate trunk groups for individual traffic types
18 allow accurate and proper compensation for the traffic. There is no need to guess which
19 part of the traffic is local traffic governed by the interconnection agreement, or which
20 part is toll traffic governed by tariffs.

21 Surprisingly, despite AT&T's recent allegations regarding MCI/WorldCom
22 misrouting calls over AT&T's network (making it difficult for AT&T to detect and
23 properly bill MCI's high-cost calls), AT&T would propose a similar routing scheme for
24 SBC Missouri. AT&T made the following statements demonstrating its concerns about
25 such approaches:

1 *“We’re talking about the difference between shopping for*
2 *bargains and shopping with somebody else’s credit card. The*
3 *latter is clearly a crime that people can go to jail for.”¹⁹*

4 *“Debtors (MCI/WorldCom) were well aware that even if AT&T*
5 *had known to look, AT&T could not have easily detected Debtors’*
6 *high-cost calls. Indeed, even after law enforcement notified*
7 *AT&T of Debtors’ fraudulent diversion scheme, it took AT&T*
8 *weeks to locate the diversions in the ocean of data that AT&T’s*
9 *network generates.”²⁰*

10 In combining Section 251(b)(5) and IntraLATA traffic with InterLATA Access
11 Traffic, AT&T leaves it to SBC Missouri to detect AT&T’s high-cost calls. SBC
12 Missouri has great difficulty properly assessing reciprocal compensation or access
13 charges for traffic it receives over such a combined group. In short, AT&T’s (as well as
14 Sprint’s and Coalition’s) proposal opens the door to avoiding access charges, even if
15 unintentional, by mixing access calls with Section 251(b)(5) traffic.

16 **Q. IF THE CLECS PROVIDED CALL DETAIL REPORTS, COULD SBC**
17 **MISSOURI PROPERLY RECORD AND BILL THE CALLS?**

18 A. No, for two reasons. First, it is not clear that AT&T or any other CLECs have agreed to
19 provide call detail data. SBC Missouri cannot be sure AT&T will provide call detail
20 data. Second, even if AT&T agrees to provide accurate call detail, SBC Missouri will
21 still have to sort through the “oceans of data” generated by SBC Missouri’s network for
22 the information.

23 As AT&T stated regarding the MCI/WorldCom fraud accusations:

24 *“ ... The mere fact that there is disclosure during the course of*
25 *the scam does not eradicate the swindle. So too, the mere fact that*
26 *a carrier discloses call detail as part of a scheme to deceive or an*
27 *artful stratagem does not in itself eliminate the deception.”²¹*

¹⁹ AT&T Replies to WorldCom’s Bankruptcy Court Response Wednesday August 6, 5:14 pm ET, AT&T Chief Counsel James Cicconi.

²⁰ *Id.*

²¹ *Id.*

1 **Q. HAVE THE PARTIES EXCHANGED COMBINED CIRCUIT SWITCHED**
2 **TRAFFIC IN THE PAST?**

3 A. Although the exchange of combined traffic may have happened in the past, innovations in
4 technology such as the expanding growth of voice over internet protocol (VoIP) have
5 changed the landscape regarding the jurisdictional nature of traffic and its appropriate
6 compensation. For example, AT&T has interpreted VoIP to include AT&T's use of its
7 internet protocol (IP) backbone merely to transport calls that originate and terminate on
8 the PSTN. AT&T claims these calls are "VoIP" and, therefore, not subject to access
9 charges. This practice by AT&T has hindered SBC Missouri's ability to properly
10 determine the jurisdictional nature of calls from AT&T over these combined trunks
11 preventing SBC Missouri from accurately recording and billing AT&T. The FCC has
12 already rejected this ploy to avoid access charges.

13 While AT&T contends that combining all traffic over a single trunk group would
14 be a more efficient use of network resources than establishing segregated trunks, it
15 creates the possibility for AT&T to engage in inappropriate masking of calls to avoid
16 access charges (either intentionally or inadvertently), that the ILEC cannot reasonably
17 detect. SBC Missouri should not be forced to continue to accept combined Section
18 251(b)(5) ISP Bound, IntraLATA and InterLATA Access traffic over the same trunk
19 groups even if it may have been done so in the past. SBC Witness Jason Constable
20 further discusses the matter of VoIP and related subjects in his testimony.

1 **Q. IN REGARD TO MCIM NIM/ITR ISSUE 15(A), HOW SHOULD INTERNET**
2 **PROTOCOL TRAFFIC BE ROUTED?**

3 A. Accurate billing for all traffic, regardless of the protocol used in its delivery, is important.
4 MCIm and SBC Missouri are compensated based on the type of traffic they exchange and
5 not the protocol of the traffic. What type a particular traffic is basically depends on
6 where it originated and to where it terminated. SBC Missouri believes this traffic must
7 be separated according to traffic type onto different trunk groups in order to accurately
8 record and bill based on reciprocal compensation or the appropriate intraLATA or
9 interLATA Exchange Access as found in Appendix Compensation. (SBC Missouri
10 witness Sandra Douglas discusses compensation in her testimony.)

11 **V. TRUNK REQUIREMENTS:**

12 **AT&T Attachment 11: Network Architecture Issue 11:**

13 *Should AT&T be required to establish local interconnection trunks to every local calling*
14 *area in which AT&T offers service?*

15 **AT&T Attachment 11: Network Architecture Issue 13:**

16 *Should AT&T be required to establish a two-way IntraLATA toll trunk group to the SBC*
17 *Missouri Access Tandem, when SBC Missouri has a separate local Tandem and Access*
18 *Tandem in the same local exchange area?*

19 **MCIm NIM/ITR Issue 12(b):**

20 *(b) Should MCIm be required to trunk to every Local Calling Area in which it Offers*
21 *Service?*

22 **MCIm NIM/ITR Issue 18:**

23 *Should MCIm be required to trunk to every Local Calling Area in which it Offers*
24 *Service?*

25 **MCIm NIM/ITR Issue 18(a):**

26 *(a) Should MCIm be required to establish separate trunk groups to each SBC access*
27 *Tandem under which MCIm's NXX's home?*

28 **Sprint ITR Issue 3(d):**

29 *(d) Should Sprint be required to provide trunking to each local exchange area or LATA?*

1 **Sprint NIM Issue 4:**

2 *Should Sprint be required to provide trunking to each local exchange area or LATA?*

3 **Charter Attachment ITR Issue 1:**

4 *Should CLEC be required to establish local interconnection trunks to every local calling*
5 *area in which CLEC offers service?*

6 **Q. WHAT ISSUES WILL YOU BE DISCUSSING IN THIS SECTION?**

7 **A.** This section of my testimony addresses the topics related to how interconnecting carriers
8 should establish trunks across SBC Missouri's network architecture. I will discuss
9 establishing trunks and single POI architectures.

10 **Q. IF THE COMMISSION FINDS THAT THE CLECS MAY ESTABLISH A**
11 **SINGLE POI, DOES THAT MEAN THAT THEY ONLY HAVE TO CONNECT**
12 **THEIR TRUNKS TO A SINGLE SWITCH?**

13 **A.** No. CLECs claim that they are entitled to single POI architectures and therefore are not
14 required to trunk to every local calling area. A POI is the point where the physical
15 linking of the CLEC's network to SBC Missouri's network takes place. In my preceding
16 discussion of facilities and trunks, I explained that the POI relates only to facilities.
17 Trunking establishes the paths for the exchange of traffic between switches within the
18 carrier's networks. There is no basis for a claim that single POI architectures allow a
19 single switch to establish trunking. Neither the Act nor any of the FCC rules mention
20 this. Establishing trunks to the local calling areas where a CLEC serves customers does
21 not create new POI in that local calling area, because the CLEC only pays for the
22 transport from its switch to the Single POI that already exists. SBC Missouri pays for the
23 transport of those trunks from the Single POI to the new local calling area. Only when
24 the CLEC assumed financial responsibility for the facility that carries the trunk group
25 from its switch to the new calling area would the parties establish a new POI.

1 **Q. DOES SBC MISSOURI'S PROPOSED LANGUAGE ASK FOR A NEW POI IN**
2 **EVERY LOCAL CALLING AREA?**

3 A. No, SBC Missouri's proposed language does not ask for a new POI in every local calling
4 area. SBC Missouri's language only asks the CLEC to establish trunks to the local
5 calling areas where the CLEC has opened an NPA-NXX, ports a number to serve an end
6 user, or pools a block of numbers to serve end users.

7 **Q. DO SINGLE POINT OF INTERCONNECTION ARCHITECTURES AND**
8 **TRUNKING TO LOCAL CALLING AREAS WHERE CLECS SERVE END**
9 **USERS GO HAND IN HAND?**

10 A. No, they do not. The CLECs are trying to make the claim that requiring trunks to every
11 local calling area where they serve end users would violate their right to a single point of
12 interconnection ("SPOI") per LATA. SBC Missouri's proposal, under certain conditions
13 such as when CLEC's are entering a new market, allows CLECs to establish SPOI
14 architectures until they reach certain capacity thresholds. This is completely different
15 from the CLECs' claim that requiring trunks to every local calling area where they serve
16 end users creates a new POI in those additional local calling areas. SBC Missouri
17 disagrees with AT&T/MCIm because facility connections create POIs, not trunks.
18 SBC Missouri believes the responsibility for serving an end user falls upon the carrier
19 that the end user has selected as its provider. SBC Missouri does not believe that
20 responsibility should fall upon one of the provider's competitors. SBC Missouri has
21 proposed that all requesting carriers establish trunks to every local calling area where the
22 requesting carrier has opened an NPA-NXX, ports a number to serve an end user, or
23 pools a block of numbers to serve end users.

24 **Q. WHAT IS SBC MISSOURI'S PROPOSED LANGUAGE IN MCIM NIM/ITR**
25 **ISSUE 18?**

26 A. SBC Missouri proposes the following language in NIM/ITR Section 8.7.1:

1 **In SBC MISSOURI, MCIm shall establish Local Interconnection Trunk**
2 **Groups to all SBC MISSOURI Local Tandems in the Local Calling Area**
3 **where MCIm Offers Service. If there are no SBC MISSOURI Local**
4 **Tandems in the Local Calling Area, MCIm shall establish Local**
5 **Interconnection Trunk Groups to every SBC MISSOURI End Office in the**
6 **Local Calling Area where MCIm Offers Service. These trunk groups shall**
7 **be two-way and will utilize Signaling System 7 (SS7) signaling.**
8

9 **Q. WHAT IS MCIM’S PROPOSED LANGUAGE?**

10 A. MCIm has not offered language to counter that proposed by SBC Missouri.

11 **Q. FOR AT&T NETWORK ARCHITECTURE ISSUE 11, AND MCIM NIM/ITR**
12 **ISSUE 18, WHAT IS IN DISPUTE?**

13 A. SBC Missouri disputes the CLEC proposal concerning trunks required when SBC
14 Missouri has a “local only” tandem and an access tandem serving a local calling area.
15 AT&T again contends that SBC Missouri’s language requires CLECs to trunk to every
16 tandem in the LATA. The CLECs’ proposed language does not take into account that a
17 “local only” tandem cannot handle all types of traffic and routing all of the CLEC traffic
18 to a single tandem violates the industry standard routing guidelines. SBC Missouri
19 believes that if CLECs are serving end users in a Local Calling Area that subtends an
20 SBC Missouri tandem where the CLEC does not have trunks, then the CLECs should
21 establish the trunks needed to serve its end users. SBC Missouri’s proposed language
22 would allow the proper routing of traffic in accordance with the local exchange routing
23 guide (“LERG”). Under SBC Missouri’s proposal, when SBC Missouri has a “Local
24 Only” tandem that serves a local calling area, CLECs would establish trunks to the Local
25 Only Tandem and route local traffic to the local only tandem over those trunks.
26 Concerning IntraLATA and InterLATA traffic, SBC Missouri’s proposal would require
27 the CLECs to establish trunks to the access tandem and route IntraLATA and InterLATA
28 traffic over those trunks.

1 **Q. DOES SBC MISSOURI'S PROPOSAL REDUCE THE INVESTMENT**
2 **REQUIRED FOR A NEW ENTRANT CLEC TO EXCHANGE TRAFFIC?**

3 A. Yes. SBC Missouri's proposed language states that, in local calling areas where a CLEC
4 establishes a NPA/NXX, ports numbers, or pools numbers, SBC Missouri will bear the
5 burden for the cost of the underlying facilities for the CLEC's local interconnection
6 trunks from the existing POI within the LATA to that local calling area. SBC Missouri is
7 willing to do this until the CLEC trunking demand exceeds 24 DS1 (576 DS0's) worth of
8 traffic. This would not interfere with AT&T's, or any other CLEC's, right to establish a
9 single POI where the carrier is a new entrant.

10 **Q. IS AT&T'S PROPOSAL AN INEFFICIENT USE OF SBC MISSOURI'S**
11 **NETWORK RESOURCES?**

12 A. Yes. In effect, AT&T has proposed least-cost routing for itself, in which AT&T "dumps"
13 all of its traffic at one SBC Missouri tandem in a LATA and lets SBC Missouri determine
14 where the traffic should go. This is contrary to the industry-accepted standard of routing
15 to the appropriate tandem using the LERG, per the Network Interconnection
16 Interoperability Forum ("NIIF"). AT&T's proposed language forces SBC Missouri into
17 inefficient inter-tandem trunking for calls between AT&T and SBC Missouri. AT&T's
18 proposed trunking arrangement could have negative consequences on other carriers as
19 well as on SBC Missouri. When Network resources are not used in an efficient manner,
20 such as proposed by AT&T, equipment shortages become a reality. If no equipment is
21 available, no carriers trunk order can be filled until equipment can be purchased and
22 installed.

23 **Q. HOW IS AT&T'S PROPOSAL AN INEFFICIENT USE OF SBC MISSOURI'S**
24 **NETWORK RESOURCES?**

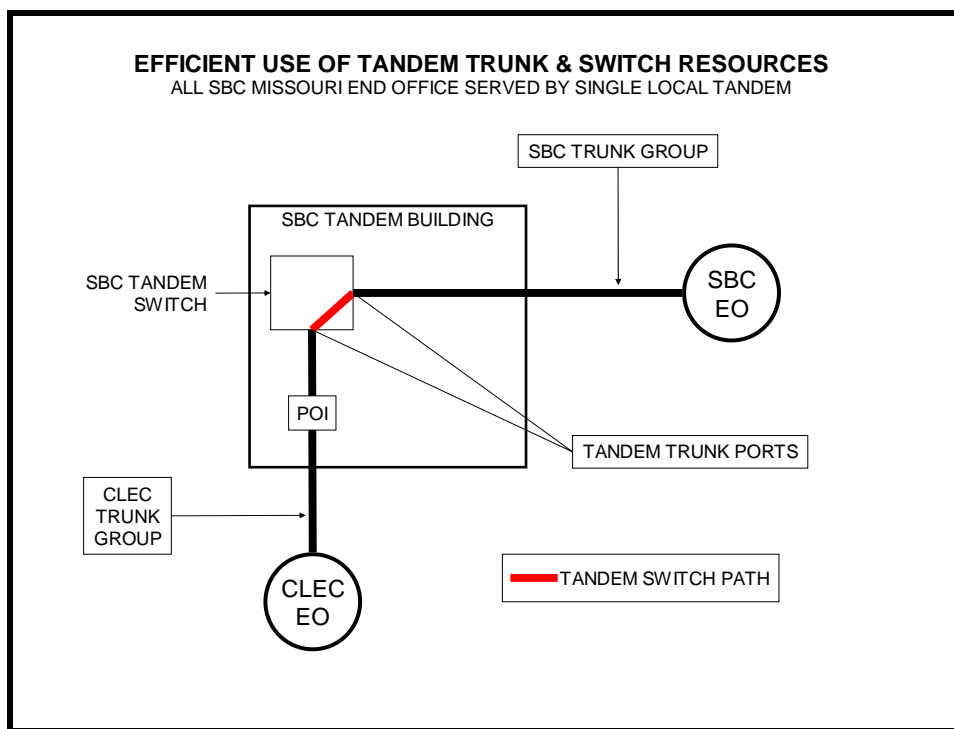
25 A. AT&T's proposal requires the use of more switch trunk ports at the SBC Missouri
26 tandems than is necessary to complete a call.

Q. WHAT IS AN EXAMPLE OF AN INTERCONNECTION THAT IS AN EFFICIENT USE OF SBC MISSOURI'S NETWORK RESOURCES?

A. The following example explains and illustrates an interconnection that uses SBC Missouri's network resources efficiently. In this interconnection example, the CLEC uses the LERG to route calls over a trunk group to the appropriate tandem. This requires two switch trunk ports at the tandem:

- 1) One switch trunk port at the tandem for the trunk connecting to the CLEC end office/switch; and
- 2) One switch trunk port is also required at the tandem for the trunk connecting the tandem to the SBC end office.

See drawing below:



Q. YOU DISCUSS DIRECT END OFFICE TRUNK GROUPS (DEOTS) IN SECTION XII OF YOUR TESTIMONY. WOULD THE USE OF A DEOT BETWEEN THE CLEC END OFFICE AND THE SBC MISSOURI END OFFICE FURTHER REDUCE THE NEED FOR TANDEM RESOURCES?

1 A. Yes, as I discuss in another section of my testimony, DEOT minimize the reliance of
2 tandem resources to trunk and route calls. However, the CLEC is not required to
3 establish a DEOT until the traffic to an end office reaches a certain threshold at the
4 tandem. I explain this in detail elsewhere in my testimony.

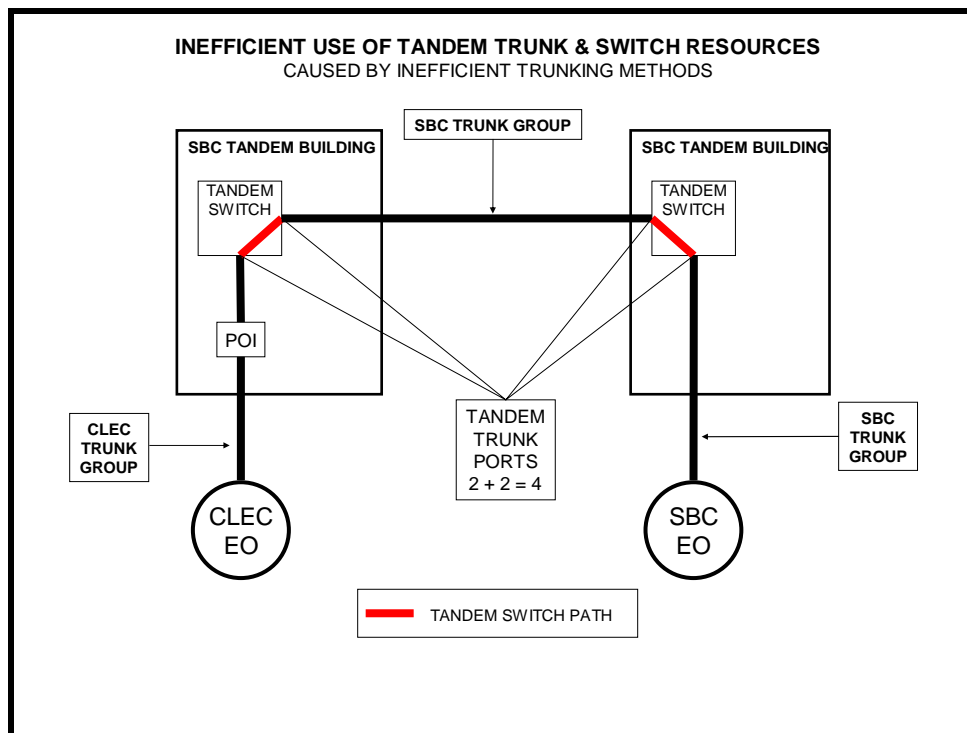
5 **Q. WHAT IS AN EXAMPLE OF AN INTERCONNECTION THAT IS AN**
6 **INEFFICIENT USE OF SBC MISSOURI'S NETWORK RESOURCES, SUCH AS**
7 **THAT PROPOSED BY AT&T AND OTHER CARRIERS?**

8 A. AT&T proposes an interconnection in which trunks from their switch only go to the
9 tandem in which their POI is located. AT&T only wants to trunk to a single tandem in
10 the LATA. AT&T would send all of its traffic, regardless of where the traffic actually
11 terminates, over this trunk group and have SBC Missouri haul it from there. Under this
12 scenario, SBC Missouri would have no choice but to double tandem the calls destined for
13 another local calling area. Trunking, as proposed by AT&T, would require two
14 additional switch trunk ports for each tandem involved in the inter-tandem switching of a
15 call.

16 While the efficient interconnection described above would require only two
17 tandem-switch trunk ports to deliver a call, Inter-tandem trunking between two tandems,
18 as AT&T proposes, would require four tandem-switch trunk ports. The following list and
19 drawing enumerates and illustrates where these four switch ports are in the network:

- 1) One switch trunk port for the trunk connecting the CLEC end office/switch to the tandem switch where the POI is located; and
- 2) One switch trunk port at the tandem where the POI is located to inter-tandem the call to the appropriate tandem designated in the LERG; and
- 3) One switch trunk port for the inter-tandem trunk connection at the appropriate tandem designated in the LERG; and
- 4) One switch trunk port is required to connect the appropriate tandem designated in the LERG to the SBC Missouri end office.

See drawing below.



Compared to the drawing in the efficient interconnection example, this drawing illustrates that AT&T's trunking proposal requires additional tandem switch ports above what is required to complete calls in an efficient manner.

Q. WHY IS SBC MISSOURI CONCERNED ABOUT CLECS TRUNKING ACCORDING TO THE LERG?

1 A. Yes, SBC Missouri is concerned about tandem exhaust in its network. If SBC Missouri
2 is required to Inter-tandem calls for the CLECs, this will accelerate tandem exhaust.
3 Tandem exhaust becomes more of a concern to SBC Missouri when all requesting
4 carriers adopt AT&T's proposal.

5 SBC Missouri is especially concerned about any tandem in which its resources are
6 already constrained. A tandem is physically limited to a finite number of ports (trunks),
7 typically 90,000-100,000. Tandem exhaust on its network forces SBC Missouri to build
8 new tandems to handle this inter-tandem trunking arrangement. This becomes quite
9 costly to SBC Missouri.

10 **Q. IS SBC MISSOURI'S CONCERN OVER TANDEM EXHAUST REALISTIC-**
11 **COULD IT BE THAT SBC MISSOURI IS OVER REACTING TO THIS?**

12 A. SBC Missouri bases its concern over tandem exhaust on actual experience. SBC
13 Missouri has one tandem in Missouri that is currently constrained. This is the Kansas
14 City McGee (CLLI Code KSCYMO5503T) in Kansas City, Missouri. The limiting
15 factor for this tandem is trunk termination capacity.

16 SBC Missouri has determined this tandem will exhaust sometime in late 2005 or
17 early 2006.. If the tandem is allowed to exhaust, no trunk orders for any carrier including
18 SBC Missouri can be worked. Consequently, SBC Missouri must either purchase a
19 replacement tandem or augment the existing tandem by the end of this year. SBC
20 Missouri has implemented a relief plan for this tandem, and now monitors its status on a
21 weekly basis.

1 **Q. WHAT DOES THE RELIEF PLAN FOR THE KANSAS CITY, MISSOURI**
2 **MCGEE TANDEM ENTAIL?**

3 A. The McGee relief plan includes implementing a project called Self Help. This entails
4 reclaiming trunk terminations by establishing DEOTs to pull traffic to end offices off the
5 tandem, and disconnecting under-utilized trunks from tandem trunk groups. SBC
6 Missouri looks at its own trunk groups for these reclamation opportunities, but also
7 approaches the CLEC community for assistance in reclaiming trunk terminations.
8 Monitoring the tandem status on a weekly basis lets the SBC tandem-planning group
9 determine if any relief from Self Help efforts is evident. Additionally, these weekly
10 snapshots help determine when and how this tandem will be augmented.

11 **Q. IS THE COST OF INEFFICIENT TRUNKING AVOIDABLE?**

12 A. Yes, the use of the LERG to determine appropriate routing insures the efficient use of
13 network resources. This is critical to all carriers.

14 **Q. WHEN SBC MISSOURI TRUNKS AND ROUTES CALLS ORIGINATED ON ITS**
15 **NETWORK, DOES IT DO SO ACCORDING TO THE LERG?**

16 A. Yes. SBC Missouri trunks and routes calls originated on its network according to the
17 LERG.

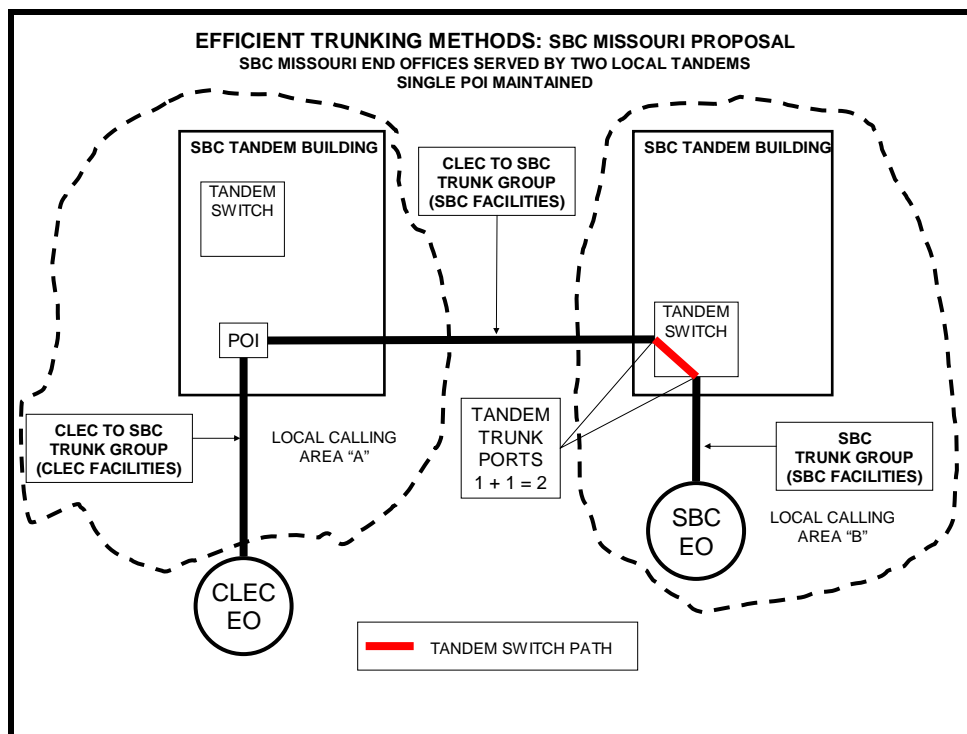
18 **Q. DOES IT MAKE A DIFFERENCE IF A CLEC ROUTES PER THE LERG OR**
19 **NOT?**

20 A. Yes. The CLECs would have this Commission believe that whether they route traffic in
21 accordance with the LERG is of little consequence. However, this is just not the case.
22 SBC Missouri does not have access to the records of how CLECs route their traffic,
23 therefore SBC Missouri is not aware if they use the LERG or not. Routing via the LERG
24 minimizes the time it takes for SBC Missouri to locate problems that may occur in the
25 network. Routing per the LERG allows SBC Missouri to test each segment and locate
26 any problem. Without knowing how a CLEC routes a call, locating where trouble exists

is like trying to find a needle in a haystack. SBC Missouri must consider the impact of trunking architectures for itself and all other requesting carriers. Routing and trunking per the LERG best allows SBC Missouri to manage its network in such a way as to minimize the potential impacts for all carriers.

Q. HOW DOES SBC MISSOURI'S PROPOSED LANGUAGE WORK WITH SINGLE POI AND YET MAINTAIN EFFICIENT USE OF NETWORK RESOURCES?

A. The following narrative and drawing illustrates how SBC Missouri's proposed language works with Single POI and still maintains efficient use of network resources.



In the drawing immediately above, a CLEC has interconnected with SBC Missouri at the SBC Tandem that serves Local Calling Area "A". The CLEC has established a trunk group from its end office switch to the tandem that serves Local Calling area "A". This interconnection is the same as the interconnection depicted in the drawing provided in the example of an efficient interconnection above. Since the purpose of this drawing is to

show efficient trunking to Local Calling Area “B”, the trunk group for calling area “A” is not included in this illustration.

For traffic from its end office switch to the SBC Missouri end office switch in Local Calling Area “B”, the CLEC has established a trunk group from its end office switch to the SBC Missouri tandem that serves Local Calling Area “B”. This trunk group is depicted in the drawing immediately above by the bold black line. This is an efficient form of trunking because it requires only two tandem-switch trunk ports to deliver a call to end offices in local calling area “B”- unlike the example shown earlier in the drawing that depicts an inefficient trunking method, which requires four tandem-switch trunk ports.

As indicated in the drawing, SBC Missouri’s proposal allows the CLEC to maintain a Single POI in the LATA.

Q. WOULD DEOTS WORK WITH THIS ARRANGEMENT AS YOU STATED THEY WOULD WITH THE EFFICIENT EXAMPLE ABOVE?

A. Yes, they will further reduce the need for tandem resources in the same manner.

VI. ONE-WAY VERSUS TWO-WAY TRUNKING:

MCIIm NIM/ITR Issue 16:

If the ICA requires two-way trunking, should the current one-way architecture be grandfathered or should the parties be required to transition to two-way trunks?

Pager Company Appendix ITR Issue 1:

Should the parties utilize two-way trunking or should CLEC have the right to unilaterally decide whether to use one-way or two-way trunking?

Pager Company Appendix ITR Issue 3(a):

(a) Should the parties utilize two-way trunking?

CLEC Coalition Attachment 11a, Appendix NIA Issue 4:

Should the parties utilize two-way trunking or should CLEC have the right to unilaterally decide whether to use one-way or two-way trunking?

Xspedius Issue Statement: *Does the CLEC have the right to utilize one-way trunking?*

CLEC Coalition Attachment 11b, Appendix ITR Issue 2:

Should the parties utilize two-way trunking or should CLEC have the right to unilaterally decide whether to use one-way or two-way trunking?

Charter Attachment ITR Issue 2(a):

(a) Should the parties utilize two-way trunking or should CLEC have the right to unilaterally decide whether to use one-way or two-way trunking?

CLEC Coalition Attachment 11a, Appendix NIA Issue 13:

What terms and conditions should apply to the transition of existing interconnection arrangements, if any, to the network architecture described in this agreement?

Q. WHAT ISSUES WILL YOU BE DISCUSSING IN THIS SECTION?

A. This section of my testimony will address one-way and two-way trunking. Many of the CLECs want the ability to exchange traffic utilizing one-way trunks. Some have existing one-way trunks from previous agreements. The CLECs give no basis for their desire for one-way trunks, only that they should have the option. SBC Missouri believes that one-way trunks are less efficient than two-way trunks.

Q. WHAT IS THE DIFFERENCE BETWEEN ONE-WAY AND TWO-WAY TRUNKS?

A. A one-way trunk allows the establishment of a call in one direction only. For example, a one-way trunk, between a CLEC's switch and SBC Missouri's switch, carries traffic from CLEC end users to SBC Missouri end users. However, because it is a one-way trunk group, it cannot handle traffic from SBC Missouri end users to the CLEC end users. A second one-way trunk group from the SBC Missouri switch to the CLEC's switch handles the SBC-to-CLEC traffic. Two-way trunk groups carry traffic originated from either end.

1 **Q. WHY IS TWO-WAY TRUNKING MORE EFFICIENT THAN ONE-WAY**
2 **TRUNKING?**

3 A. Typically, two-way trunk groups are more efficient than one-way trunk groups because
4 they carry more traffic than one-way trunks under the same load conditions and grade-of-
5 service constraints. Because two-way trunk groups are more efficient, they conserve
6 network resources better than one-way trunk groups. Two-way trunks conserve network
7 resources by reducing the number of switch ports needed.

8 **Q. ARE THERE ADDITIONAL EFFICIENCIES GAINED BY USING A TWO-WAY**
9 **TRUNK GROUP?**

10 A. Yes. Typically, the traffic in one direction has a different “busy hour” than the traffic in
11 the other direction- that is the traffic volume peaks at different times of the day. When
12 this occurs, the efficiencies gained from the use of a two-way group increases. As an
13 extreme example, assume the traffic levels between two offices are equal in both
14 directions, yet the peak level of traffic for one direction occurs during the morning hours,
15 while the traffic in the other direction is at its lowest during the morning hours. During
16 the evening hours, the traffic patterns reverse- the direction that was lowest in the
17 morning is now at its peak level and the direction that was highest is now at its lowest. In
18 this example, the total size of a two-way group need be no larger than what is required to
19 carry one direction of traffic. This example is analogous to the use of contra-flow lanes
20 on freeways coming into and going away from major metropolitan cities. Suppose a city
21 has three lane coming into it and three lanes leaving it. By partitioning off one of the
22 normally outbound lanes in the morning, four lanes carry inbound traffic into the city.
23 During the afternoon rush hour, four lanes carry outbound traffic by partitioning off one
24 of the normally inbound lanes. While this example is unlikely, it illustrates the additional
25 efficiency gains that can occur with two-way trunking during non-coincidental busy
26 hours.

1 **Q. WHAT IS SBC MISSOURI'S DISPUTE WITH MCIM OVER TWO-WAY**
2 **TRUNKS?**

3 A. MCIm proposes language that “grandfathers” their existing one-way trunks. They also
4 want to continue augmenting these trunks. SBC Missouri, on the other hand, proposes
5 language that allows the Parties to negotiate a transition plan that allows them to convert
6 embedded one-way trunks to two-way trunks. SBC Missouri disagrees with MCIm that
7 continuing to “grow” the one-way trunks is appropriate. SBC Missouri wants to
8 eliminate as many inefficient one-way trunks as possible. With MCIm’s proposed
9 language, that will never happen. The Parties should strive to establish interconnection in
10 the most efficient manner – and that is two-way trunking.

11 **Q. WHAT IS SBC MISSOURI'S DISPUTE WITH THE OTHER CLECS OVER**
12 **TWO-WAY VERSUS ONE-WAY TRUNKS?**

13 A. The other CLECs have proposed Two-way/One-way language that is not much better
14 than MCI’s proposal. Pager Company, CLEC Coalition, and Charter want the ability to
15 decide whether to use one-way or two-way. If their language is adopted, SBC Missouri
16 is skeptical that it will ever be able to replace the less efficient one-way trunks with more
17 efficient two-way trunks.

18 **Q. WHOSE LANGUAGE SHOULD THE COMMISSION ADOPT?**

19 A. SBC Missouri wishes to migrate from a one-way trunk group network to a two-way trunk
20 group network, because it wants its current network resources used more efficiently.
21 Doing this will forestall the need to replace or augment the existing resources. SBC
22 Missouri’s proposed language allows this to happen, and it also allows for a transition
23 period where CLECs currently utilizing a one-way architecture can migrate without any
24 undo hardship in doing so. Allowing the CLECs’ proposed One-way/Two-way language

to prevail will severely limit SBC Missouri's efforts to maximize the efficiency of its network, and CLECs will continue using SBC Missouri's network resources inefficiently.

The Commission should adopt SBC Missouri's proposed language.

Q. DOES THIS CONCLUDE YOUR DISCUSSION ON ONE-WAY VERSUS TWO-WAY TRUNKING?

A. Yes, it does.

VII. MEET POINT TRUNKS, MASS CALLING AND ANCILLARY TRUNKS

MCIm NIM/ITR Issue 11:

Should MCIm be solely responsible for the facilities that carry OS/DA, 911, mass calling and Meet-Point trunk groups?

MCIm NIM/ITR Issue 20:

Should a non 251/252 facility such as 911 interconnection trunk groups be negotiated separately?

MCIm NIM/ITR Issue 21:

What should the point of interconnection for 911 be?

AT&T Attachment 11: Network Architecture Issue 14(c):

(c) Should AT&T be solely responsible for the Meet Point Trunk Groups and the facilities used to carry them?

AT&T Attachment 11: Network Architecture Issue 17:

Should AT&T be required to establish a segregated trunk group for mass calling for less than 2500 access lines?

Pager Company Appendix ITR Issue 2:

Should CLEC be required to establish a segregated trunk group for mass calling?

CLEC Coalition Attachment 11b, Appendix ITR Issue 6:

Should CLEC be required to establish a segregated trunk group for mass calling?

Charter Attachment ITR Issue 5(a):

(a) Should CLEC be responsible to issue ASRs for Meet Point Trunk Groups?

Charter Attachment ITR Issue 6:

Should Charter be required to trunk to every 911 Tandem in each Local Exchange Area in which it Offers Service?

1 **Charter Attachment NIM Issue 3:**

2 *Should CLEC be solely responsible for the facilities that carry OS/DA, E911, Mass*
3 *Calling, and Meet Point trunk groups?*

4
5 **Q. WHAT ISSUES WILL YOU BE DISCUSSING IN THIS SECTION?**

6 A. This section of my testimony addresses issues related to ancillary trunks and the parties'
7 responsibilities regarding their underlying facilities.

8 **Q. WHAT IS THE PRIMARY PURPOSE OF AN INTERCONNECTION**
9 **AGREEMENT OR ICA?**

10 A. An Interconnection Agreement or ICA is an agreement between two carriers that
11 establishes rates, terms, and conditions for those two carriers to interconnect their
12 networks for the mutual exchange of telecommunications traffic that originates and
13 terminates on their networks.

14 **Q. WHAT ARE ANCILLARY TRUNKS?**

15 A. Ancillary trunks provide access to a carrier's end users for services such as Operator
16 Services, Directory Assistance, Interexchange Carriers, Mass Calling, and Emergency
17 Services. The end user's carrier provides ancillary trunks so their end users may access
18 these services.

19 **Q. DO THE ANCILLARY TRUNKS OF ANY ONE CARRIER PROVIDE ANY**
20 **BENEFIT TO THE END USERS OF ANOTHER CARRIER?**

21 A. No. The end users of one CLEC, such as AT&T or Charter, cannot access another
22 CLEC's, such as MCI or any of the CLEC Coalition's, ancillary trunks. Neither can the
23 end users of any ILEC, such as SBC Missouri, access the Ancillary trunks of a CLEC.

1 **Q. HOW DO ANCILLARY TRUNKS DIFFER FROM LOCAL**
2 **INTERCONNECTION TRUNKS?**

3 A. When a CLEC's, such as AT&T's, end user dials 911, or makes a Directory Assistance
4 call, AT&T routes his call to the appropriate AT&T 911 or Directory Assistance trunk
5 group, depending on the call made by the AT&T end user. The same applies to an SBC
6 Missouri end user that makes the same type ancillary call. SBC Missouri routes his call
7 to the appropriate SBC Missouri ancillary trunk group.

8 Whenever the AT&T end user and the SBC Missouri end user call each other, the
9 originating company routes their call to the ICA trunk group. Since AT&T and SBC
10 Missouri created the ICA trunk group for the exchange of traffic between AT&T and
11 SBC Missouri end users, it is mutually beneficial to both AT&T end users and SBC
12 Missouri end users. This is not the case for AT&T ancillary trunks, or SBC Missouri
13 ancillary trunks. They were created specifically for the benefit of their respective end
14 users.

15 **Q. ARE MEET POINT TRUNKS AND TRAFFIC, AS DEFINED BY AT&T IN SBC**
16 **ISSUE 14(C), ANCILLARY SERVICES PROVIDED BY AT&T SOLELY FOR**
17 **THE BENEFIT OF AT&T'S END USERS?**

18 A. Yes. As defined by AT&T, Meet Point Traffic "*involves calls sent to or received from a*
19 *Switched Access customer (i.e., an IXC that is not a Party to this Agreement)...*"²² Meet
20 point traffic benefits CLECs and a CLEC's end users, and would provide no value to
21 SBC Missouri's end users or to SBC Missouri.

²² Interconnection SBC Issue 14, AT&T proposed language Network Architecture Section 2.1.

1 AT&T's proposed language would allow AT&T to dump its IXC destined traffic
2 anywhere AT&T chooses, on or off SBC Missouri's network, and then would require
3 SBC Missouri to deliver AT&T's traffic to the SBC Missouri access tandem where the
4 IXC is connected.²³ Meet Point Traffic is an ancillary service offered by AT&T to
5 provide IXC-bound access calling capabilities solely for the benefit of AT&T end users.
6 SBC Missouri end users may not originate IXC-bound calls over AT&T's Meet Point
7 trunks. Thus transporting of AT&T end user access traffic is AT&T's responsibility (on
8 behalf of its end users) and should be identified as such in the ICA. The compensation
9 and details of feature groups B and D traffic are in SBC Missouri's state and federal
10 access tariffs discussed in the testimony of SBC Missouri witness Sandra Douglas.

11 **Q. WHY SHOULD A CLEC BE RESPONSIBLE FOR THE FACILITIES USED TO**
12 **CARRY ITS ANCILLARY SERVICES THAT ARE PART OF ITS NETWORK**
13 **SUCH AS OS/DA, 911 AND MEET-POINT TRUNK GROUPS?**

14 A. The CLEC provides OS/DA, 911 and Meet-point trunk groups within its network in
15 support of the telecommunications services it provides to its end users. As stated above,
16 Interconnection between a CLEC and SBC Missouri is for the mutual exchange of
17 Section 251(b)(5)/IntraLATA Toll Traffic between the CLEC's end users and SBC
18 Missouri's end users. The services provided through OS/DA, 911 and meet-point trunk
19 groups do not exchange Section 251(b)(5)/IntraLATA Toll Traffic. Responsibility for
20 the trunks and underlying facilities necessary to provide such ancillary services to the
21 CLEC's end users lies with the CLEC. A CLEC must not shift its costs to SBC Missouri
22 or force SBC Missouri's end users to subsidize these services on behalf of the CLEC's
23 end users.

²³ Interconnection SBC Issue 14, AT&T Proposed Language § 2.1.3: "SBC Missouri will provide, tandem switching and, **if so requested by AT&T, transport between the AT&T switch and the SBC MISSOURI access tandem for** Feature Group B and D calls from AT&T end-users who have chosen an IXC that is connected to SBC MISSOURI's tandem switch."

1 **Q. ARE SEPARATE MASS CALLING TRUNKS NECESSARY TO ENSURE**
2 **NETWORK RELIABILITY?**

3 A. Yes. As the designated 911 provider, SBC Missouri is responsible for ensuring that no
4 emergency 911 calls are blocked from completion due to avoidable network situations.
5 Network overloads caused by mass calling events (e.g., American Idol voting, radio
6 station contest, concert ticket sales), pose a real threat to 911 emergency services. If SBC
7 Missouri end office switches are overwhelmed by a network overload, they could be
8 prevented from providing end users a dial tone to call 911 or other emergency services.
9 Mass calling trunks (also referred to as choke trunks or high volume call in trunks
10 (HVCI)) limit the number of calls allowed at one time to a particular mass calling
11 number.

12 A network failure caused by a mass calling event can trigger a delay in prompt
13 emergency services in response to an accident, injury, or even a life and death situation.
14 Thus, all CLECs must provide adequate mass calling choke trunking for their end
15 users. SBC Missouri requires all carriers (including itself and affiliates) to establish
16 segregated trunk groups for mass calling to ensure network reliability. SBC Missouri
17 takes this aspect of service very seriously and makes this a high priority. This
18 Commission should order all carriers to take such actions by requiring separate mass
19 calling trunks.

1 **Q. SHOULD MASS CALLING TRUNKS UTILIZE MULTI-FREQUENCY (“MF”)**
2 **OR SS7 SIGNALING?**

3 A. Since a mass calling event can create serious congestion in the network, it is possible
4 even with separate trunking to cause an SS7 outage, due to the backlog of call set-up
5 requests over the SS7 network. This type of outage has the same net effect as any other
6 major outage, since set up for all SS7 trunk connections uses the SS7 network. Utilizing
7 MF signaling eliminates this possibility and serves to protect the network.

8 **Q. HAS THE ABSENCE OF MASS CALLING TRUNKS EVER AFFECTED THE**
9 **RELIABILITY OF SBC MISSOURI’S NETWORK?**

10 A. Yes. Most recently, on October 16, 2002, there was a significant “High Volume Call-In”
11 (HVCI) event in the SBC California telephone network. The event was caused by media
12 advertisements provoking the public to call HVCI telephone numbers to purchase World
13 Series tickets from the October 17 *San Francisco Chronicle*. Two SBC California
14 Access Tandems experienced significant degradation during the event. Both switching
15 machines went into “machine congestion,” they exceeded call register capacity, billing
16 records were lost, control, visibility and diagnostic capability was lost. The carriers that
17 caused this outage were mainly wireless and IXC’s that did not have mass calling trunks
18 and used SS7 signaling instead of MF signaling.

19
20 **Q. ARE THERE OTHER METHODS CLECS SUGGEST USING INSTEAD OF**
21 **PUTTING IN CHOKE TRUNKS?**

22 A. Yes. Some CLECs would rather substitute “call gapping” for mass calling trunks.
23 However, call gapping is a reactive rather than proactive software method of limiting the
24 number of calls to a specific telephone number. The carrier implements call gapping
25 with a message command to a switch. While call gapping is a temporary fix, the only

1 A. permanent solution SBC Missouri is aware of is the utilization of mass calling trunks.
2 Call gapping is limited in application and is not as reliable as the mass calling trunking
3 network. The carrier implements call gapping after an event is in progress. Thus, it
4 depends on someone recognizing the problem and then activating the call gapping in a
5 reactive mode. Further, a software glitch, or a power surge or failure, can accidentally
6 reset call gapping. If either of these events occurred, the carrier must re-implement call
7 gapping before HVCI calls are again choked. SBC Missouri cannot accept this
8 possibility, nor should this Commission accept this risk on behalf of its Missouri
9 telephone users.

10 At its February 1998 meeting, the North American Numbering Council (NANC)
11 reviewed both the SBC mass calling plan and the AT&T methodology. The industry
12 members selected the SBC solution over the AT&T model. The minutes to that NANC
13 meeting described the AT&T call gapping method thusly:

14 "Option 2 integrates this traffic back into the PSTN and significantly increases the risk
15 of network reliability failures".
16

17 The Missouri Commission must not allow a solution that introduces such risk into
18 the network.

1 **Q. WOULD SBC MISSOURI BE WILLING TO RECIPROCATATE IF AT&T**
2 **PROVIDES A PUBLIC RESPONSE CHOKE NETWORK?**

3 A. Yes. SBC Missouri will provide mass calling trunks to AT&T's Public Response Choke
4 Network in the same manner SBC Missouri requires from AT&T, itself, and other
5 carriers.

6 **Q. GIVEN THE NEED FOR MASS CALLING TRUNKS AS YOU HAVE**
7 **OUTLINED, ABOVE, WHY IS MASS CALLING AN ISSUE IN THE**
8 **PERMANENT NUMBER PORTABILITY APPENDIX?**

9 A. Because mass calling trunks are designed as they are, "choke numbers" cannot port to a
10 different carrier in the same way that most numbers port. The Permanent Number
11 Portability Appendix has language that describes how these numbers should port.

12 **Q. WHAT IS A "CHOKE NUMBER"?**

13 A. Suppose the choke number for St. Louis has a 555 prefix and that a radio station such as
14 KMOX in St. Louis has a dial in number of 555-KMOX (5669) that listeners are to call in
15 hopes of being the ninth caller to win tickets to see Kenny Chesney at the Savvis Center.
16 555-5669 would be established as a choke number because thousands of calls directed to
17 that number are safely choked down close to their source (at the end office where the
18 customer is dialing from) so that just a few calls get through at any one time.

19 **Q. HOW MIGHT A CHOKE NUMBER PORT TO A NEW CARRIER?**

20 A. As proposed by SBC Missouri, porting will occur by changing the translations of a
21 centralized end office, which functions as a collection and dissemination site for all calls
22 with a 555 prefix. If KMOX, which as 555-5669 wishes for its calls to be handled by a
23 different Local Exchange Carrier, then the existing network for all of the 555 calls will be
24 augmented with a trunk group from SBC Missouri's Choke office (the collection point
25 for all choke calls) to the CLEC's end office. SBC Missouri will then direct calls for

1 555-5669 to those trunks. The CLEC terminates the calls to its customer, the radio
2 station.

3 **Q. WHY NOT PORT CHOKE NUMBERS THE SAME WAY OTHER NUMBERS**
4 **ARE PORTED?**

5 A. Normal porting is simply not technically feasible given the design of the choke network.
6 Part of the protection of the choke network, as outlined above, is that calls on the network
7 do not use the SS7 data network. Before any call to a portable prefix leaves an end
8 office, the SS7 network queries a centralized database to see if the number is ported to a
9 new location, or if it should route to the normal end office for that prefix. Since choke
10 calls do not generate queries (to save the possible ramifications on the database that
11 thousands of simultaneous calls hitting at once could generate) placing routing
12 instructions in that database will not reroute a call to a new end office.

13 **Q. HAS THE CLEC COALITION OFFERED A BETTER METHOD FOR CHOKE**
14 **NUMBER PORTING?**

15 A. No. The CLEC Coalition makes the following statement in its preliminary position
16 statement concerning Issue 6 on ITR Section 2.5:

17 “With the advent of SS7, the need for choke networks has diminished greatly, as
18 interoffice trunks are not tied up on calls to busy stations. Mass calling trunking
19 requirements are a waste of resources. They tie up trunk networks and telephone
20 number NPA/NXXs.”

1 The CLEC Coalition believes call gapping effectively controls HVCI events, and Mass
2 Calling trunk groups are a waste of resources. The point of a choke network is not to
3 save money. The point of a choke network is just the opposite. In a choke network, the
4 point is network safety. Each Party has an interest in safely blocking most outbound calls
5 to the choke number (the radio station is giving away only two tickets to one caller, after
6 all). Only a few calls should complete. SBC Missouri's position is that the Parties
7 should work together with a method that ensures outbound traffic is blocked, with end
8 users of all networks having the same probability of call completion, and with all
9 networks continuing to operate smoothly even while mass calling events are taking place.
10 SBC Missouri's proposal for number portability and mass calling trunks ensures that
11 outcome.

12 **Q. SHOULD THE CLECS BE ALLOWED TO USE MEET POINT FACILITIES**
13 **FOR THEIR ANCILLARY TRUNKS?**

14 A. No. This is similar to my discussion in Section "XI" below, and is further discussed by
15 Mr. Silver in his testimony concerning the TRO regarding dedicated transport facilities
16 that are no longer considered part of the ILEC's network and the CLEC's responsibility
17 to provide the "transmission links that simply connect a competing carrier's network to
18 the incumbent LEC's network".²⁴

²⁴ Triennial Review Order ¶ 366.

VIII. TRUNK SPECIFICATIONS / TRUNK UTILIZATION AND RESIZING

MCIIm NIM/ITR Issue 24:

For trunk blocking and/or utilization, what is the appropriate methodology for measuring trunk traffic?

MCIIm NIM/ITR Issue 25:

Should SBC Missouri be required to provision trunk augments within 30 days?

CLEC Coalition attachment 11b, Appendix ITR Issue 8:

Should SBC be required to note “service affecting” on TGSRs?

CLEC Coalition attachment 11b, Appendix ITR Issue 9:

Should the ICA contain provisioning intervals?

CLEC Coalition Attachment 11b, Appendix ITR Issue 10:

Should SBC be required to expedite any and all orders from CLEC or only those concerning a blocking situation?

CLEC Coalition Attachment 11b, Appendix ITR Issue 11:

Should the ICA contradictory language regarding the issuance of TGSRs and ASRs?

Charter Attachment ITR Issue 7:

When a Joint Planning Discussion is necessary, should SBC be required to process ASRs prior to such discussion?

Sprint Attachment ITR Issue 3(c):

(c) Should Sprint be required to pay all charges associated with ordering trunks and facilities related to establishing and maintaining an efficient Network for purposes of Interconnecting with SBC?

Q. WHAT IS TRUNK BLOCKING?

A. Trunk blocking is a situation created by the lack of an available trunk to carry a call.

Every call requires a trunk dedicated to that call during the time the call is taking place.

1 The number of trunks in a group determines the number of conversations that can occur
2 at the same time. If a caller places a call and no trunk is available to carry the call, the
3 caller receives a rejection - either a fast busy signal or a message - that indicates the
4 network cannot complete the call. In other words, if all the available trunks in a trunk
5 group are busy, that trunk group cannot handle any more traffic until a trunk becomes
6 idle.

7 **Q. IF A TRUNK GROUP HAS 96 TRUNKS, DOES THAT MEANS IT WILL HAVE**
8 **96 CALLS DURING THE PEAK TRAFFIC LOAD?**

9 A. No. The number of trunks in service, or working, in a group only means it can carry that
10 number of calls at any one time. The trunk group utilization depends on the number of
11 calls offered to that trunk group at any specific time.

12 **Q. WHAT IS TRUNK UTILIZATION?**

13 A. Trunk or trunk group utilization is a measure of the amount of trunks that are in use
14 during the trunk group busy hour. Trunk utilization measures the number of trunks
15 needed during a busy hour as a percentage of the number of trunks in the available group.
16 For example, if only half the trunks are busy during the busy hour, the group is 50%
17 utilized. A trunk group that is below 100% Utilization during the trunk group busy hour
18 will have completed every call presented or offered to that trunk group during the busy
19 hour.

20 **Q. HOW DOES SBC MISSOURI DETERMINE TRUNK UTILIZATION?**

21 A. SBC Missouri divides the number of trunks required to handle a given traffic load,
22 offered to that group during the group busy hour, by the total number of working or in-
23 service trunks in the trunk group. Next, multiply this number by 100 to yield a
24 percentage. This percentage is the Trunk Group Utilization for that trunk group.

25 Here's an example:

1 A trunk group with 240 working trunks is offered a traffic load during the trunk
2 group busy hour that requires 48 trunks. What is the Trunk Group Utilization for
3 this trunk group during this busy hour?

$$4 \quad 48 \div 240 = 0.20$$

$$5 \quad 0.20 \times 100 = 20\%$$

6 **Q. WHAT IS THE SIGNIFICANCE OF THE WORDS “CARRY” AND “OFFERED”**
7 **IN YOUR DISCUSSION ON UTILIZATION?**

8 A. The Required Trunk value, used to determine trunk group utilization, is not a measurable
9 term. SBC must calculate it. Additionally, the traffic usage data measured and collected
10 by SBC Missouri only represents the traffic carried by the trunk group- that is, it only
11 represents those calls that were completed. To take into account the blocked calls as well
12 as the completed calls, SBC Missouri must calculate the offered traffic load- that is, the
13 traffic load the trunk group would have carried if sufficient trunks would have been
14 present for all the calls to complete. After this is done, SBC Missouri converts the
15 offered load to required trunks.

16 **Q. WHAT METHODOLOGY DOES SBC MISSOURI EMPLOY TO MEASURE**
17 **TRUNK REQUIREMENTS?**

18 A. First, for each trunk group, SBC Missouri collects, on an hourly basis, traffic
19 measurements. These measurements are trunk group usage (CCS), the number of calls
20 offered to the trunk group (Offered Calls or Call Peg Count), the number of calls blocked
21 during the hour (NC or No Completion), and the number of trunks out of service. From
22 the trunk group busy hour measurements the traffic load that would have been present
23 had every call offered to the trunk group completed is calculated. This offered load,
24 when placed into trunk tables, provides a trunk quantity. This quantity is the required
25 trunk quantity.

1 **Q. HOW DOES SBC MISSOURI DETERMINE A TRUNK GROUP'S BUSY HOUR?**

2 A. To determine a trunk group's busy hour, SBC Missouri averages the hourly data collected
3 over a 20-day period. SBC Missouri selects the highest value resulting from these
4 averages.

5 **Q. WHY DOES SBC MISSOURI USE A 20-DAY AVERAGE FOR THE OFFERED**
6 **LOAD WHEN CALCULATING THE REQUIRED TRUNK QUANTITY?**

7 A. SBC Missouri uses the 20-Day Average Busy Season/Busy Day busy hour because it
8 provides a more accurate solution than the method proposed by the MCI. According to
9 the Bell Communications Research (now Telcordia Industries) Special Report,

10 "Use of a trunk base period of 20 Average Business Days (ABDs), as a basis for either
11 forecasting or servicing, is an optimal solution in order to provide statistical reliability
12 within acceptable confidence limits. With a base of 20 days of busy hour measurements
13 on a typical trunk group, there is a 95 percent assurance that the difference between the
14 statistically estimated load and the observed load will not exceed the range of plus or
15 minus 5 percent for larger trunk groups (25 trunks or more) and 11 percent plus or minus
16 for smaller groups. With only 5 days of data, the 95 percent confidence interval is in the
17 order of plus or minus 10 and 22 percent, respectively."²⁵

18
19 SBC Missouri prefers to use the most accurate method to determine required trunk
20 quantities.

21 **Q. WHAT TRUNK TABLE DOES SBC MISSOURI USE?**

22 A. SBC Missouri uses the Neal-Wilkinson table for Final, or Only Route trunk groups, and
23 the Erlang B table for High Usage trunk groups.

24 **Q. WHAT ARE THE TERMS "POISSON", "ERLANG B", AND "NEAL-**
25 **WILKINSON", AND HOW DO THEY RELATE TO THE TELEPHONE**
26 **INDUSTRY?**

²⁵ SR EOP-000191, issue 1, April 1985, pg 1-6 "Trunk Traffic Engineering Concepts and Applications."

1 A. Telephone traffic is random. SBC does not have control over when and how telephone
2 subscribers make calls. SBC Missouri uses mathematical models to predict trunk
3 quantities. Specifically, SBC Missouri uses Erlang B and Neal-Wilkinson tables to
4 predict the number of trunks required to carry the amount of traffic offered to a trunk
5 group during its busy hour, and remain within the blocking objectives stated in the ICA.

6 **Q. WHY IS SBC MISSOURI OPPOSED TO THE USE OF THE POISSON METHOD**
7 **TO DETERMINE TRUNK BLOCKING OBJECTIVES?**

8 A. The Poisson method, developed by a French Mathematician in 1840, is an accurate
9 predictor of random data. In fact, random data is often referred to as Poisson-type data.
10 However, in predicting trunk quantities required to carry offered telephone traffic loads,
11 The Poisson theory is less accurate than the Neal-Wilkinson tables. The Poisson formula
12 does not take into account as many characteristics of telephone traffic offered to a trunk
13 group. For instance, the Poisson formula ignores peakedness and day-to-day variation.
14 The Neal-Wilkinson formula was developed from the Poisson formula with consideration
15 given to these and other characteristics associated with telephone traffic. Because of this,
16 approximations from the Neal Wilkinson tables are more precise. Additionally, the
17 Poisson formula works under the assumption that there will always be an alternate route
18 available. The Neal Wilkinson tables assume no alternate route will be available- which
19 is why SBC Missouri uses it for Final/Only Route trunk groups. Because of the reasons
20 stated above, the Neal Wilkinson tables more accurately predict trunking requirements.

21 **Q. WHAT IS TRUNK UNDERUTILIZATION?**

22 A. Trunk underutilization occurs when the volume of traffic measured on a trunk group falls
23 below a designated threshold. Underutilization of trunks results in an inefficient use of
24 limited network resources, namely switch ports and the facilities that the trunks ride.

1 **Q. WHY IS A UTILIZATION THRESHOLD ESTABLISHED?**

2 A. SBC Missouri establishes a trunk utilization threshold to prevent carriers from hoarding
3 trunk ports and the facilities that the trunks ride. When trunk utilization falls below this
4 threshold, the associated trunk ports, SBC Missouri attempts to recover the unused trunk
5 ports. SBC Missouri does this for itself as well as for another requesting carrier. Without
6 a threshold, a carrier could order a large number of trunks (thus tying up trunk, ports and
7 facilities) and never be obligated to relinquish them. A switch only has a finite number
8 of trunk ports. Once the ports are exhausted, SBC Missouri must either grow the existing
9 switch or deploy a new additional switch, both at considerable expense. Utilization rates
10 guard against the possibility of trunk port exhaust as well as stranded investment.

11 **Q. IS THERE A PROCESS TO RECOVER TRUNKS THAT ARE**
12 **UNDERUTILIZED?**

13 A. Yes. If a trunk group falls below the 65% threshold, SBC Missouri sends a Trunk Group
14 Service Request (TGSR) to the CLEC. A TGSR informs a CLEC whenever a trunk
15 group falls below the utilization threshold. At this time, SBC Missouri requests the
16 CLEC to downsize the trunk group. The CLEC has 10 business days to respond to the
17 TGSR with either an Access Service Request (“ASR”), or an explanation of some
18 unknown demand for the trunks. An ASR is an order to resize a trunk group, (add or
19 eliminate trunks).

20 **Q. WHAT HAPPENS IF THE CLEC DOES NOT RESPOND TO SBC MISSOURI’S**
21 **ASR WITHIN THE ALLOTTED 10 BUSINESS DAYS?**

22 A. If the CLEC does not respond to the TGSR within 10 business days, SBC Missouri
23 contacts the CLEC and schedules a joint planning meeting to discuss why the trunk group
24 is underutilized and what resizing, if any, is needed.

1 **Q. HAS THIS PROCESS WORKED AS INTENDED?**

2 A. No. Many times, the CLEC has not responded to the TGSR and has ignored SBC
3 Missouri's attempts to set up a joint planning meeting. As a result, SBC Missouri has
4 proposed language that would provide a means for SBC Missouri to recover trunks from
5 a non-responsive CLEC. SBC Missouri's proposal would give the CLEC an additional
6 five business days to reply to SBC Missouri's request for a joint planning meeting. If the
7 additional five days were to lapse without the CLEC's response, SBC Missouri would
8 have the right to issue an ASR on behalf of the CLEC so that underutilized trunks could
9 be recovered.

10 **Q. CAN SBC MISSOURI FILL ALL TRUNK ORDERS WITHIN 20 DAYS?**

11 A. No. Orders for large quantities of trunks that qualify as "projects" (orders in excess of
12 four DS1s or 96 trunks) may require a due date longer than 20 days. A lack of trunk
13 ports or facilities would also prevent the completion of an order within 20 days. A lack
14 of trunk ports or facilities requires that a growth job take place in order to make the
15 needed trunk ports or facilities available. The necessary growth job to install new trunk
16 ports or facilities could extend the due date beyond 20 days. If all the necessary
17 equipment and facilities were available for a particular order, SBC Missouri could meet a
18 20-day due date for most orders. However, it is unfair to hold SBC Missouri to a 20-day
19 standard if the necessary equipment and/or facilities are not available.

20 **Q. SHOULD A CLEC BE ABLE TO EXPEDITE ALL TRUNKING ORDERS?**

21 A. No. This is an obvious abuse by the CLEC Coalition of SBC Missouri's well intended
22 expedite proposal. As described above, there is a planning process for trunking
23 requirements, so this desire for expedites is an attempt to compensate for poor planning
24 on the part of CLECs. If the Commission deletes SBC Missouri's language, as the CLEC

Coalition proposes, SBC Missouri and other CLECs, who planned accordingly for trunk augments, bear the cost of the CLEC Coalition's poor planning. The CLEC Coalition's provision jeopardizes SBC Missouri's ability to meet the due dates of those CLECs that had planned accordingly and allows a CLEC to hoard trunk ports. Such a provision detracts from SBC Missouri's ability to plan and allocate the work to provide services for all other customers as well. SBC Missouri works with CLECs to eliminate legitimate call blocking scenarios for a CLEC when customer service is an issue. Planned orders, worked within normal intervals, utilize work forces and equipment in a timely and efficient manner. Without normal intervals, there will be no provision for true service jeopardies.

**Q. DOES SBC MISSOURI HAVE A PROCESS FOR ADDITIONAL CHARGES
STEMMING FROM EXPEDITED TRUNKING ORDERS?**

A. No. The CLEC Coalition's Issue statement suggests that SBC Missouri should simply charge more for such a request, but the Coalition has conveniently omitted this offer from its proposed contract language. SBC Missouri does not have a process in place to bill the CLEC for expedited activities. Most CLECs plan well enough to eliminate the need for expedited trunking orders.

**Q. SHOULD SBC MISSOURI GUARANTEE ORDERS WILL BE PROCESSED
WITHIN 30 DAYS?**

1 A. No. SBC Missouri cannot guarantee that every order to provision trunks can be
2 completed within 30 days. There are some situations, beyond SBC Missouri's control,
3 that prevent making this guarantee. For example, if there are no trunk ports available at
4 an SBC Missouri Tandem or End Office; or, if there are no facilities available to a SBC
5 Missouri Tandem or End Office, SBC Missouri cannot guarantee to complete, within 30
6 days, any order for trunks to those offices. Vendor schedules and lack of product
7 availability from the vendor can also hinder SBC Missouri's ability to work orders within
8 30 days. However, trunk orders, for which sufficient trunks and facilities at the office in
9 question exist, will be completed within 30 days.

10 IX. TRUNK FORECASTING

11 MCIIm NIM/ITR Issue 23:

12 *Should trunk forecasts include trunk quantities for all trunking required in this Appendix*
13 *NIM/ITR?*

14 CLEC Coalition Attachment 11b, Appendix ITR Issue 7:

15 *Should the agreement require yearly forecasted trunk quantities for all trunk groups*
16 *referenced in the agreement?*

17 Q. WHAT ISSUE WILL YOU BE DISCUSSING IN THIS SECTION?

18 A. This section of my testimony will address the topics related to the reports and forecasts
19 exchanged between SBC Missouri and CLECs. These topics include identifying when
20 trunk forecasts are required and how they should be provided.

21 Q. WHAT ARE TRUNK FORECASTS?

22 A. Trunk forecasts are estimates of the number of trunks a carrier expects to have in service
23 over a given time period.
24

1 **Q. WHAT DOES SBC MISSOURI REQUEST FROM CLECS WITH RESPECT TO**
2 **TRUNK FORECASTS?**

3 **A.** SBC Missouri requests trunk forecasts from CLECs semi-annually. SBC Missouri asks
4 CLECs to estimate the number of trunks they expect to have in service in each trunk
5 group during each of the next two years. SBC Missouri requires a forecast only for those
6 clec trunk groups that carry traffic to and from SBC Missouri's network. SBC Missouri
7 does not request forecasts from CLECs for CLEC trunk groups on any other part of their
8 network.

9 **Q. ARE TRUNK FORECASTS BINDING ON CLECS?**

10 **A.** No. SBC Missouri realizes that trunk forecasts are estimates and as such do not
11 guarantee that a CLEC will actually need the amount of trunks it has forecasted.

12 **Q. HOW ARE THESE TRUNK FORECASTS USED BY SBC MISSOURI?**

13 **A.** SBC Missouri combines the trunk forecasts of all carriers- ILEC, CLEC, wireless, and
14 pager- with the forecasts of its own trunk groups into SBC Missouri's semi-annual
15 General Trunk Forecast ("GTF"). SBC Missouri uses the GTF to estimate and budget for
16 the network resources needed in future years.

17 While SBC Missouri adjusts the forecasts it receives from other carriers, the
18 CLECs' estimates, along with those of other carriers, offers guidance regarding when
19 central office switching, trunk termination capacity, and inter-office facilities might be in
20 jeopardy of exhaust. Being able to determine when SBC Missouri might need to acquire
21 more equipment from central office equipment providers or install additional facilities
22 insures network integrity. Lead time for "growth jobs" (additions of cables, frames and
23 other equipment necessary for trunks) may be 15 weeks or more. Thus, SBC Missouri
24 produces a general trunk forecast semi-annually so it will have spare equipment in place
25 when needed. CLEC-provided forecast information is an important part of this process.

1 **Q. DOES SBC MISSOURI SHARE FORECAST INFORMATION THAT IS**
2 **SPECIFIC TO ONE CARRIER WITH ANY OTHER CARRIERS?**

3 A. No. SBC Missouri does not divulge carrier-specific forecast information to other
4 companies.

5 **X. EXPENSIVE INTERCONNECTION²⁶—SINGLE POI VS. MULTIPLE POI**

6 **AT&T Attachment 11: Network Architecture Issue 4(b):**

7 *(b) Should AT&T interconnect at more than one POI per LATA once traffic exceeds a 24*
8 *DS1 threshold?*

9 **AT&T Attachment 11: Network Architecture Issue 6:**

10 *Should each party be financially responsible for the facilities on its side of the POI?*

11 **Charter Attachment ITR Issue 3(a):**

12 *(a) Should this appendix ITR contain terms and conditions regarding the establishment*
13 *of additional POIs?*

14 **Charter Attachment NIM Issue 1(b):**

15 *(b) Should each party be financially responsible for the facilities on its side of the POI?*

16 **Charter Attachment NIM Issue 1(c):**

17 *(c) When CLEC selects a single POI, should this appendix contain language detailing the*
18 *need for CLEC to establish additional POIs when CLEC reaches the appropriate*
19 *threshold of traffic?*

20 **Sprint Attachment ITR Issue 7:**

21 *Should each party be financially responsible for the facilities on its side of the POI?*

22 **Sprint Attachment NIM Issue 5:**

23 *Should Sprint be financially responsible for interconnection facilities on its side of the*
24 *point of interconnection?*

25 **CLEC Coalition NIA Issue 9:**

26 *Should the Parties establish additional POIs when traffic levels through the existing POI*
27 *exceed 24 DSIs at peak?*

28 **CLEC Coalition NIA Issue 10(b):**

additional costs incurred by providing interconnection, competitors have an incentive to make economically efficient decisions about where to interconnect.”

1 *(b) Should each party be responsible to transport its traffic from the POI to the other*
2 *party's switch?*

3 **MCIIm NIM/ITR Issue 12(a):**

4 *When MCIIm selects a single POI, should this attachment contain language detailing the*
5 *need for MCIIm to establish additional POIs when MCIIm reaches the appropriate*
6 *threshold of traffic?*

1 **Q. WHAT IS THE UNDERLYING DISPUTE BETWEEN THE PARTIES IN THESE**
2 **ISSUES?**

3 A. This section of my testimony focuses on single POI versus multiple POIs: when, where,
4 and under what conditions are a single POI or multiple POIs to be established. The goal
5 of the new ICA should be to delineate POI location and allocation of cost to accomplish
6 interconnection pursuant to the mandates of the Act.

7 A number of CLEC proposals, however, seek to skew this arrangement to unfairly
8 shift costs to, and create inefficiencies for, SBC Missouri. These proposals actually
9 contravene express language of the Act. As an example, by omitting any reference to
10 “within” SBC Missouri’s network in its proposed language, CLECs would unduly expand
11 SBC Missouri’s obligations beyond those imposed by the Act and would impose
12 substantial additional costs on SBC Missouri.

13 **Q. DOES SBC MISSOURI AGREE THAT A REQUESTING CARRIER IS**
14 **ENTITLED TO A SINGLE POI?**

15 A. Yes. SBC Missouri agrees that, in an effort to foster competition, “new entrants”²⁷
16 should be allowed to establish, at a minimum, one point of interconnection in a LATA
17 within the network and franchise territory of the ILEC in which the requesting carrier
18 seeks to compete.

19 **Q. DOES ENTITLEMENT TO A SINGLE POI FOR “NEW ENTRANTS”**
20 **ELIMINATE ANY NEED FOR MULTIPLE POIs IN A LATA?**

21 A. No. The single POI entitlement is merely a vehicle to facilitate facilities-based entry and
22 competition. It is, in short, an entry vehicle. It is reasonable to assume that the rationale
23 for allowing a single POI was the FCC’s intent to help “new entrants” initially enter a

²⁷ FCC First Report and Order ¶ 14 – “We also note that many new entrants will not have fully constructed their local networks when they begin to offer service. Although they may provide some of their own facilities, these new entrants will be unable to reach all of their customers without depending on the incumbent's facilities.”

1 given market without creating a financial disincentive to competition as evidenced by the
2 FCC's questioning its single POI rules in its Intercarrier Compensation NPRM.²⁸

3 **Q. HAVE ANY COMMISSIONS PREVIOUSLY RULED ON THE ISSUE OF WHEN**
4 **IT IS APPROPRIATE TO ESTABLISH ADDITIONAL POIs?**

5 A. Yes. In fact, the Texas Commission ruled on this issue in both an MCI and a Level 3
6 arbitration and has indicated their intent to hold with their prior decisions in the Texas
7 Mega Arbitration Docket # 28821. In the MCI proceeding (Docket No. 21791), the
8 Commission ruled:

9 "While the establishment of a single POI may be efficient during initial market
10 entry, once growth accelerates, what was initially economically efficient may
11 become extremely burdensome for one party. Although the FCC's First Report
12 and Order expressly provides for interconnection at any technically feasible
13 point, it does not appear to state that only one POI is required."²⁹

14 In that docket, the Commission also found that:

15 "In order to avoid network and/or tandem exhaust situations, the Commission
16 determines, on this record, that it is reasonable that a process exist for requesting
17 interconnection at additional, technically feasible points."³⁰

18 Based on this rationale, the Commission adopted the following language regarding POIs:

19 "A POI is required where each carrier provides service to end user customers."³¹

20 "Multiple POI(s) will be necessary to balance the facilities investment and
21 provide the best technical implementation of interconnection requirements. Both
22 parties shall negotiate the architecture in each location that will seek to mutually
23 minimize and equalize investment."³²

24 The Commission ultimately approved language requiring the parties to negotiate
25 additional POIs when MCI's traffic usage exceeds a traffic level equal to 24 DS1s. The

²⁸ FCC 01-132, Developing a Unified Inter-carrier Compensation Regime, April 27, 2001 - ¶ 113 - If a carrier establishes a single POI in a LATA, should the ILEC be obligated to interconnect there and thus bear its own transport costs up to the single POI when the single POI is located outside the local calling area? Alternatively, should a carrier be required either to interconnect in every local calling area, or to pay the ILEC transport and/or access charges if the location of the single POI requires the ILEC to transport a call outside the local calling area?

²⁹ Docket No. 21791, MCIW Arbitration Award at 12 (May 23, 2000).

³⁰ Order Approving Interconnection Agreement at 4. Docket No. 21791.

³¹ Order Approving Interconnection Agreement at 5. – NIM § 2.2, Docket No. 21791.

³² *Id.*

1 following language was included in MCI's interconnection agreement in Texas to
2 implement the award in Docket No. 21791:

3 2.3.3 Where MCIW has a POI at a combined SWBT local and access
4 tandem, and such area also has another local tandem, if the traffic exceeds
5 24 DS1s, the parties shall negotiate and agree to provide within 90 days
6 the provision of an additional physical POI to interconnect MCIW
7 facilities with the local tandem.³³

8 SBC Missouri proposes language to the CLECs in this arbitration that is very similar to
9 the Texas Commission-approved multiple-POI language.³⁴

10 Similarly, in the Level 3 proceeding (Docket No. 22441), the Texas Commission required
11 that Level 3 establish a POI in any mandatory local calling area where Level 3 offers
12 service that qualifies for reciprocal compensation.

13 "[I]t is appropriate for the parties to negotiate the establishment of
14 additional POIs within a mandatory local calling area where call traffic
15 levels may lead to inefficient network utilization or the exhaustion of
16 network facilities."³⁵

17 "Although the FCC's First Report and Order expressly provides for
18 interconnection at any technically feasible point, it does not appear to state
19 that only one POI is required."³⁶

20 Importantly, the Commission specifically determined that Level 3 was required to have
21 "at least one POI in any mandatory local calling area where Level 3 offers service that
22 qualifies for reciprocal compensation."³⁷

23 The Arbitrators based their decision in part on the fact that SBC Texas should not be
24 required to assume all of the costs of transport to a single POI within a LATA, which is
25 consistent with the FCC's questioning of single POI as mentioned earlier.

³³ *Id.* at 6. – NIM § 2.3.3.

³⁴ Interconnection SBC Issue 6, SBC Texas proposed language § 1.1.3.1.

³⁵ Docket No. 22441, *Petition of Level 3 Communications, LLC for Arbitration*, Arbitration Award at 19 (August 11, 2000).

³⁶ *Id.* at 20 (quoting Docket No. 21791, MCI Arbitration Award at 12).

³⁷ *Id.* at 19.

1 **Q. DIDN'T THE FIFTH CIRCUIT COURT OF APPEALS DECISION RESOLVE**
2 **THIS ISSUE?**

3 A. No. Although I am not a lawyer, I understand that the Fifth Circuit decision in
4 *Southwestern Bell Telephone Co. v. Public Utility Comm'n of Texas*,³⁸ addressed the
5 issue of whether an originating carrier could recover the cost of transport to a remote
6 POI. The Fifth Circuit's decision did not, however, clearly address whether the
7 prohibition on recovery of expensive interconnection costs was limited to costs imposed
8 as reciprocal compensation. Indeed, after the Fifth Circuit's decision, SBC Texas (at that
9 time known as SWBT) informed the court and the parties that the decision was unclear in
10 this respect, sought clarification, and made clear that it would read the decision (absent
11 clarification) as leaving that issue open and authorizing the PUC to address the question
12 of whether there should be an interconnection rate, term, or condition to address recovery
13 of the additional cost. Moreover, and regardless of the intended scope of the Fifth Circuit
14 decision, that case clearly did not address whether SPOI was intended as more than a
15 market entry vehicle or whether, and to what extent, growth levels and capacity
16 exhaustion should be considered.

17 SBC Missouri proposes reasonable language that provides the CLECs with a
18 variety of options for establishing a single POI and adding additional POIs as the CLECs'
19 customer growth dictates.

³⁸ 348 F.3d 482 (5th Cir. 2003).

1 **Q. SHOULD THE CLECS BE ALLOWED TO REVERSE ENGINEER THEIR**
2 **NETWORK, WHERE THE CLEC HAS ALREADY ESTABLISHED MULTIPLE**
3 **POIS, TO A SINGLE POI?**

4 A. No. However, the language proposed by the CLECs could, in fact, give the CLECs that
5 capability.³⁹ Allowing the CLECs to decommission existing POIs at its sole discretion
6 would run completely counter to the goals of the Act to promote facilities-based
7 competition.

8 **Q. WHERE THE CLEC IS A NEW ENTRANT IN A LATA, SHOULD THE CLEC**
9 **BE ALLOWED TO ESTABLISH ONE POI IN THAT LATA?**

10 A. Yes, when such POI is within the network of the incumbent LEC with which the CLEC
11 intends to mutually exchange traffic.

12 **Q. DO THE CLECS' PROPOSALS IGNORE THE ACT AND ATTEMPT TO**
13 **CREATE OTHER DISCRIMINATORILY FAVORABLE LANGUAGE FOR**
14 **THEMSELVES?**

15 A. Yes. For example, AT&T's position on Issue 4 states that applicable law allows AT&T
16 to interconnect "at any technically feasible point in the LATA".⁴⁰ However, AT&T's
17 language conveniently omits any reference to "within" the incumbent LEC's network,
18 which is a critical requirement under Section 251(c)(2). Under the Act, of course, the
19 technically feasible point must be within the ILEC's network.

20 AT&T's proposal disregards the plain language of the Act and its requirements.
21 AT&T twists this portion of the Act and the FCC's rules in an attempt to force SBC
22 Missouri to interconnect with AT&T outside of SBC Missouri's network. AT&T
23 proposes the following language: "Where SBC Missouri end offices subtend another

³⁹ AT&T Network Architecture/Interconnection DPL Issue 5 proposed language ¶ 1.2 – At AT&T's sole discretion, AT&T will establish one or more POIs within a LATA in which AT&T offers local exchange service.

⁴⁰ AT&T Position statement Attachment 11: Network Architecture/Interconnection Issue 4

1 ILEC's tandem switch for 251(b)(5) traffic, AT&T may, at its discretion, interconnect
2 with SBC Missouri for 251(b)(5) traffic via the other ILEC's tandem switch.”⁴¹

3 The language proposed by AT&T further states that SBC Missouri must establish a POI
4 at each AT&T switch.⁴² AT&T's proposed language would, in effect, force SBC
5 Missouri to deliver traffic not only outside of its network, but potentially outside of its
6 franchise territory as well. This is clearly beyond the intent of the Act, and AT&T should
7 not be allowed to shift its obligations and costs to interconnect unfairly to SBC Missouri.

8 **Q. ARE THERE ANY REASONS A CLEC SHOULD ESTABLISH ADDITIONAL**
9 **POIs AS ITS GROWTH ACCELERATES?**

10 A. Yes. By selecting a single point of interconnection, a carrier is putting the reliability of
11 both networks in a vulnerable position. Though a single POI may help a new entrant
12 establish a foothold in a given market or LATA, as growth accelerates, multiple POIs
13 provide additional security and reliability that a single POI does not.

14 With a single POI arrangement, a catastrophic failure at that single POI location,
15 such as a fire, network failure, or other disaster, could completely isolate that carrier's
16 network from the PSTN. While the PSTN contains many built-in redundancies to protect
17 itself from such catastrophic events, the PSTN cannot guarantee protection from a single
18 point of failure to a carrier that chooses to place all of its access to the PSTN through a
19 single POI.

20 Additionally, problems in one carrier's network can create a backlash into other
21 carrier's networks, causing blocked calls. Blocking calls has an exponential effect due to
22 customer attempts to redial the telephone number. Any long range planning of a
23 telecommunications carrier's network should include protections on behalf of that

⁴¹ AT&T proposed language § 1.2. See Interconnection Attachment 11: Issue 4.

⁴² AT&T proposed language § 1.3. See Interconnection SBC Issue 3.

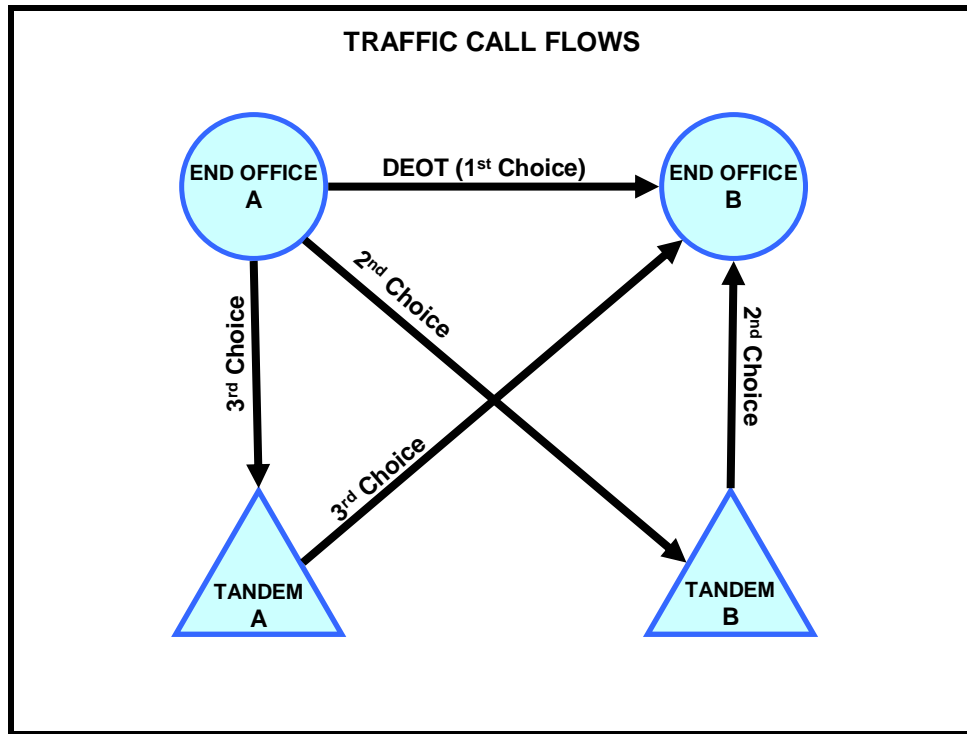
1 carrier's end users as well as the general public's safety. The successful completion of
2 calls, including 911 emergency calls, for any carrier's end users demands nothing less.

3 It is difficult to understand why any carrier would risk its entire network
4 reliability within a LATA by choosing to limit its access the PSTN at a single POI on a
5 long term basis.

6 **Q. DOES SBC MISSOURI PROVIDE DIVERSITY FOR ITS OWN NETWORK**
7 **SECURITY AND RELIABILITY SIMILAR TO THE MULTIPLE POI**
8 **ARCHITECTURE THAT SBC MISSOURI IS ADVOCATING IN THIS**
9 **ARBITRATION?**

10 A. Yes. SBC Missouri not only provides redundancy in its trunking capabilities as shown
11 below, SBC Missouri also provides redundancy in its network transport facilities
12 including advanced SONET rings often referred to as self-healing networks. In addition
13 to all of these self-healing network precautions, SBC Southwest, which includes
14 Missouri, Kansas, Missouri, Arkansas and Texas, maintains a Network Systems
15 Maintenance Center group (NSMC) dedicated to 24x7 monitoring of SBC Southwest's
16 network reliability and performance.

17 Yet even with all of the redundancy and self-healing capability built into the SBC
18 Missouri network, network failures such as transport equipment failures, cable cuts,
19 traffic overload conditions, and software glitches still occur and the NSMC must perform
20 a manual reroute to maintain service. Given intentional and accidental damage to cables,
21 such as construction site cuts, car accidents, storm damage and vandalism, as well as
22 equipment failures and traffic overload conditions, the NSMC still must reroute traffic on
23 an almost weekly basis over SBC's five-state Southwest region.



Traffic Call Flows:

1. 1st choice: calls routed office A to B via direct end office trunk (DEOT)
2. 2nd choice: calls routed end office A to B via Tandem B
3. 3rd choice: calls routed end office A to B via Tandem A

As seen in the drawing above, SBC Missouri provides multiple trunk paths between offices, whenever possible, to provide redundancy in the event of traffic overflow. Though not always possible in rural environments, multiple trunking arrangements are common in high volume urban/metropolitan markets.

XI. INTERCONNECTION WITHIN SBC MISSOURI'S NETWORK

MCIm NIM/ITR Issue 14(a):

(a) Should MCIm be required to interconnect on SBC's network?

AT&T Attachment 11: Network Architecture Issue 2(a):

(a) Should the ICA state that AT&T may interconnect with SBC MISSOURI at outside plant and customer premises when those terms are undefined?

AT&T Attachment 11: Network Architecture Issue 4(a):

(a) Should AT&T be required to interconnect on SBC's network?

AT&T Attachment 11: Network Architecture Issue 5:

May AT&T's POI be located outside of SBC's incumbent territory?

Pager Company Appendix NIA Issue 4(a):

(a) Should CLEC be required to interconnect on SBC Missouri's network?

Charter NIM Issue 4(a):

(a) What type of trunk groups should be allowed over the Fiber Meet Point?

Charter NIM Issue 4(b):

(b) Should CLEC be required to interconnect with SBC- Missouri's within SBC-Missouri's network?

CLEC Coalition NIA Issue 10(a):

(a) Should CLEC be required to interconnect on SBC Missouri's network?

CLEC Coalition NIA Issue 10(b):

(b) Should each party be responsible to transport its traffic from the POI to the other party's switch?

CLEC Coalition NIM Issue 2:

Should CLEC be required to interconnect with SBC-MISSOURI within SBC Missouri's network?

CLEC Coalition NIM Issue 3:

May a Fiber Meet Point be used for trunk groups other than Local Interconnection Trunk Group?

Sprint ITR Issue 1(b):

(b) Should CLEC be required to interconnect with SBC-MISSOURI within SBC-MISSOURI' network?

Sprint ITR Issue 5:

May Sprints' POI be located outside of SBC's incumbent territory?

Sprint NIM Issue 1:

May Sprint's POI be located outside of SBC's incumbent territory?

1 **Sprint NIM Issue 2:**

2 *Should Sprint be required to establish a POI on SBC's network?*

3 **Q. SHOULD THE ICA STATE THAT THE CLECS MAY INTERCONNECT WITH**
4 **SBC MISSOURI AT OUTSIDE PLANT AND CUSTOMER PREMISES?**

5 A. No. The language proposed by SBC Missouri more closely complies with Section
6 251(c)(2) of the Act and SBC Missouri's obligation to provide for interconnection within
7 its "network," which was recently clarified in the TRO. The CLECs are attempting to
8 expand that obligation and shift the CLECs' costs and responsibility to interconnect to
9 SBC Missouri.

10 **Q. WHAT DOES SECTION 251(C)(2) OF THE ACT REQUIRE SBC MISSOURI TO**
11 **PROVIDE FOR INTERCONNECTION?**

12 A. Section 251(c)(2) states that "each incumbent local exchange carrier has the following
13 duties:

14 (2) Interconnection.--The duty to provide, for the facilities and equipment of any
15 requesting telecommunications carrier, interconnection with the local exchange carrier's
16 network--

17 (A) for the transmission and routing of telephone exchange service and
18 exchange access;

19 (B) at any technically feasible point ***within the carrier's network***;

20 (C) that is at least equal in quality to that provided by the local exchange
21 carrier to itself or to any subsidiary, affiliate, or any other party to which
22 the carrier provides interconnection; and

23 (D) on rates, terms, and conditions that are just, reasonable, and
24 nondiscriminatory, in accordance with the terms and conditions of the
25 agreement and the requirements of this section and section 252.
26 (emphasis added).

27 Simply stated, SBC Missouri must provide interconnection at any technically feasible
28 point ***within SBC Missouri's network***, for the facilities and equipment of a requesting
29 carrier. The CLECs would turn the Act on its head and require SBC Missouri (the
30 incumbent local exchange carrier) to interconnect outside of its own network. Rather

1 than interconnect on SBC Missouri's end office that homes on another ILEC's tandem,
2 AT&T proposes SBC Missouri interconnect with it at the ILEC tandem at AT&T's sole
3 discretion.⁴³ This is not on SBC Missouri's network and is therefore not allowable.

4 **Q. DID THE TRO ADDRESS INTERCONNECTION AND SECTION 251(C)(2) OF**
5 **THE ACT?**

6 A. While the TRO focused mainly on UNEs and unbundling requirements, there is no doubt
7 that the decisions and rulings issued by the FCC in the TRO affected interconnection in
8 two distinct ways.

9 **Q. WHAT ARE THE TWO WAYS THE TRO DISTINCTLY AFFECTED**
10 **INTERCONNECTION?**

11 A. First, the TRO clarified that dedicated transport only includes those transmission facilities
12 between ILEC switches and wire centers and does not include transmission facilities
13 connecting a competing carrier's network to the ILEC's network that exist outside of the
14 ILEC's network. In the TRO, the FCC stated that its previous definition of dedicated
15 transport was "misguided"⁴⁴ and may have inappropriately shifted the CLECs' network
16 deployment costs and responsibilities to the ILECs⁴⁵ because CLECs were more inclined
17 to "rely exclusively on the incumbent LEC's network."⁴⁶

18 Second, the TRO places the responsibility on the CLEC to provide facilities
19 outside the ILEC's network that are necessary for interconnection. The "entrance
20 facilities" used to link the requesting carrier's network with facilities that "exist outside

⁴³ AT&T Attachment 11, Part A, Section 1.2

⁴⁴ TRO ¶ 367. – "... because unbundling this type of transmission facility is "technically feasible" and "will reduce entry barriers into the local exchange market," it was appropriate to include such facilities within the definition of dedicated transport. We find that this approach was misguided."

⁴⁵ *Id.* at ¶ 367.

⁴⁶ TRO ¶ 367. "Moreover, we find that our more limited definition of transport is consistent with the Act because it encourages competing carriers to incorporate those costs within their control into their network deployment strategies rather than to rely exclusively on the incumbent LEC's network."

1 the incumbent LEC's local network" are the responsibility of the requesting carrier. The
2 FCC found that economics dictate this separation of responsibility:

3 Competing carriers have control over where to locate their network facilities to
4 minimize self-deployment costs, or the costs of using third-party alternatives for
5 transport from the incumbent LEC's network. These backhaul facilities from
6 incumbent LEC networks to competitor's networks are distinguished from other
7 transport facilities because competing carriers have some control over the
8 location of their network facilities... Competing carriers control, in part, how
9 they design and locate their networks, as opposed to obtaining a connection
10 between two incumbent LEC wire centers. For instance, a competing carrier can
11 choose to locate its switch very close to an incumbent LEC wire center to
12 minimize costs associated with deploying fiber over longer distances. Similarly, a
13 competing carrier can choose to locate its network equipment, such as its switch,
14 near other competing carriers to share costs, or near existing competitive fiber
15 providers that have already deployed competitive transport facilities... Moreover,
16 we find that our more limited definition of transport is consistent with the Act
17 because it encourages competing carriers to incorporate those costs within their
18 control into their network deployment strategies rather than to rely exclusively on
19 the incumbent LEC's network.⁴⁷

20 The FCC in the TRO ruled that competing carriers must incorporate interconnection costs
21 into their own network deployment strategies, not shift those costs to the ILEC, or "rely
22 exclusively on the incumbent LEC's network."

23 In its "Summary of the FCC's Triennial Review Order" the National Association
24 of Regulatory Utility Commissioners (NARUC) confirmed this interpretation of the
25 TRO:

26 The dedicated transport element is now limited to only those transmission
27 facilities that connect an ILEC switch/wire center to another ILEC switch/wire
28 center within a LATA; the definition therefore does not include entrance
29 facilities, i.e., transport between an ILEC switch/wire center and a requesting
30 carrier's switch/wire center.⁴⁸

⁴⁷ TRO ¶ 367.

⁴⁸ Summary of the FCC's Triennial Review Order at 20, NARUC Triennial Review Implementation Process Task Force (September 5, 2003).

1 **Q. DO OUTSIDE PLANT AND END USER CUSTOMER PREMISES QUALIFY AS**
2 **PART OF SBC MISSOURI'S NETWORK FOR THE PURPOSE OF**
3 **INTERCONNECTION AS AT&T'S PROPOSED LANGUAGE SUGGESTS?**

4 A. No. As stated earlier, Section 251(c)(2) of the Act states that incumbent LECs must
5 provide for interconnection at any technically feasible point within the ILEC's network.
6 Such points as outside plant are simply not appropriate for connection of a CLEC switch
7 to a SBC Missouri switch. Typically, SBC Missouri designs these facilities to serve end
8 users and not carriers.

9 **Q. DO THE CLECS ATTEMPT TO CIRCUMVENT THE TRO DEFINITION OF**
10 **DEDICATED TRANSPORT IN THEIR PROPOSED CONTRACT LANGUAGE?**

11 A. Yes. The CLECs refer to either transport or dedicated transport throughout their
12 proposed language in an effort to bypass the TRO definition of dedicated transport and to
13 shift the CLECs' interconnection obligations to SBC Missouri.⁴⁹

14 **Q. ARE THE CLECS CORRECT THAT THE LOCATION OF THE CLEC'S POINT**
15 **OF INTERCONNECTION WITH SBC MISSOURI DOES NOT HAVE TO BE ON**
16 **SBC MISSOURI'S NETWORK?**

17 A. No. Again, the CLECs ignore the Act and grant themselves "sole discretion" as to when,
18 where, and how to establish a POI. Section 251(c)(2)(B) of the Act is very clear that
19 incumbent LECs must provide for interconnection at points "within the carrier's
20 network." Further, the FCC has expressly defined the ILEC's network to be "only those
21 transmission facilities within an incumbent LEC's transport network, that is, the
22 transmission facilities between incumbent LEC switches."⁵⁰ Thus, the point of
23 interconnection must be within the ILEC's network, at the switch locations.

24 **Q. DOES THE PLACEMENT OF A CLEC'S POI NEED TO BE ON SBC**
25 **MISSOURI'S NETWORK IF THE CLEC IS A NEW ENTRANT?**

⁴⁹ See, e.g., AT&T language – Interconnection Issues 6, 8, 19.

⁵⁰ TRO ¶ 366.

1 A. Yes. As a new entrant, a CLEC must establish a POI within the network of each
2 incumbent LEC with which the CLEC intends to exchange traffic in that LATA. The
3 rules are not different for a new entrant.

4 **Q. IN THE SECTION III DEFINITIONS OF THIS TESTIMONY, YOU TESTIFY**
5 **THAT A POINT OF INTERCONNECTION IS THE POINT “AT WHICH THE**
6 **PARTIES’ NETWORKS MEET FOR THE PURPOSE OF ESTABLISHING**
7 **INTERCONNECTION”, BUT WHO PAYS FOR THE FACILITIES?**

8 A. SBC Missouri is responsible for the facilities and equipment on its network. The CLEC is
9 responsible for facilities on its network. Joining those networks at a common point does
10 not alter the fact that each carrier is financially responsible for its own network.

11 **Q. IN REGARD TO CLEC COALITION’S NIM ISSUE 3, WHAT IS SBC**
12 **MISSOURI’S PROPOSED LANGUAGE ON FIBER MEET POINT FACILITIES?**

13 A. SBC Missouri offers the following language on Fiber meet Point Facilities in NIM
14 Section 1.1:

15 **“If Fiber Meet Point is the selected method for interconnection, Fiber Meet**
16 **Point shall be used to provide interconnection trunking as defined in**
17 **Appendix ITR to Attachment 11: Network Interconnection Architecture for**
18 **trunk groups used to carry Section 251(b)(5)/IntraLATA Toll Traffic**
19 **originating from an end user obtaining local dialtone from CLEC where**
20 **CLEC is both the Section 251(b)(5) Traffic and IntraLATA Toll provider or**
21 **IntraLATA Toll Traffic originating from an end user obtaining local**
22 **dialtone from SBC Missouri where SBC Missouri is both the Section**
23 **251(b)(5) Traffic and IntraLATA Toll provider (hereinafter “Local**
24 **Interconnection Trunk Groups”).”**
25

26 **Q. WHAT IS THE NATURE OF SBC MISSOURI’S DISPUTE WITH CLEC**
27 **COALITION IN NIM ISSUE 3?**

28 A. SBC Missouri’s proposed language states that a Fiber Meet Point facility shall be used
29 for Local Interconnection Trunk Groups. It may not be used for OS/DA, 911, mass
30 calling and meet point trunk groups. Aside from the fact that the language as proposed
31 by the CLEC Coalition makes no sense, the language implies that the CLEC Coalition
32 may also use the Fiber Meet Point facility for OS/DA, 911, mass calling and meet point
33 trunks, which is inconsistent with the agreed language in NIA, Section 10.2.

1 **Q. DOES SBC MISSOURI HAVE ANY SPACE LICENSING ARRANGEMENTS**
2 **WITH AT&T?**

3 A. No, it does not, and at this time has no plans to request any.

4 **XII. DIRECT END OFFICE TRUNKING (DEOT) REQUIREMENTS**

5 **AT&T Attachment 11: Network Architecture Issue 12:**

6 *Should AT&T be required to establish direct end office trunk groups if the traffic*
7 *exchanged between the parties to a SBC MISSOURI end office exceeds one DS1 for a*
8 *period of one month, with traffic adjusted for anomalies?*

9 **Pager Company Appendix NIA Issue 5:**

Should a CLEC be required to direct end office trunk once traffic between the parties
exceed one DS1 (or 24 trunks)?

10 **CLEC Coalition OE Issue 5:**

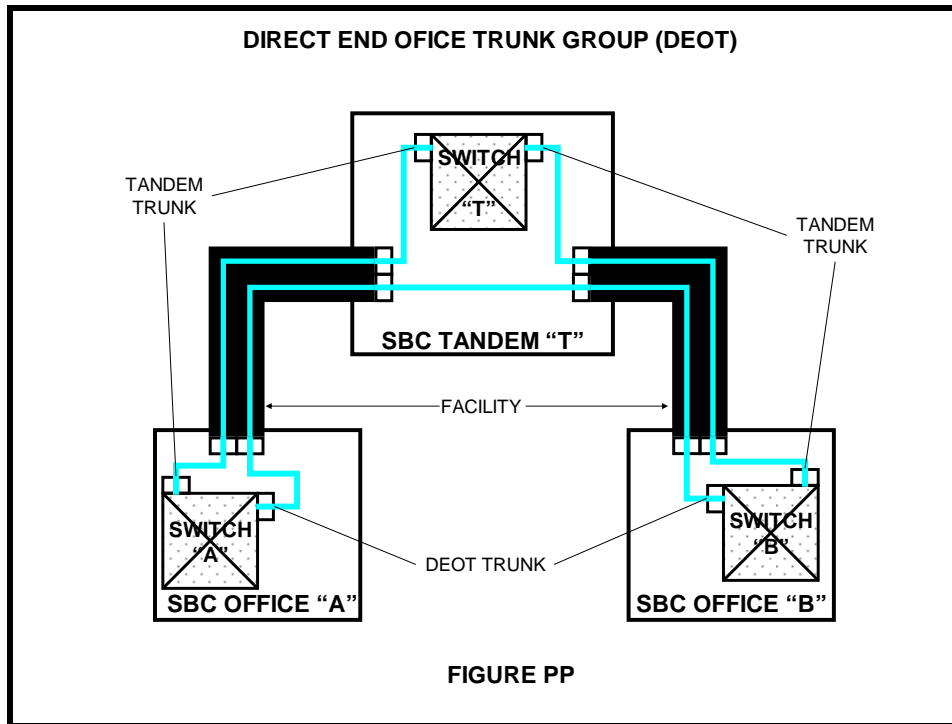
11 *Should a CLEC be required to direct end office trunks once OE LEC Traffic*
12 *exceeds one DS1 (or 24 DS0s) to or from an SBC Missouri end office?*

13 **Charter ITR Issue 4:**

What type of trunk groups should be allowed over the Fiber Meet Point?

Q. WHAT IS A “DEOT”?

14 A. The term “DEOT” stands for “Direct End Office Trunk group”. A DEOT is simply a
15 direct trunk group between two class 5 end office switches. Routing calls from one of the
16 end office switches to the other end office switch by way of a DEOT eliminates the need
17 to route through a tandem, thereby eliminating that point of switching and potential point
18 of failure. The fewer points of switching the more efficient the network is. Figure PP
19 illustrates a DEOT and how it eliminates the need for a tandem connection.



Q. WHAT TRAFFIC DOES SBC MISSOURI ROUTE TO A DEOT GROUP BETWEEN TWO END OFFICES?

A. Only that traffic, originated by the end users connected to one end office switch, destined for the end users, connected to another end office switch, is routed over a DEOT between those two end office switches. SBC Missouri designs trunk capacity at its end office switches to handle the traffic requirements created by the end user NPA NXX codes that are homed at that End Office switch. SBC Missouri does not design end office switches to perform a tandem function.

SBC Missouri utilizes DEOTs to alleviate tandem exhaust problems where traffic levels to an SBC Missouri End Office are sufficient to merit direct trunks. DEOTs also eliminate potential points of failure, by eliminating unnecessary points of switching.

1 **Q. WHY DOES SBC MISSOURI NOT ROUTE CALLS, DESTINED TO END USERS**
2 **IN OTHER SWITCHES, OVER A DIRECT END OFFICE TRUNK GROUP**
3 **BETWEEN TWO END OFFICES, DIFERENT FROM THE INTENDED**
4 **SWITCH?**

5 A. SBC Missouri engineers each of its end office switches to handle the traffic and
6 switching requirements needed to provide service to only those end users connected to
7 those specific offices. SBC Missouri routes calls, originated by end users in one office
8 and destined for end users in another office, over the proper DEOT that connects the
9 originating office to the terminating office. An alternative to this, when no DEOT exists
10 between the two offices, is to send the call to the tandem that serves the terminating
11 office.

12 Routing calls, originated from one end office and destined for a second end office,
13 to a DEOT that connects the originating office to a third office- not the office in which
14 the call is destined- is call misrouting. Misrouting calls over a direct trunk group forces
15 the third end office to function like a tandem. SBC Missouri does not design and
16 provision end office network resources to accommodate an end office functioning as a
17 tandem. When calls are improperly routed to an SBC Missouri end office switch, the
18 network resources for that switch are being used at a faster than planned rate, such that
19 the required network resources are greater than what SBC Missouri has actually
20 purchased.

21 SBC Missouri purchases, administers, and maintains end office switches to
22 function only as end office switches, not as tandem switches. Tandem switches perform
23 functions that end office switches cannot perform. To provision an end office switch to
24 function as a tandem compromises the efficiency of SBC Missouri's network and reduces
25 the level of service provided to the end office's end users.

1 Misrouting calls over the wrong DEOT adds an additional element of switching
2 into the completion of those calls. This, as mentioned above, adds a potential point of
3 failure.

4 **Q. ACCORDING TO THE ACCORDING TO THE APPENDIX NETWORK**
5 **ARCHITECTURE/ITR, AT WHAT LEVEL DOES SBC MISSOURI REQUIRE**
6 **AT&T AND OTHER CLECS TO ESTABLISH A DEOT?**

7 A. SBC Missouri requires AT&T and other CLECs to establish a DEOT whenever traffic
8 between the parties exceeds 1-DS1 (or 24 trunks) for one month.

9 **Q. WHEN AND WHY DOES SBC MISSOURI ESTABLISH DEOTS IN ITS**
10 **NETWORK?**

11 A. Typically, when the amount of traffic, or call volume, between two SBC Missouri end
12 office switches reaches an offered load level that is equivalent to 24 trunks during a 20-
13 day Average Busy Hour at the tandem, SBC Missouri establishes a DEOT between these
14 two offices. Doing this maintains SBC Missouri's network efficiency. DEOTs help
15 conserve tandem switch and trunk resources.

16 **Q. IS THIS PROCEDURE CONSISTENT WITH SBC MISSOURI'S POLICY**
17 **REGARDING DEOTS FOR ITSELF, ITS AFFILIATES, OR OTHER**
18 **CARRIERS?**

19 A. Yes, SBC Missouri establishes DEOTs for itself under similar, more stringent guidelines.
20 SBC Missouri also requires its affiliates to establish DEOTs at a 24-trunk threshold. This
21 language is also consistent with SBC Missouri's 13-State generic Interconnection
22 Agreement ("ICA") and what SBC Missouri requests from other carriers. SBC requires
23 CLECs to establish a DEOT after the traffic load reaches and maintain a 24-trunk level
24 that level for one month. For itself, SBC Missouri establishes the DEOT as soon as the
25 load reaches 24 trunks.

1 **Q. HAS THE ISSUE OF DIRECT END OFFICE TRUNK GROUPS (DEOTS) AND**
2 **THE LEVEL AT WHICH TO ESTABLISH THEM BEEN ADDRESSED BY ANY**
3 **STATE COMMISSIONS BEFORE?**

4 A. Yes. The issue of DEOTS and the level at which to establish them was addressed in two
5 states. In Oklahoma Cause No. 200000587, the Oklahoma Commission found that:
6 “Direct End Office trunks terminate traffic originating on one Party’s switch directly to
7 the other Party’s switch and are not switched at a Tandem location. AT&T shall
8 establish a direct End Office trunk group when AT&T’s originating End Office traffic
9 requires twenty-four (24) or more trunks. Overflow from either end of the direct End
10 Office trunk group will be alternate routed to the appropriate Tandem.”⁵¹

11 In Texas Docket # 21791, the Texas Commission concluded that a 24-trunk
12 threshold is appropriate for beginning negotiations for the establishment of direct-end
13 office trunking between SWBT and WorldCom.⁵² The Texas Commission ultimately
14 adopted the following language to be included in the MCI WorldCom interconnection
15 agreement regarding DEOTs:

16 2.3.1 When MCIW traffic usage to a SWBT end office exceeds 24 trunks, the
17 parties shall negotiate and agree to provide within 90 days the provision of direct
18 end-office trunking and the sharing of investment in the provision of such
19 facilities.⁵³

20 Additionally, the Texas Commission confirmed their prior decision in the Texas Mega
21 Arbitration Docket # 28821.⁵⁴ This is consistent with SBC Missouri’s proposed language

⁵¹ Oklahoma Cause No. PUD 2000-00-587, Order No. 452837, June 6, 2001.

⁵² *Petition of Southwestern Bell Telephone Co. for Arbitration with MCI Worldcom Communications Inc. Pursuant to Section 252(B)(1) of the Federal Telecommunications Act of 1996*, Docket No. 21791, Arbitration Award at 16.

⁵³ *Id.*

⁵⁴ Texas PUC Docket # 28821 – Draft Arbitration Award – Track 1 Issues, released February 10, 2005 – page 18 – “The Commission agrees with the concerns that tandem exhaust, cost, network integrity and ability to serve multiple CLECs together suggest that CLECs should establish direct end office trunking (DEOT) once the parties exchange traffic in excess of 1 DS1. The Commission has already concluded in Docket No. 21791 that DEOTs are necessary...”

in this arbitration and corresponds to language agreed to by other Parties to this arbitration.

Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND CHARTER IN ITR ISSUE 4?

A. Although the issue statement refers to a Fiber Meet Point (it is identical to Charter's NIM Issue 4), the contested language (ITR 4.3) is that which describes DEOTs. Charter appears to want any type of traffic routed over a DEOT. SBC Missouri is opposed to this because of reasons stated above- specifically, DEOTS are only intended for traffic between the CLEC switch and the SBC Missouri end office switch.

XIII. MUTUAL AGREEMENT OF TECHNICALLY FEASIBLE METHODS OF INTERCONNECTION

MCIm NIM/ITR Issue 9:

When is mutual agreement necessary for establishing the requested method of interconnection?

AT&T Attachment 11: Network Architecture Issue 7:

Should the Parties mutually agree to the method of obtaining interconnection or should AT&T be able to solely specify the method of interconnection?

MCIm NIM/ITR Issue 14(b):

(b) Should the Fiber Meet Design option selected be mutually agreeable to both Parties?

Q. WHAT IS THE FCC DEFINITION OF INTERCONNECTION AS IT APPLIES TO POI?

A. The FCC concluded:

“that the term ‘interconnection’ under Section 251(c)(2) refers only to the physical linking of two networks for the mutual exchange of traffic. Including the transport and termination of traffic within the meaning of Section 251(c)(2) would result in reading out of the statute the duty of all LECs to establish ‘reciprocal compensation arrangements for the transport and termination of telecommunications,’ under section 251(b)(5).”⁵⁵

⁵⁵ FCC 96-325 – First Report and Order - ¶ 26.

1 Thus, a POI is the point where the CLEC's network and SBC Missouri's network are
2 linked together for the mutual exchange of traffic. Transport and termination are not
3 included in this definition. The CLECs seek to redefine "interconnection" and "POI" to
4 include the transport and termination of traffic, thereby avoiding any trunking
5 requirements to the SBC Missouri local calling areas with which the CLECs seek to
6 exchange traffic.

7 For example, the facility between AT&T and SBC Missouri that establishes the
8 POI, or the "physical linking," is distinct from the interface by which Section 251(b)(5)
9 traffic is exchanged between AT&T and SBC Missouri in the same way that Interstate
10 44, which links Springfield to St. Louis, is distinct from the means by which a person
11 travels (e.g. a car vs. a bus). Though the I-44 freeway may physically link the two cities,
12 it by no means will get someone from one city to the other without a means of transport.

13 The CLECs confuse the issue such that the freeway and the car are one and the
14 same. SBC Missouri's proposed language provides for mutual agreement on the
15 interface between the carriers. In other words, two or three people traveling from
16 Springfield to St. Louis would find it much more economical to travel in a car rather than
17 charter a bus, while a large group might find it more economical to charter the bus.
18 Based on forecasts, the CLECs and SBC Missouri should be allowed to mutually agree
19 on the interface required for the exchange of traffic.

1 **Q. DOES THE CLECS' PROPOSED LANGUAGE INAPPROPRIATELY VEST THE**
2 **CLECS WITH UNILATERAL DECISION-MAKING AUTHORITY?**

3 A. Yes. By vesting themselves with “sole discretion,” the CLECs seek to exempt
4 themselves from any rules or orders of this Commission, the FCC, or courts and would
5 deny SBC Missouri, as provider of last resort, the right to manage and protect its network
6 integrity. The CLECs could even argue that they have “sole discretion” in determining
7 what constitutes “any other technically feasible method requested . . .”⁵⁶ In effect, the
8 language proposed by the CLECs would render any definition of “technically feasible”
9 moot as the CLECs would have “sole discretion” in determining what was or was not
10 “technically feasible.”

11 Additionally, several CLECs, including AT&T, refer to the facilities between a
12 CLEC’s switch and SBC Missouri’s switches as dedicated transport, which the FCC, in
13 the TRO, ruled to be no longer a part of dedicated transport and outside of the incumbent
14 LEC’s network.⁵⁷

15 **Q. WHAT IS SBC MISSOURI’S DISAGREEMENT WITH AT&T AND**
16 **MCIM CONCERNING “MUTUAL AGREEMENT?”**

17 A. Although SBC Missouri is willing to work with AT&T and MCIm to allow for other
18 technically feasible methods of interconnection, mutual agreement of any method
19 outlined in this agreement must be allowed. The language as proposed by AT&T and
20 MCIm would allow each of those carriers to make the sole determination of technical
21 feasibility. Further, where more than one technically feasible method is available, it is
22 reasonable for SBC Missouri to be involved in the decision making process as to which
23 method to utilize. AT&T and MCIm would deny SBC Missouri the right to manage and
24 protect its network integrity.

⁵⁶ AT&T Interconnection Issue 7 – AT&T proposed language §§ 1.0 – 1.7.

XIV. INTRABUILDING CABLING

AT&T Attachment 11: Network Architecture Issue 9:

In central office buildings where both parties have a presence, may AT&T use intrabuilding cable for interconnection?

CLEC Coalition Attachment 11c, Appendix NIM Issue 5:

In central office buildings where both parties have a presence, may CLEC use intrabuilding cable for interconnection?

CLEC Coalition Attachment 11a, Appendix NIA Issue 14:

Xspedius: May CLEC use intrabuilding cable for interconnection in central office buildings where both parties have a presence?

Q. WOULD THE LANGUAGE AT&T PROPOSES PROVIDE AT&T WITH DISCRIMINATORY RATES, TERMS, AND CONDITIONS IN VIOLATION OF SECTION 251(C)(2) OF THE ACT?

A. Yes. When collocating in SBC Missouri's central offices CLECs typically interconnect with SBC Missouri in a similar manner in which they provide facilities from their switch at a remote location to their collocation arrangement. AT&T seeks to avoid Section 251(c)(2) interconnection requirements simply by taking advantage of its status as the former parent of the Bell Operating Companies where AT&T is still in the same building as SBC Missouri. These "condominium" arrangements are a carry over from the break-up of the Bell System.⁵⁸ Other CLECs do not have this advantage, which AT&T seeks to exploit.

⁵⁷ TRO ¶ 366.

⁵⁸ FTA § 251 (c)(2)(D).

1 **Q. DOES AT&T'S PROPOSED LANGUAGE FOR INTRABUILDING CABLING**
2 **VIOLATE SBC MISSOURI'S DUTIES AND RIGHTS TO MANAGE AND**
3 **MAINTAIN NETWORK SECURITY AND RELIABILITY WITHIN SBC**
4 **MISSOURI'S PREMISES?**

5 A. Yes. On several points, AT&T seeks to circumvent SBC Missouri's duties and
6 obligations, as well as SBC Missouri's rights to maintain network reliability and security
7 within SBC Missouri's premises as provided for by the FCC:

8 We also conclude, however, that legitimate threats to network reliability and
9 security must be considered in evaluating the technical feasibility of
10 interconnection or access to incumbent LEC networks. Negative network
11 reliability effects are necessarily contrary to a finding of technical feasibility.
12 **Each carrier must be able to retain responsibility for the management,**
13 **control, and performance of its own network.**⁵⁹
14

15 As an example, AT&T's proposed language in Section 1.5.1 allows AT&T to "designate
16 the use of either a fiber optic cable or coax (i.e., DS-3 ABAM) cable."⁶⁰ In AT&T's
17 proposed language in Section 1.5.2, "Such cable will be installed via the shortest,
18 practical route between SBC Missouri's and AT&T's equipment."⁶¹ Due to the
19 transmission characteristics of telecommunications equipment, coaxial cable used for
20 telecommunications equipment has distance limitations of 150 to 450 feet, depending on
21 the type of coaxial cable used. For this reason, multiplexers and transmission equipment
22 requiring coax connectivity are usually located in the same general area.

23 In order to connect AT&T's network to SBC Missouri's network using coax via
24 the shortest, practical route as AT&T's proposed language states, routing of the coax
25 would be done in a manner consistent with SBC Missouri's safety and security
26 procedures.

⁵⁹ First Report and Order ¶ 203. (Emphasis added).

⁶⁰ AT&T proposed language, SBC Issue 12.

⁶¹ *Id.*

1 As an example, AT&T could insist on additional riser locations in an SBC
2 Missouri office under the argument that it is practical as far as AT&T is concerned. If the
3 Commission were to rule in favor of AT&T, AT&T could force SBC Missouri to
4 interconnect, using intrabuilding cabling - even over SBC Missouri's safety and security
5 objections - because the language AT&T proposes would allow AT&T to "designate" the
6 shortest practical route.

7 **Q. WHAT ARE THE SAFETY AND SECURITY OBJECTIONS TO SBC MISSOURI**
8 **IF AT&T DESIGNATED ADDITIONAL RISER LOCATIONS IN AN SBC**
9 **MISSOURI LOCATION?**

10 **A.** SBC Missouri is concerned about a number of potential safety and building security
11 issues that could arise if the Commission were to allow AT&T to designate additional
12 riser locations in an SBC Missouri location.

13 First, while cutting a hole in the floor just to provide the shortest route may sound
14 practical to AT&T, SBC Missouri practices do not allow for cutting holes in the floor for
15 the sake of expediency or to shorten a route. Due to floor loading concerns, riser
16 locations in an SBC Missouri office are strategically located and limited in order to avoid
17 compromising floor loading integrity.

18 An additional factor in riser placement is fire, flood, and chemical control. Risers
19 are located in an SBC Missouri building in such a way as to minimize the potential
20 damage in the event of a fire, to control flooding, which can damage electronics, and to
21 control liquid or gas chemical contamination, such as a battery leak, between floors.
22 Though these are events no one desires, SBC Missouri makes every attempt to be
23 prepared for such catastrophic events. AT&T's proposal could undermine that
24 preparation.

1 **Q. ARE THERE ANY OTHER REASONS AT&T'S PROPOSED LANGUAGE**
2 **REGARDING INTRABUILDING CABLING SHOULD BE REJECTED BY THE**
3 **COMMISSION?**

4 A. Yes. AT&T's language in Section 1.5 would take SBC Missouri's obligation to
5 interconnect via intrabuilding cabling even further. In Section 1.5, AT&T proposes:

6 Intra-building Interconnection – where both Parties have a presence within
7 a central office building (e.g., a condominium arrangement, point of
8 presence or POP hotel) or *between two adjacent central office buildings*
9 *utilizing an intra-building cable.*

10 AT&T suggests that two separate buildings would qualify for “intra-building” cabling.
11 The term “intra” is defined in Webster's Dictionary as a prefix meaning “within”.⁶²
12 Therefore, an “intra-building cable” would be a cable that is “*within*” the same building,
13 not between separate buildings. Under such a distortion of the non-discriminatory
14 requirements of the Act, other CLECs would be justified in demanding that intra-building
15 cabling apply to them as well since their equipment is also located in a separate building
16 from SBC Missouri. The CLEC Coalition (Attachment 11c, Appendix NIM Issue 5)and
17 Xspedius (CLEC Coalition Attachment 11a, Appendix NIA Issue 14) have already
18 included these same provisions in their language.

19 Besides safety and security concerns, SBC Missouri opposes the language
20 regarding intra-building cabling because the Act obligates SBC Missouri to provide
21 interconnection in a non-discriminatory manner. SBC Missouri cannot justify doing one
22 thing for AT&T- simply because AT&T was its former parent company- and justify this
23 as not discriminating against other CLECs.

24 Lastly, AT&T's, Xspedius', and the CLEC Coalition's proposed language
25 attempts to redefine a central office building in such a way as to include third party
26 buildings such as a CLEC or “POP” (Point of Presence) hotel, or even a customer

premises. A central office is a “Telephone Company facility where subscriber lines are joined to switching equipment for connecting other subscribers to each other, locally and long distance.”⁶³ A POP hotel, CLEC hotel, or third party building does not meet this definition, nor would these locations qualify as part of SBC Missouri’s network as defined in the TRO.

XV. LEASING OF CLEC FACILITIES AND LEASED FACILITIES

CLEC Coalition Attachment 11c, Appendix NIM Issue 4:

Should this agreement contain language that references SBC’s leasing of facilities from third parties?

MCIIm NIM/ITR Issue 13:

Should a non-section 251/252 service such as Leased Facilities be arbitrated in this section 251/252 proceeding?

Q. IS THE LANGUAGE PROPOSED BY THE CLECS CONSISTENT WITH 251(C)(2) AND THE TRO?

A. No. As stated earlier, Section 251(c)(2)(b) places on SBC Missouri “the duty to provide, for the facilities and equipment of any requesting telecommunications carrier, interconnection with the local exchange carrier’s network—at any technically feasible point within the carrier’s network.” SBC Missouri, as the incumbent LEC, has the duty to provide interconnection within SBC Missouri’s’ network to AT&T or any other requesting carrier.

The FCC, in the TRO, further clarified the definition of the ILEC’s network such that:

“transmission links that simply connect a competing carrier’s network to the incumbent LEC’s network are not inherently a part of the incumbent LEC’s local network. Rather, they are transmission facilities that exist outside the incumbent LEC’s local network.”⁶⁴

“Moreover, we find that our more limited definition of transport is consistent with the Act because it encourages competing carriers to incorporate those costs

⁶² Webster’s II New Riverside Dictionary Revised Edition, page 365.

⁶³ Newton’s Telecom Dictionary– 20th Updated & Expanded Edition, 2004.

⁶⁴ TRO ¶ 366.

1 within their control into their network deployment strategies rather than to rely
2 exclusively on the incumbent LEC's network."⁶⁵

3 Rather than "incorporate those costs within their control into their network deployment
4 strategies," the CLECs' proposed language would shift their costs to interconnect to SBC
5 Missouri, forcing SBC Missouri to build facilities to a CLEC designated location outside
6 of SBC Missouri's local network.

7 Incredibly, the CLECs would have this Commission believe the FCC intended the
8 phrase "incorporate those costs within their control into their network deployment
9 strategies" to mean shift costs, wherever possible, to the *incumbent*. This would include
10 entrance facilities, which the FCC, and the NARUC agreed are no longer defined to be a
11 part of the ILEC's network.⁶⁶

12 **Q. IS THE ISSUE OF SBC MISSOURI LEASING FROM A CLEC RELATED TO**
13 **ANY OTHER ISSUE PRESENTED IN THIS ARBITRATION?**

14 **A.** Yes. This is similar to the leased facilities issues addressed by SBC Missouri witness
15 Mike Silver. These facilities are no more a part of SBC Missouri's network than are
16 entrance facilities, which the FCC has now defined as outside of the incumbent LEC's
17 local network.

18 As a matter of policy, SBC Missouri does not lease facilities from CLECs.
19 Therefore, the CLECs' language is unnecessary to this interconnection agreement and
20 should be rejected.

⁶⁵ TRO ¶ 367.

⁶⁶ Summary of the FCC's Triennial Review Order – NARUC Triennial Review Implementation Process Task Force – September 5, 2003, p. 20. – "... *the definition therefore does not include entrance facilities, i.e., transport between an ILEC switch/wire center and a requesting carrier's switch/wire center.*"

1 **Q. WHAT IS THE NATURE OF THE DISPUTE BETWEEN SBC MISSOURI AND**
2 **MCIM IN REGARD TO NIM/ITR ISSUE 13?**

3 A. In regard to NIM/ITR Issue 13, MCIm takes the position that leased facilities (the
4 facilities on MCIm's network that are leased from SBC Missouri) should be a part of this
5 agreement and should be attainable at TELRIC rates. SBC Missouri disagrees with this
6 in that Section 251 of the Act does not require the ILEC to provide facilities from the
7 CLEC's switch to the POI. Each carrier is financially responsible for the facilities on its
8 side of the POI. SBC Missouri witness Michael Silver discusses in detail the financial
9 responsibility for these facilities in his testimony.

XVI. INFORMATION REQUIREMENTS

Charter Attachment NIM Issue 5(b):

11 *(b) Should CLEC provide information needed to establish interconnection for the mutual*
12 *exchange of traffic?*

CLEC Coalition attachment 11b, Appendix ITR Issue 8:

14 *Should SBC be required to note "service affecting" on TGSRs?*

Charter Attachment ITR Issue 5(a):

16 *(a) Should CLEC be responsible to issue ASRs for Meet Point Trunk Groups?*

CLEC Coalition Attachment 11b, Appendix ITR Issue 11:

18 *Should the ICA contradictory language regarding the issuance of TGSRs and ASRs?*

1 **Q. IS THE NETWORK INFORMATION SHEET (NIS) FORM AVAILABLE TO**
2 **THE CLECS IN THE CLEC HANDBOOK FOUND ON THE CLEC WEBSITE?**

3 A. Yes.

4 **Q. IS THERE A NECESSARY FUNCTION THAT THE NETWORK**
5 **INFORMATION SHEET (NIS) PROVIDES?**

6 A. Absolutely. The NIS form provides information to SBC Missouri that is necessary to
7 accurately design, establish, and maintain trunks and facilities on behalf of the requesting
8 carrier. It is important that SBC Missouri have the ability to maintain accurate
9 information regarding the CLEC's interconnection and trunking arrangement with SBC
10 Missouri, including appropriate maintenance windows and procedures, contact
11 information, escalation procedures and any trunking changes. The NIS accurately
12 captures all of the necessary information in a uniform and consistent document so that
13 nothing is inadvertently left out or forgotten. This saves time in reduced emails and
14 confirmations of information and can be critical to a quick response by SBC Missouri in
15 the event of a service-affecting problem.

16 **Q. WERE THE CLECS INVOLVED IN THE DEVELOPMENT OF THE NIS FORM**
17 **AS IT EXISTS TODAY?**

18 A. Yes. In fact, the original NIS form was revised in 2002 from approximately 11 pages to
19 its current 4 page format. As an example, when SBC invited the CLECs to participate in
20 revision of the NIS form in 2002, AT&T was actively involved.

21 **Q. IS THERE NECESSARY INFORMATION CONTAINED ON THE NETWORK**
22 **INFORMATION SHEET (NIS) FORM THAT SBC MISSOURI DOES NOT GET**
23 **FROM OTHER SOURCES?**

24 A. Yes. The NIS form not only includes the information required for all new market
25 entrants, the NIS is used to provide other information necessary to ensure completion of
26 each interconnection arrangement. Examples of the information requested on the NIS
27 include:

- 1 1. **Contact information for repair or maintenance authorization** – This
2 information is critical to quickly respond to potential problems in the
3 network that may impact the CLEC's end users or SBC Missouri's
4 network integrity and reduces response time that might otherwise be
5 wasted trying to contact the appropriate CLEC personnel for trouble
6 reporting.
- 7 2. **Maintenance windows** – In order to perform routine maintenance on
8 behalf of the CLEC, SBC Missouri must know when to schedule work
9 that will not disrupt service.
- 10 3. **Switch "Point Codes"**– Point Codes are necessary to ensure proper
11 routing of calls between the CLEC and SBC Missouri end users using
12 SS7 signaling.

13 As shown above, the information provided by the NIS form, which is necessary to
14 complete and properly install, maintain, and track interconnection trunks between SBC
15 Missouri and requesting carriers, requires more than the minimal information the CLECs
16 would provide.

17 Incomplete information would require follow up calls between a CLEC and SBC
18 Missouri to ensure completion of the trunk groups, and could lead to delays in trouble
19 reporting and restoration due to inaccurate or incomplete contact information. Such
20 delays could impact completion of calls between the CLEC and SBC Missouri end users
21 and possibly jeopardize SBC Missouri's network integrity due to trouble such as mass
22 calling choke failures, which are trunk groups established for high volume calling events
23 such as concert ticket sales, radio station contests, American Idol voting, etc. The NIS
24 form and NIS Job Aid are readily available on SBC Missouri's CLEC website.

1 **Q. IS IT NECESSARY TO NOTE “SERVICE AFFECTING” ON THE TGSR THAT**
2 **SBC MISSOURI SENDS TO THE CLEC?**

3 A. No. SBC Missouri only sends TGSRs when there is a service affecting issue.
4 Commission should reject the CLEC Coalition’s proposal.

5 **Q. WHAT IS THE NATURE OF THE DISPUTE WITH CLEC COALITION**
6 **REGARDING ISSUE 11?**

7 A. The language that the CLEC Coalition has proposed in Section 13.0, 13.1, and 13.2 is
8 unnecessary because the Parties have agreed to language in Sections 5.3, 5.4, 6.1.2 and
9 6.1.3 regarding the issuance of TGSRs and ASRs. Xspedius has agreed that SBC will
10 issue TGSRs and Xspedius will issue ASRs. Xspedius attempts to introduce language
11 that would require SBC Missouri to issue ASRs which is contradictory to the agreed upon
12 language in the sections referenced above. The Commission should reject Xspedius’
13 language due to its contradictory nature and its attempt to impose undue obligations upon
14 SBC.

15 **XVII. CONCLUSION**

16 **Q. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

17 A. Yes.