

STEWART & KEEVIL, L.L.C.

ATTORNEYS AT LAW

SOUTHAMPTON VILLAGE AT CORPORATE LAKE
4603 JOHN GARRY DRIVE
SUITE 11
COLUMBIA, MISSOURI 65203

CHARLES BRENT STEWART
JEFFREY A. KEEVIL

OFFICE (573) 499-0635
FAX (573) 499-0638

December 18, 2003

Missouri Public Service Commission
Attn: Secretary of the Commission
200 Madison Street, Suite 100
P.O. Box 360
Jefferson City, Missouri 65102-0360

FILED²

DEC 18 2003

Missouri Public
Service Commission

Re: Case No. TO-2004-0207
Mass Market Impairment Inquiry

Dear Mr. Roberts:

Please find enclosed for filing in the above-referenced case an original and eight (8) copies each of the Direct Testimony of Robert W. McCausland and Michael Starkey filed on behalf of Sage Telecom, Inc.

A copy of this filing has been sent this date via electronic mail to counsel for all parties of record.

Sincerely,


Brent Stewart

CBS/bt

Enclosure

cc: Counsel for all parties of record

Exhibit No.:
Issues: Geographic Market and
Cross-over
Witness: Michael Starkey
Type of Exhibit: Direct Testimony
Case No. TO-2004-0207
Date Testimony Prepared: Dec. 18, 2003

**MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. TO-2004-0207**

FILED⁴

DEC 18 2003

**Missouri Public
Service Commission**

**Direct Testimony
Of**

Michael Starkey

**On Behalf Of
Sage Telecom, Inc.**

December 18, 2003

Table of Contents

Phase I

Direct Testimony of

Michael Starkey

Case No. TO-2004-0207

I.	INTRODUCTION.....	1
II.	BACKGROUND AND SCOPE OF PROCEEDING	7
III.	STATE PUCS' ROLES AND GRANULAR ANALYSES	12
IV.	A PROPER DEFINITION OF THE MARKET IS CRITICAL TO A VALID IMPAIRMENT ANALYSIS.	18
	A. MASS MARKET.....	18
	B. SERVICE AND INTER-MODAL COMPETITION CONSIDERATIONS.....	23
	C. GEOGRAPHIC GRANULARITY	28
	D. THE WIRE CENTER MARKET DEFINITION IS CONSISTENT WITH THE HMG	42
	CONCLUSION	46

Attachment I: Curriculum Vitae of Michael Starkey

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS FOR THE RECORD.

A. My name is Michael Starkey. My business address is QSI Consulting, Inc., 703 Cardinal Street, Jefferson City, Missouri. 65101.

Q. WHAT IS QSI CONSULTING, INC. AND WHAT IS YOUR POSITION WITH THE FIRM?

A. QSI Consulting, Inc. ("QSI") is a consulting firm specializing in regulated industries, econometric analysis and computer aided modeling. I currently serve as the firm's President.

Q. PLEASE PROVIDE A SYNOPSIS OF YOUR EDUCATIONAL BACKGROUND AND RELEVANT WORK EXPERIENCE.

A. Included with this testimony as Attachment MS-1 is a thorough description of my educational background and relevant work experience. In brief, in the past 12 years I have been employed by three state utility commissions (Missouri, Illinois and Maryland), most recently serving as the Director of Telecommunications for the Maryland Public Service Commission and before that, as Senior Policy Analyst for the Illinois Commerce Commission (Office of Policy and Planning). My experience with each of these state commissions included substantive analysis of federal and

**Direct Testimony of
Michael Starkey
Sage Telecom, Inc.**

1 state administrative rules and law governing the relationship between
2 incumbent local exchange carriers ("ILECs") and new entrant, competitive
3 carriers. In addition, I have substantial experience with issues
4 surrounding unbundled network elements ("UNEs") and their role in
5 facilitating competition in the local exchange marketplace. Likewise, as a
6 consultant for the past seven years I have represented competitive
7 carriers, citizen groups, equipment manufacturers, state commissions and
8 a host of other entities with respect to numerous telecommunications
9 issues. Much of my experience with QSI's clients has involved direct
10 implementation of the federal Telecommunications Act of 1996 (hereafter
11 "TA96" or "the Act"), the Federal Communications Commission's ("FCC's")
12 rules further implementing the Act's pro-competitive objectives, and a
13 number of individual state requirements aimed at fostering competition in
14 the local exchange marketplace.

15 **Q. PLEASE DESCRIBE YOUR PREVIOUS POSITION WITH THE MISSOURI**
16 **PUBLIC SERVICE COMMISSION?**

17 **A.** From roughly 1991 through 1993 I was employed as an Economist III with
18 the Commission's Telecommunications Staff within what was then, the
19 Commission's Public Utilities Division.

1 **Q. ON WHOSE BEHALF WAS THIS TESTIMONY PREPARED?**

2 A. I have prepared this testimony on behalf of Sage Telecom, Inc. ("Sage").

3 **Q. PLEASE PROVIDE A BRIEF OVERVIEW OF SAGE TELECOM, INC.**

4 A. Sage is a Competitive Local Exchange Carrier ("CLEC") providing service
5 to over 500,000 residential and small business customers in ten states
6 (primarily in rural and suburban areas) and is planning to expand into an
7 eleventh—Illinois—in the near future. The Company's headquarters are
8 in suburban Dallas, Texas. Sage offers its customers a complete menu of
9 local and long distance services, including a variety of bundled calling
10 plans.

11 In September of this year, Sage was named to Deloitte & Touche's
12 prestigious Technology Fast 50 Program for Texas, a ranking of the 50
13 fastest growing technology companies in Austin, Dallas-Fort Worth
14 Metroplex, Houston and San Antonio. The Company's annual revenues
15 have grown from \$268,000 in 1998 to almost \$190,000,000 in 2002, an
16 astounding rate of growth that demonstrates as clearly as anything can
17 that consumers value the competitive alternatives Sage brings to the
18 marketplace. The Company attributes its growth to its innovative, low cost
19 services as well as its primary commitment to high quality customer care.

1 **Q. WILL YOU PROVIDE A GENERAL OVERVIEW OF SAGE TELECOM, INC. IN**
2 **MISSOURI?**

3 A. Yes. As will be discussed in more detail by Robert W. McCausland, who
4 is also filing testimony on behalf of Sage in this Phase of the proceeding,
5 Sage has a distinctive customer and business profile. In Missouri, Sage
6 serves approximately 33,000 customers. Of this total, approximately 94%
7 are residential and 6% are small business customers. Moreover, of that
8 total, Sage services 52% in suburban areas, 10% rural, and 38% in urban
9 areas in the State of Missouri. Therefore, Sage is a CLEC that is truly
10 serving the Mass Market in Missouri and providing competitive choices to
11 customers. As Mr. McCausland will further explain, Sage provides its
12 telecommunications services to customers in Missouri exclusively through
13 the use of SBC Missouri's ("SBC") unbundled network elements platform
14 ("UNE-P").

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

2 A. In its *Triennial Review Order*,¹ the Federal Communications Commission
3 ("FCC") delineated a number of actions that state commissions must
4 undertake for purposes of evaluating "impairment" within the
5 telecommunications markets under their jurisdiction. Consistent with that
6 directive, the Missouri Public Service Commission (hereafter
7 "Commission") ordered parties to first discuss the relevant market
8 definitions that would be of value in evaluating impairment specific to
9 certain UNEs.² This testimony focuses specifically on what Sage believes
10 to be the most relevant geographic market for purposes of evaluating
11 impairment for UNE switching used to serve residential and small
12 business customers (what the FCC refers to as the mass market). In that
13 regard, my testimony also provides the Commission with information
14 useful in delineating the "enterprise" market from the "mass market" (*i.e.*,
15 product market differentiation) within the larger context of the entire
16 geographic market.

¹ *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01- 338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (rel. Aug. 21, 2003) ("*Triennial Review Order*" or "*TRO*").

² *Order Establishing Procedural Schedule*, Issued December 1, 2003.

1 **Q. PLEASE SUMMARIZE YOUR CONCLUSIONS AND RECOMMENDATIONS.**

2 A. The proper geographic market useful for evaluating local
3 telecommunications services (especially those dominated today by
4 incumbent carriers) is the ILEC's wire center. Within this testimony, I will
5 encourage the Commission to find that a more granular, wire center
6 analysis better suits the available data relative to market entry, and it
7 provides the Commission with the most reasonable "starting point" for
8 purposes of analyzing larger markets (if in the future the Commission
9 finds such an analysis helpful). Further, I discuss a number of other
10 considerations that realistically impact the proper geographic market
11 definition, such as the presence of Integrated Digital Loop Carrier ("IDLC")
12 Systems within the ILEC's network and the traditional price discrimination
13 between residential and business customers that may also exist, at
14 varying degrees, within given wire centers. These considerations serve to
15 further delineate the mass-market in order to determine, in the
16 subsequent phases of this proceeding, whether or not carriers should be
17 counted toward the wholesale and self-provisioning triggers the FCC
18 discusses in its *Triennial Review Order*.

19 Last, I discuss the importance of properly distinguishing between
20 mass-market customers and enterprise customers. I speak generally

1 about defining a proper "cutover" used to quantitatively segregate these
2 two customer segments, but I also caution the Commission that it is
3 difficult to make a final determination on this issue in the abstract, without
4 the benefit of empirical data, which I am not convinced that we have fully
5 at this point. Specifically, I encourage the Commission to decide this
6 issue based upon the actual choices made by both consumers and
7 suppliers within the relevant market, determining that a single cutover
8 across markets may have little validity. As such, until more data is
9 available specific to the Missouri marketplace, I conclude that the only
10 "bright line" that appears to definitively segregate enterprise and mass
11 market customers can be drawn based upon the technology used to serve
12 them, *i.e.*, all customers that are served at the DS1 level or higher levels
13 of capacity should automatically be considered enterprise customers.

14 **II. BACKGROUND AND SCOPE OF PROCEEDING**

15 **Q. WHAT IS YOUR UNDERSTANDING OF WHY THESE PROCEEDINGS ARE**
16 **NECESSARY?**

17 A. The immediate impetus for these proceedings lies in certain mandates
18 and directives to the states contained in the FCC's *Triennial Review*
19 *Order*. However, in a broader sense, the need for these proceedings can
20 be traced back to the requirements and objectives embodied in the 1996

1 Act and its intentions to foster competition in the local telecommunications
2 marketplace.

3 **Q. WHY IS IT RELEVANT TO NOTE THAT THESE PROCEEDINGS STEM**
4 **ULTIMATELY FROM REQUIREMENTS AND GOALS THAT WERE**
5 **ESTABLISHED IN THE 1996 ACT?**

6 A. This is important to bear in mind because it is possible, in delving into the
7 detailed analyses mandated by the FCC in the *TRO*, to lose sight of the
8 "forest" (the objectives of the Act) while focusing on the "trees" (the trigger
9 and market analyses). Ultimately, in the words of the FCC itself, the
10 purpose of the *TRO* is to implement "the Act's goals of opening local
11 exchange markets to competition, fostering the deployment of advanced
12 services, and reducing regulation."

13 **Q. ARE YOU SUGGESTING THAT THIS COMMISSION IS NOT BOUND BY THE**
14 **ANALYTICAL FRAMEWORK ESTABLISHED IN THE *TRO*?**

15 A. No. My point is that in striving to implement the letter and spirit of the
16 *TRO*, this Commission will find itself faced with difficult decisions in highly
17 contested matters. In its efforts to resolve these matters, the Commission
18 should bear in mind that the analytical framework established in the *TRO*
19 is a means to certain ends. One of the most important of those ends is
20 the maintenance and promotion of competition in local exchange markets.
21 The word "trigger" never appears in the Act. The word "competition" and
22 its cognates (e.g., "competitor," "competitively," etc.) appears 38 times.

1 **Q. WHAT IS YOUR UNDERSTANDING OF THE FOCUS OF THIS PROCEEDING**
2 **AS IT DERIVES SPECIFICALLY FROM THE *TRO*?**

3 A. This proceeding stems from the FCC's directive in the *TRO* specific to
4 unbundled local switching ("ULS") and the extent to which competitors are
5 impaired without access to ULS on an unbundled basis.

6 **Q. WHAT SHOULD BE THE SPECIFIC OBJECTIVE OF THE MISSOURI**
7 **COMMISSION IN THESE PROCEEDINGS?**

8 A. Over the course of three phases identified in its Procedural Order, the
9 Commission will need to determine whether the wholesale and self-
10 provisioning triggers identified by the FCC have been met on a market-by-
11 market basis, taking into account all relevant factors, including operational
12 and economic barriers. To do so will require the Commission to establish
13 definitions critical in determining the appropriate market to be utilized in
14 the impairment analysis. Once the market definitions are established, the
15 Commission will need to test each market to determine whether the
16 ILEC's petition to reverse the national finding of impairment in that market
17 should be granted.

1 **Q. PLEASE DISCUSS THE MOST IMPORTANT SPECIFIC FINDINGS IN THE**
2 **TRO THAT ARE RELEVANT TO THIS PROCEEDING.**

3 A. The FCC established a national finding that competing carriers are
4 impaired without access to ULS when serving mass market customers.³
5 This finding was based primarily on the barriers to entry facing CLECs
6 when attempting to use an UNE-Loop ("UNE-L") entry strategy to
7 compete. The FCC has stated that these barriers include "increased cost
8 due to non-recurring charges and high customer churn rates, service
9 disruptions, and incumbent LEC's inability to handle a sufficient volume of
10 hot cuts."⁴

11 **Q. WHAT DO YOU MEAN BY A UNE-L STRATEGY?**

12 A. The term "UNE-L" refers to a market entry strategy under which a CLEC
13 seeks to compete for local customers by means of its own switching
14 facilities in combination with the incumbent LEC's unbundled loop. This
15 strategy stands in contrast with the UNE-P strategy under which a CLEC
16 deploys neither its own loops nor switching facilities but enters the market
17 by using the unbundled network elements of the incumbent LEC. The
18 latter strategy has been successfully deployed by Sage in a number of
19 states including Missouri. If the Commission, however, determines that

³ *Triennial Review Order*, ¶ 459.

⁴ *Id.*, ¶ 422.

1 the FCC's national finding of impairment needs to be reversed, and UNE-
2 P were no longer a service delivery option available to Sage, Sage's entire
3 business plan would be in danger and the future of Sage in its entirety
4 would be in jeopardy. A necessary result of this circumstance would be
5 that hundreds of thousands of existing Sage customers in all of its service
6 territory states would need to find another local carrier, most likely
7 returning to SBC.

8 **Q. PLEASE CONTINUE WITH YOUR DISCUSSION OF KEY TRO FINDINGS**
9 **THAT ARE RELEVANT TO THIS PROCEEDING.**

10 A. The FCC recognized that an analysis more granular than the national
11 *approach was necessary to determine on a market-by-market basis*
12 *whether carriers are impaired without access to ULS. In an effort to target*
13 *this analysis, the FCC relies largely upon an "actual deployment"*
14 *standard, i.e., if CLECs have actively deployed their own facilities within a*
15 *market and are providing services to customers via those facilities, the*
16 *FCC assumes that the economic and technical issues it raises within its*
17 *order must have been overcome. As such, the FCC relies first upon*
18 *"enumerated impairment triggers and criteria for the states to apply in*
19 *individual markets."*⁵ In this regard the FCC requires that the states
20 conduct their impairment analysis for mass market switching on a market-

1 by-market basis, leaving it to each state commission to first define what it
2 believes to be the relevant market to be studied.⁶

3 **Q. IS IT BECAUSE THE IMPAIRMENT ANALYSIS MUST BE CONDUCTED ON A**
4 **MARKET-BY-MARKET BASIS THAT MARKET DEFINITION IS SO CRUCIAL**
5 **TO THIS PROCEEDING?**

6 A. Yes. The *TRO* requires that competitive alternatives be evaluated within
7 each defined geographic market wherein the ILEC identifies a carrier (or
8 carriers) as a trigger. For this reason, it is essential that markets be
9 defined in ways that are theoretically sound and reflect the actual
10 competitive alternatives available to potential customers within those
11 markets.

12 **III. THE ROLE OF THE MISSOURI COMMISSION AND A**
13 **"GRANULAR ANALYSES"**

14 **Q. WHY DOES THE FCC REQUIRE A GRANULAR ANALYSIS SPECIFIC TO**
15 **IMPAIRMENT?**

16 A. The granular analysis called for by the FCC is grounded in the DC Circuit
17 Court's Decision in *United States Telecom Association v. Federal*
18 *Communications Commission*.⁷ The DC Circuit vacated the FCC's

⁵ *Id.*, ¶ 424.

⁶ *Id.*, ¶ 493.

⁷ *United States Telecom Ass'n v. FCC*, 290 F.3d 415 (D.C. Cir. 2002) ("USTA"),
cert. denied sub nom.

1 interpretation of the impair standard embodied in the *UNE Remand*
2 *Order*,⁸ which had applied the "impair" analysis at a national level, both
3 adding and removing elements from a "national list" of UNEs. The *USTA*
4 court found that under the FCC's approach, "UNEs will be available to
5 CLECs in many markets where there is no reasonable basis for thinking
6 that competition is suffering from any impairment"⁹ In short, the *USTA*
7 court criticized the FCC's impairment interpretation because it did not
8 consider market-specific variations that may lead to varying impairment
9 findings across markets smaller than a national market. Accordingly, in its
10 *TRO*, the FCC revised its previous interpretation of the impairment
11 standard by requiring a more granular approach.¹⁰

12 **Q. DOES THE FCC SPECIFY THE TYPES OF GRANULAR ANALYSIS THAT**
13 **MUST BE CONDUCTED BY THE STATES?**

14 A. Yes. The FCC discussed three types of granularity that bear on any
15 impairment analysis: (1) customer class distinctions, (2) geographic
16 granularity, and (3) service considerations.

⁸ *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996*, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696, 3699, ¶ 1 (rel. November 5, 1999) (citing *AT&T v. Iowa Utils. Bd.*, 119 S.Ct. 721 (1999)) ("*UNE Remand Order*"),

⁹ *Id.* at 422.

¹⁰ *Triennial Review Order*, ¶ 118.

1 **Q. PLEASE EXPLAIN CUSTOMER CLASS DISTINCTIONS.**

2 A. The FCC delineates three distinct customer classes: (1) mass market
3 customers, (2) small/medium business customers, and (3) large business
4 customers.¹¹ The FCC found this level of granularity appropriate because
5 these customer classes are differentiated on the basis of services
6 purchased, costs of providing service, and revenue generated. My
7 testimony addresses only the mass market customer segment.

8 **Q. PLEASE SUMMARIZE THE GEOGRAPHIC ASPECT OF THE FCC'S**
9 **GRANULAR ANALYSIS.**

10 A. The FCC has determined that impairment varies geographically across
11 the nation and that geographic market boundaries should be taken into
12 account when revisiting the unbundling rules. As will be explained in more
13 detail below, the FCC has delegated to the states the authority to define
14 the market for assessing impairment for unbundled local circuit switching
15 used to serve mass market customers.

¹¹*Id.*, ¶ 124.

1 **Q. YOU STATED THAT THE THIRD TYPE OF GRANULARITY THAT NEEDS TO**
2 **BE TAKEN INTO ACCOUNT PERTAINS TO SERVICE CONSIDERATIONS.**
3 **WHAT ARE THESE?**

4 A. The FCC has determined that to gain access to UNE's, carriers must
5 provide "qualifying services" with that UNE. "Qualifying services" are
6 defined as telecommunications services offered by requesting carriers in
7 competition with those telecommunications services that have been
8 traditionally the exclusive or primary domain of the incumbent LECs.¹²
9 Such services include local exchange service (e.g., "plain old telephone
10 service," or "POTS") and access services, such as xDSL.

11 **Q. WHAT IS THE RELATIONSHIP BETWEEN THE REQUIREMENT TO**
12 **CONDUCT A GRANULAR ANALYSIS AND THE NEED TO ESTABLISH**
13 **MARKET DEFINITIONS?**

14 A. The FCC requires that states implement its analytical framework in two
15 steps: 1) establish the market definition that will apply to the framework,
16 and 2) apply this market definition to the trigger and potential deployment
17 analyses.

¹² *Id.*, ¶ 135.

1 **Q. WHY DID THE FCC DECIDE NOT TO ESTABLISH MARKET DEFINITIONS**
2 **THAT MUST BE ADOPTED BY THE STATES?**

3 A. The FCC indicated that it did not rule on what should constitute a market
4 for this analysis because the record in the Triennial Review Proceeding
5 did not provide sufficient evidence with respect to the varying
6 characteristics of particular markets. Specifically, the FCC stated that

7 There is no doubt that state commissions possess the
8 ability and the competence to undertake such analyses for
9 specific network elements successfully. Moreover, for the
10 elements we have specified, state commissions are well
11 situated to conduct the granular analysis required.¹³

12 **Q. WHY IS MARKET DEFINITION IMPORTANT TO THE IMPAIRMENT**
13 **ANALYSIS?**

14 A. If a market is defined too broadly, the variations in characteristics between
15 markets which the FCC aims to capture in its granular analysis will not be
16 recognized. The consequences of the failure to recognize these
17 differences are discussed in greater detail later in my testimony. For
18 purposes of the *trigger* analysis, the market must be defined so that "[i]f
19 triggers are satisfied, the states need not undertake any further inquiry,
20 because no impairment should exist in the market."¹⁴ Thus, the market
21 must be defined in such a way as to make sure that a finding of no
22 impairment results in real competitive alternatives that actually serve the

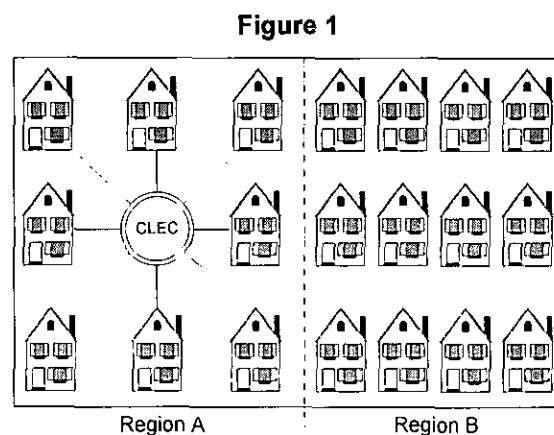
¹³ *Id.*, ¶ 190.

¹⁴ *Id.*, ¶ 494.

1 customers in that market. More specifically, if the trigger analysis is
2 undertaken properly relative to defining the appropriate market, no mass
3 market customer should be left with fewer than three facilities-based
4 alternatives to the ILEC's local telecommunications services in an area
5 where the state commission finds "no impairment." Similarly, with respect
6 to the potential deployment analysis, the same market definition must be
7 used to determine whether barriers exist in the absence of ULS that are
8 "likely to make entry into a market uneconomic" or whether the market is
9 "suitable for multiple, competitive supply."¹⁵

10 **Q. WHY IS IT SO IMPORTANT TO ENSURE THAT MARKETS ARE NOT**
11 **DEFINED TOO BROADLY?**

12 **A.** An illustration may help to clarify my concern in this regard.



15
16
17

¹⁵ *Id.*, ¶¶ 84, 506.

1 Figure 1 illustrates the potential danger of defining a market too
2 broadly. The lines extending from the CLEC to the households in Region
3 A represent the potential of that CLEC to provide service to those
4 households. The absence of lines extending from the CLEC to the
5 households in Region B illustrates the inability of this CLEC to serve those
6 households. If the market were defined as encompassing both Regions A
7 and B, the CLEC in Region A would count towards a trigger for a finding
8 of non-impairment in Region B (as well as Region A). However, since the
9 households in Region B cannot, in fact, be served by this CLEC, such a
10 finding runs the risk of leaving the households in Region B without access
11 to viable competitive alternatives.

12
13 **IV. A PROPER DEFINITION OF THE MARKET IS CRITICAL TO A**
14 **VALID IMPAIRMENT ANALYSIS**

15 **A. MASS MARKET**

16 **Q. WHY IS IT NECESSARY TO ESTABLISH A DEFINITION FOR MASS MARKET**
17 **CUSTOMERS IN THIS PROCEEDING?**

18 **A.** The FCC did not provide a binding definition for mass market customers,
19 but left this up to the states to decide. Since the FCC has distinguished
20 mass market customers from enterprise customers for purposes of
21 analyzing impairment, this definition is critical to the outcome of this
22 proceeding.

1 **Q. PLEASE EXPLAIN. WHY IS THIS DEFINITION CRITICAL?**

2 **A.** For the same reason that the proper geographic determination is critical.

3 Consider the following Figure:

4
5
6 **Figure 2**

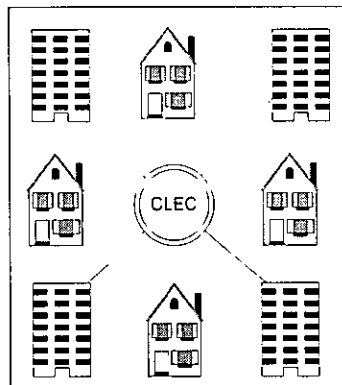


Figure 2 is analogous to Figure 1, only here I am illustrating the possible consequences of a failure to properly recognize the distinction between mass market and other classes of customers. In this hypothetical, the CLEC serves only customers larger than those included in the mass market. Counting this CLEC towards a trigger for a finding of non-impairment relative to mass market customers runs the risk of leaving mass market customers without viable competitive alternatives. Applying this analysis to Sage is also illustrative. As Mr. McCausland will explain, from Sage's perspective, all of its customers are mass market customers in that Sage provides service only to customers served through the use of DS0/voice grade level loops. Unlike other carriers, Sage does not focus

1 its provision of services to large business customers. Therefore, to the
2 extent that the term "enterprise customer" or the cross-over point between
3 mass market and enterprise customer (which I will discuss later) is defined
4 too broadly, it will significantly prevent Sage from providing competitive
5 choices to its true mass market customers. While the CLEC in Figure 2
6 above apparently chooses to provide service to the businesses, and not to
7 the mass market residential customers, Sage has not and does not have
8 this same market focus or strategy.

9 **Q. DID THE FCC PROVIDE THE STATES WITH ANY DIRECTION AS TO WHAT**
10 **CONSTITUTES A MASS MARKET CUSTOMER?**

11 A. Yes, it did. First, the FCC identified those customers that are NOT mass
12 market customers, *i.e.*, those customers who are served by DS1 and
13 higher facilities. Second, the FCC further specified that mass market
14 customers include "residential customers and very small business
15 customers" and recognized that mass market customers typically
16 purchase a common set of services; namely, POTS service, a few vertical
17 features, and possibly an additional line for data services.¹⁶ Third,
18 according to the FCC, "mass market customers are analog voice

¹⁶ *Id.* ¶ 127.

1 customers that purchase only a limited number of POTS lines, and can
2 only be economically served via DS0 loops."¹⁷

3 **Q. AS PART OF DETERMINING WHAT THE MASS MARKET IS IN A**
4 **PARTICULAR AREA, WHAT MUST THE STATES DETERMINE IN DEFINING**
5 **THE MASS MARKET?**

6 A. The FCC also required the states to determine the appropriate cut-off
7 (commonly referred to as the crossover point) for certain multi-line
8 customers. With respect to customer size, the FCC stated as follows:

9 Therefore, as part of the economic and operational
10 analysis discussed below, a state must determine the
11 appropriate cut-off for multi-line DS0 customers as part of
12 its more granular review. This cross over point may be the
13 point where it makes economic sense for a multi-line
14 customer to be served via a DS1 loop. We expect that in
15 those areas where the switching carveout was applicable
16 (i.e., density zone 1 of the top 50 MSAs), the appropriate
17 cutoff will be four lines absent significant evidence to the
18 contrary.¹⁸

19
20 Therefore, the FCC requires state PUCs to determine whether the
21 mass market is best defined at or below the DS1 level and, if below the
22 DS1 level, how many DS0s a customer could purchase at a given location
23 which would make crossing over to a DS1 economic.

¹⁷ *Id.*, ¶ 497.

¹⁸ *Id.*, ¶ 497.

1 **Q. IS THE FCC'S 4-LINE CUTOVER DISPOSITIVE?**

2 A. No. In actuality, the FCC's "4-line" cutover has little empirical support.
3 The FCC has never attempted to show that its original decision to use 4
4 lines as a definition for the mass market was in any way based upon the
5 purchasing decisions of consumers (*i.e.*, demand) or the provisioning
6 practices of competing carriers (*i.e.*, supply). As such, despite the FCC's
7 encouragement to use it for purposes of defining the mass market in this
8 context, I would recommend the Commission give it little weight.

9 **Q. IF THE MISSOURI COMMISSION SHOULD NOT RELY UPON THE FCC'S 4-**
10 **LINE CUTOVER FOR PURPOSES OF DEFINING THE MASS MARKET, WHAT**
11 **NUMBER SHOULD IT USE?**

12 A. Economists study markets to determine their rational segmentation based
13 upon the demand and supply characteristics of the various market
14 participants. As such, defining a particular DSO-cutover to be used in
15 providing a rational cutover between one market versus another, before
16 having reviewed the relevant data exhibited by the market (*e.g.*, what
17 types of services/technologies given types of customers choose, the types
18 of service marketed by carriers to certain customers, relative price
19 differences, *etc.*) is a fool's errand. To my knowledge, this type of data is
20 not yet available in this proceeding and hence, determinations specific to
21 a given cutover are premature. As such, I spend time in a portion of the
22 remainder of this testimony discussing how such a cutover could be

1 determined when data does become available. It is likewise my hope that
2 before the next round of testimony in this proceeding must be filed,
3 relevant market data in this regard will be available and I can provide a
4 more definitive recommendation.

5 **B. SERVICE AND INTER-MODAL COMPETITION**
6 **CONSIDERATIONS**

7 **Q. THE FCC DEFINED QUALIFYING SERVICES TO DETERMINE FOR WHICH**
8 **COMPETITIVE SERVICES UNES WOULD BE MADE AVAILABLE. CAN THIS**
9 **SAME CONCEPT BE USED IN THE FCC'S TRIGGER IMPAIRMENT**
10 **ANALYSIS?**

11 A. Yes. The purpose of the FCC's trigger analyses is to determine in which
12 markets impairment no longer exists for unbundled local switching due to
13 actual competitive deployment or wholesale provisioning. To qualify for
14 the trigger analysis, a carrier or wholesaler must be providing service in
15 the market in question and providing a suitable substitute to the ILEC's
16 unbundled local switching. Defining the market as the FCC does in its
17 qualifying service analysis (namely, as telecommunications services that
18 have been traditionally the exclusive or primary domain of incumbent
19 LECs) ensures that the trigger-qualified company has overcome
20 operational and economic barriers to entry in the particular market for
21 purposes of providing a competitive alternative to the ILEC's unbundled
22 local switching element. Therefore, when examining whether certain
23 carriers qualify for triggers, the Commission should include a

determination that the potential trigger carriers can provide qualifying services, as defined by the FCC.

Q. SHOULD THE PRODUCT OR SERVICES MARKET DEFINITION BE EXPANDED TO INCLUDE SERVICES PROVIDED BY CMRS, CABLE TELEPHONY, AND FIXED WIRELESS?

A. No. The FCC's analysis with regard to intermodal competition focuses on whether these alternatives are "comparable in cost, quality, and maturity to incumbent LEC services."¹⁹ The FCC states:

When an intermodal technology is limited in availability to only one or a few telecommunications carriers—either because of the historical economic characteristics of their providers or legal restrictions—we will consider whether that technology contributes to a wholesale market in accessing the customer. We may give less weight to intermodal alternatives that do not contribute to the creation of a wholesale market in accessing the customer or do not provide evidence that self-deployment of such access is possible to other entrants. In addition, if the record evidence shows that there are limitations on the number or types of customers that can be served by a particular technology, we will consider whether an entrant could use this technology profitably to target only those customers that can be served by the alternative technology.²⁰

The discussion in the passage above with regard to the wholesale market refers to the "crucial function" of ILEC switching, which provides a means of accessing the local loop. Thus, to be included in this analysis,

¹⁹ Triennial Review Order, ¶ 97.

1 an intermodal carrier's technology must: (1) provide competitive access to
2 customers' loops; (2) allow access to other entrants; and (3) have
3 overcome the difficulties inherent in the hot cut process. Overall,
4 however, from my perspective, the critical aspect of any analysis of
5 intermodal technology is that the ILEC (which would presumably be using
6 the existence of the intermodal carrier or technology to overcome the
7 national presumption) would have to show that access to and services of
8 the intermodal carriers are economically and operationally available to
9 CLECs throughout a geographic market, while addressing each of the
10 factors listed above.

11 **Q. THERE ARE SEVERAL TYPES OF INTERMODAL CARRIERS OR**
12 **TECHNOLOGY DISCUSSED IN THE TRIENNIAL REVIEW ORDER. WOULD**
13 **YOU PLEASE DISCUSS EACH ONE AND EXPLAIN WHY THOSE SPECIFIC**
14 **TYPES OF CARRIERS/TECHNOLOGY SHOULD NOT BE CONSIDERED IN**
15 **THE ANALYSIS.**

16 A. The FCC discusses CMRS providers, cable telephony, and fixed wireless.
17 Let me first address CMRS providers.

18 **Q. WHY SHOULD CMRS PROVIDERS BE EXCLUDED FROM THIS ANALYSIS?**

19 A. Quite simply, the FCC excluded them from consideration within the trigger
20 analysis. As the FCC noted: "CMRS does not yet equal traditional

²⁰ *Id.*, ¶ 98.

1 incumbent LEC services in quality, its ability to handle data traffic, its
2 ubiquity, and its ability to provide broadband services to the mass
3 market."²¹ Although we are still waiting to review all of the empirical data
4 in Missouri (and SBC's initial case on this issue), I doubt that the FCC's
5 statement will be proven wrong in Missouri. Furthermore, CMRS is limited
6 in its availability to only a few telecommunications carriers due to
7 spectrum limitations and does not contribute to a wholesale market in
8 accessing customer loops.

9 **Q. WHY SHOULD CABLE TELEPHONY BE EXCLUDED FROM THE PRODUCT**
10 **MARKET DEFINITION?**

11 A. Cable telephony should be excluded from this analysis primarily because
12 it is limited in availability to one telecommunications carrier within the
13 carrier's service territory due largely to government franchise agreements.
14 As the FCC states, ". . . cable telephony is only available to cable TV
15 companies that, because of their unique economic circumstances of first-
16 mover advantages [exclusive franchises and a captive market] and scope
17 economies, have access to the customer that other competitive carriers
18 lack."²² Moreover, cable telephony does not provide a wholesale market
19 in accessing customer loops. Since cable telephony overbuilds the ILEC

²¹ *Id.*, n. 1549.

²² *Id.*, ¶ 310.

1 network in areas where the cable carrier operates, cable telephony is not
2 an alternative to Sage or to any other carrier.

3 **Q. WHY SHOULD FIXED WIRELESS BE EXCLUDED FROM THE PRODUCT**
4 **MARKET DEFINITION?**

5 A. Fixed wireless, according to the FCC, has "not proven to be viable or
6 deployable on a mass market scale."²³ I am not aware of any empirical
7 evidence that has been provided or can be provided that would establish
8 that fixed wireless in the State of Missouri would meet the requirements of
9 deployment on a mass market scale. Therefore, the Commission should
10 conclude, as the FCC concluded, that fixed wireless is not comparable to
11 the ILEC's service in cost, quality, or maturity.

12 **Q. NOW THAT YOU HAVE DISCUSSED PRODUCT ALTERNATIVES, ARE**
13 **THERE OTHER ASPECTS OF THE PRODUCT MARKET DEFINITION THAT**
14 **SHOULD BE CONSIDERED?**

15 A. I anticipate that some carriers will contend that the product market
16 definition should be expanded to include consideration of packet switches.

²³ *Id.*

1 **Q. SHOULD THE PRODUCT MARKET DEFINITION BE EXPANDED TO**
2 **INCLUDE PACKET SWITCHES?**

3 A. Not automatically. The FCC requires the states to "consider packet
4 switches *to the extent they are used to provide local voice service to the*
5 *mass market.*"²⁴ The intent of this requirement is to ensure that the
6 packet switch is serving the crucial function mentioned above and has
7 overcome the barriers brought about by the hot cut process. Therefore, a
8 further inquiry is necessary on a case-by-case basis to determine what
9 services and customers are being provided service over a packet switch.
10 If the packet switch is providing only data services to mass market
11 customers or only serves enterprise customers, it should not be included
12 in this analysis.

13 **C. GEOGRAPHIC GRANULARITY**

14 **Q. YOU STATED ABOVE THAT THE FCC DID NOT SPECIFICALLY DEFINE A**
15 **GEOGRAPHIC MARKET FOR THE "MARKET-BY-MARKET" IMPAIRMENT**
16 **ANALYSIS. PLEASE REITERATE WHY THIS DEFINITION IS SO**
17 **IMPORTANT.**

18 A. As I illustrated in my introductory comments around Figure 1, the
19 definition of the geographic market will effectively determine the scope of
20 territory over which a CLEC's presence may count as a trigger. This

²⁴ *Id.*, n. 1549 (emphasis added).

1 determination will likely be the most highly-contested issue in this
2 proceeding, because it will have a very large impact on what geographic
3 areas of Missouri will have access to unbundled local switching for mass
4 market customers.

5 **Q. WHAT GUIDANCE HAS THE FCC PROVIDED TO THE STATES IN THEIR**
6 **EFFORTS TO DEFINE THE GEOGRAPHIC MARKET?**

7 A. The FCC established a spectrum within which states can define the
8 geographic market for purposes of determining impairment for mass
9 market customers. At one end of the spectrum, states are precluded from
10 defining the geographic market as large as the entire state. At the other
11 end of the spectrum, states may not define a market so narrowly that a
12 competitor serving that market alone would not be able to take advantage
13 of scale and scope economies that would be available from serving a
14 wider market.²⁵ Any market definition chosen by the Commission must
15 fall somewhere between the upper and lower boundaries of this spectrum.

16 Moreover, the FCC mandates that market definitions must take into
17 account the locations of customers actually being served by competitors,
18 any variations in factors affecting competitors' ability to serve each group

²⁵ *Id.* ¶ 495.

1 of customers, and competitors' ability to target and serve specific markets
2 economically and efficiently using currently available technologies.²⁶

3 Finally, the FCC encouraged states to consider how the ability to
4 use self-provisioned or third-party-provisioned switches varies
5 geographically and attempt to distinguish markets where different findings
6 of impairment are likely²⁷, while conducting this granularity analysis in an
7 "administratively workable fashion."²⁸

8 **Q. DID THE FCC PROVIDE ANY ADDITIONAL GUIDANCE WITH RESPECT TO**
9 **THE GEOGRAPHIC MARKET DEFINITION?**

10 A. Yes. The FCC presented examples of factors that vary geographically,
11 such as, UNE loop rates, retail rates, and the number of high-revenue
12 customers. Most importantly, the FCC focused on wire center distinctions
13 by encouraging the state commissions to examine "how the cost of
14 serving customers varies according to the size of the wire center and the
15 location of the wire center, and variations in the capabilities of wire
16 centers to provide adequate collocation space and handle large numbers
17 of hot cuts."²⁹

²⁶ *Id.*

²⁷ *Id.*

²⁸ *Id.*, ¶ 121.

²⁹ *Id.*, ¶ 496.

1 **Q. ARE YOU RECOMMENDING A GEOGRAPHIC MARKET DEFINITION IN**
2 **YOUR TESTIMONY?**

3 A. Yes. I recommend that the Commission define the appropriate
4 geographic market at the incumbent wire center level.

5 **Q. IS YOUR RECOMMENDATION CONSISTENT WITH THE FCC'S DIRECTIVES**
6 **REGARDING THE GEOGRAPHIC MARKET DEFINITION?**

7 A. Yes. The wire center represents the most logical, administratively
8 practical geographic market for several reasons. First, the wire center is
9 where access to the incumbent LEC's network takes place. It is within a
10 wire center that competitors must access unbundled loops via collocation
11 to serve customers via UNE-L if unbundled local switching is no longer
12 available. Second, a UNE-L competitive carrier must make entry
13 decisions at the wire center level, since the costs to interconnect—a
14 substantial amount of which are fixed and sunk—are incurred on a wire
15 center-by-wire center basis. The CLEC will therefore be required to
16 determine whether the expected revenue derived from customers in that
17 wire center will cover the costs of serving the customers in that wire
18 center. The cost and revenues to be derived from this endeavor will
19 depend heavily on the characteristics of that wire center (e.g., customer
20 density and number of lines per wire center), but will be largely
21 independent of some larger market geography.

1 Third, barriers to entry (e.g., the lack of collocation, a high
2 proliferation of IDLC-served ILEC loops, high UNE loop rates) often vary
3 according to wire centers. Assuming that the sum total of all barriers to
4 entry is not sufficiently high as to discourage entry, the wire center
5 provides a basis for competitors to target and serve specific markets (i.e.,
6 wire centers) economically and efficiently using currently available
7 technologies. An example of this targeted approach is a CLEC collocating
8 a switch in the central office of a particular wire center in order to offer
9 competitive services to customers in that wire center.

10 **Q. ARE THERE ANY OTHER ADVANTAGES OF DEFINING THE GEOGRAPHIC**
11 **MARKET AT THE WIRE CENTER LEVEL?**

12 A. Yes. The wire center definition recognizes that the ability to use self-
13 provisioned or third-party-provisioned switches varies geographically and
14 can readily distinguish markets where different findings of impairment are
15 likely. This can be accomplished by examining the factors present in each
16 wire center that affect the ability of CLECs to avail themselves of a
17 competitive alternative to the incumbent's switching, and by examining the
18 extent to which competitors are in fact providing qualifying services to
19 customers in that wire center over self-provisioned or third-party
20 provisioned switches.

1 **Q. PLEASE PROVIDE AN EXAMPLE OF THE TYPE OF EXAMINATION YOU**
2 **ENVISION.**

3 A. For example, the Commission must at some level examine whether
4 competitively sustainable revenues when compared to service costs are
5 sufficient to justify market entry. Both of these factors (both revenue and
6 costs) vary largely based upon customer density which can vary
7 dramatically amongst wire centers. Since customer density – and thus
8 revenues and costs -- vary by wire center, a competitor's decisions to
9 compete will vary from wire center to wire center as well. In many ways,
10 the wire center must serve as the building block for a carrier's competitive
11 entry strategy. As a carrier decides whether it should deploy facilities to
12 serve a given market (via UNE-L), in a very real way, the carrier must
13 decide which wire centers it will target to serve customers (based largely
14 upon its costs to reach those wire centers compared to the customer-
15 specific revenues it believes it can generate within the wire center). While
16 the carrier may then group multiple wire centers together within its growth
17 strategy, for purposes of achieving greater economies of scale and scope,
18 nonetheless, its most relevant economic decision-making (*i.e.*, enter or
19 not) is made at the wire center level.

1 **Q. IS THE DATA AVAILABLE TO DEFINE GEOGRAPHIC MARKETS AT THE**
2 **WIRE CENTER LEVEL?**

3 A. Yes. Tracking pertinent data on a wire center basis is nothing new to
4 ILECs. For instance, collocation facilities deployed and available
5 collocation space is tracked by wire center. Additionally, UNE loop rates
6 and retail rates are available on a wire center level basis. Finally, the
7 customer demographics referred to above which affect CLECs' entry
8 decisions can be examined on a wire center basis from publicly available
9 data sources.

10 **Q. WOULD IT BE APPROPRIATE TO DEFINE THE GEOGRAPHIC MARKET ON**
11 **A LARGER BASIS?**

12 A. I don't believe so. First, as I explained above, any larger market definition
13 would be, in reality, simply an aggregation of individual wire centers
14 averaged to some larger, non-homogeneous grouping. As such, as
15 criteria critical to sustainable entry varies amongst individual wire centers,
16 some of those differences are necessarily lost in the averaging process
17 required to arrive at a large geographic market definition. The wire center
18 level is simply the most logical increment of analysis because it is the
19 finest, administratively practical level wherein realistic data relative to the
20 investment and entry decisions exist. Furthermore, the wire center fits
21 within the boundaries of the spectrum mentioned above and addresses
22 each one of the FCC's market-defining criteria. Most importantly,

1 however, a larger market definition than the wire center level could
2 produce results in the impairment analysis that are potentially harmful to
3 the competitive market.

4 **Q. PLEASE ELABORATE. HOW COULD AN OVERLY BROAD DEFINITION OF**
5 **THE MARKET BE HARMFUL TO COMPETITION?**

6 A. Defining a market too broadly could cause the Commission to find no
7 impairment in some geographic areas wherein consumers do not enjoy
8 the competitive services of three facilities based providers or two
9 wholesale providers. For instance, if the market were defined as the
10 metropolitan statistical area ("MSA"), densely populated wire centers with
11 high levels of competitive switching deployed—wherein it could be argued
12 impairment is absent—could "trigger" other wire centers where there are
13 actually few, if any, alternative providers. The fact that multiple
14 competitors provide switch-based service in a particular area in an MSA
15 tells us almost nothing about the level of competitive entry in other wire
16 centers within the same MSA. Therefore, if the market were to be defined
17 too broadly at the MSA level, and that MSA were found to have sufficient
18 competitive entry to meet the FCC's trigger analysis (based upon only the
19 most densely populated wire centers in the MSA), customers in less
20 densely populated wire centers within the MSA would be without adequate
21 competitive alternatives. In this scenario, the entire rationale supporting
22 the FCC's trigger analysis would have failed. These customers would be

1 forced back to the ILEC or UNE-L based competitors, if any, as UNE-P
2 based providers would be forced to exit the market without sufficient
3 switching alternatives. Moreover, these CLECs are likely never to return
4 to the market, as customer relationships are difficult to rekindle once they
5 have been severed. These negative consequences could be avoided by
6 defining the market at the wire center level, as I have recommended.

7 **Q. YOU HAVE DISCUSSED THE CONSEQUENCES OF AN INCORRECT**
8 **FINDING OF NON-IMPAIRMENT IN A PARTICULAR MARKET. WHAT**
9 **WOULD HAPPEN IF THE COMMISSION DETERMINES THAT A MARKET IS**
10 **IMPAIRED WHEN IT ACTUALLY IS NOT?**

11 A. If, after the detailed granular analysis the Commission performs in this
12 docket (*i.e.*, the trigger analysis and the analysis of potential deployment),
13 the Commission concurs with the national finding in that CLECs are
14 impaired without access to ULS, it must then determine whether "rolling
15 access" to ULS will solve the problems facing CLECs relying upon their
16 own switching facilities.³⁰ If the national finding of impairment is retained
17 for a given market, the state is mandated to conduct ongoing reviews of
18 the status of ULS impairment:

19 We emphasize that the framework set forth here
20 contemplates ongoing state review of the status of
21 unbundled switching.... Therefore, after completion of the
22 initial review described here, we expect states to conduct
23 further granular reviews, pursuant to the procedures the

³⁰ *Triennial Review Order*, ¶ 521.

1 state adopts, to reevaluate whether competitive LECs are
2 impaired without access to unbundled local circuit
3 switching, and whether such impairment, if found, could be
4 cured by rolling access to such facilities.³¹
5

6 *In other words, putting aside the administrative burdens of such a*
7 *finding, the FCC appears to have created a framework that effectively*
8 *gives ILECs unlimited "bites at the apple" to prove non-impairment in a*
9 *particular market. Therefore, if the Commission determined a market was*
10 *impaired without ULS access, when in fact there was no impairment, this*
11 *situation could be rectified in future reviews and the inefficiencies caused*
12 *would only be temporary. The FCC has, in this manner, created*
13 *somewhat of a safety net. Obviously, there is a much higher risk of*
14 *damaging the competitive market through premature findings of no*
15 *impairment because competitors are forced from the market. The same*
16 *danger does not exist in the converse (i.e., Commissions keep ULS longer*
17 *than otherwise preferred by the FCC). I would caution the Commission*
18 *again, however, of the importance of this decision as once a competitor*
19 *has been forced to leave a market due to a determination of "non-*
20 *impairment", the carrier will be averse to returning to that market, even*
21 *when the determination of non-impairment has been reversed or changed*
22 *due to further review by the Commission. I also would urge the*
23 *Commission to bear this disparate risk in mind when defining the*

³¹ *Id.*, ¶526.

1 appropriate market. It may be impossible to attain complete certainty in
2 an analysis of this kind, but the Commission should be as certain as it
3 possibly can that mass market customers in a given market have real,
4 multiple competitive alternatives before reversing the national finding of
5 impairment in any market. Again, defining the market at the wire center
6 provides the most reasoned protection in this regard.

7 **Q. ARE THERE ANY EXCEPTIONS TO YOUR MARKET DEFINITION?**

8 A. Yes. I believe that there may be two exceptions. The first exception is
9 when in a particular wire center, the UNE-L carrier will not have access to
10 all customers served from that wire center. The definition of a market at
11 the wire center level requires CLECs to be able to compete on a UNE-L
12 basis and expand service to any customer in that wire center. Without the
13 ability for UNE-L competitors to access all customers served from a wire
14 center, a subset of the defined market would be without competitive
15 switching alternatives and the results of the impairment analysis would be
16 flawed. An example of how this scenario will affect the market definition is
17 when Integrated Digital Loop Carrier ("IDLC") is present within the
18 incumbent LEC's loop architecture in a particular wire center. As Sage
19 will describe in more detail in Phase II of this proceeding, in areas wherein
20 the ILEC uses a large percentage of IDLC technology, the challenges
21 associated with a UNE-L deployment strategy are substantially increased.
22 As such, even though a CLEC may serve the wire center with its own

1 facilities, certain customers served by IDLC within the wire center may
2 have difficulty receiving competitive services. Exceptions to the general
3 wire center definition would need to be made in these circumstances so
4 as to meet with our overarching objective, *i.e.*, only in areas where
5 customers have access to three facilities based carriers that are actually
6 serving the mass market does it make sense to conclude impairment has
7 been overcome.

8 **Q. ARE THERE ANY OTHER EXCEPTIONS?**

9 A. Yes. In any market, the existence of price discrimination, which is defined
10 as charging different buyers different prices for the same product, could
11 create an exception to the wire center geographic market definition that
12 would need to be addressed separately. The FCC specifically recognized
13 this possibility when it stated that "competitors often are able to target
14 particular sets of customers, or customers in particular wire centers or rate
15 zones."³²

16 **Q. PLEASE EXPLAIN HOW PRICE DISCRIMINATION COULD CREATE AN**
17 **EXCEPTION TO YOUR PROPOSED MARKET DEFINITION.**

18 A. For example, consider a case where the ILEC engages in price
19 discrimination within the wire center and charges business customers

³² *Triennial Review Order*, n. 1539.

1 higher prices for the same service than residential customers. A
2 competitor's ability to compete for these two customer groups will be
3 affected by the difference in competitive margins (*i.e.*, potential revenues
4 relative to potential costs). If a competitor singles out the business
5 customers being charged a higher price for the service in question and
6 chooses not to compete for the lower-priced residential customers, these
7 customer groups should be separated into two separate market groups
8 (because the costs incurred to serve both is relatively similar, but the
9 potential revenues may vary greatly, the likelihood of entry specific to
10 serving the two customer groups is likely to be very different). The FCC
11 recognized this type of potential market segmentation in the following
12 excerpt:

13 Very small businesses typically purchase the same kinds of
14 services as do residential customers, and are marketed to,
15 and provided service and customer care, in a similar
16 manner. There, we will usually include very small
17 businesses in the mass market for our analysis. We note,
18 however, that there are some differences between very
19 small businesses and residential customers. For example,
20 very small businesses usually pay higher retail rates, and
21 may be more likely to purchase additional services such as
22 multiple lines, vertical features, data services, and yellow
23 page listings. *Therefore, we may include them with other*
24 *enterprise customers, where it is appropriate in our*
25 *analysis.*³³
26

³³ *Id.*, ¶ 432 (emphasis added).

1 This is an economic scenario with real-world implications, as many
2 CLECs do in fact target business customers to the exclusion of residential
3 customers (although Sage does not, and, in fact, as I have explained
4 above, Sage primarily targets the residential and small business
5 customers). Thus, if the data provided in this proceeding demonstrates
6 that price discrimination is present within the wire center and competitors
7 are targeting only a subset of customers that might otherwise be
8 considered as the "mass market," the Commission should follow the
9 FCC's lead and conclude that those competitors should not be considered
10 for satisfaction of the self-deployment or wholesale trigger analyses. To
11 do otherwise could leave residential customers without competitive local
12 options.

13 **Q. MUST THE COMMISSION DETERMINE WHETHER VERY SMALL BUSINESS**
14 **CUSTOMERS ARE IN THE SAME MARKET AS RESIDENTIAL CUSTOMERS?**

15 A. Not at this point. Again, information taken directly from the marketplace
16 should provide guidance as to whether differences in potential entry
17 amongst individual customer groups warrant some further market
18 segmentation. Consider this issue in the first instance, without the benefit
19 of market data would be a mistake.

1 **Q. IS YOUR MARKET DEFINITION CONSISTENT WITH ESTABLISHED**
2 **ECONOMIC PRINCIPLES?**

3 A. Yes. There is a large body of economic analysis that applies to the
4 question of defining markets. The essential criterion for whether a product
5 belongs in a relevant market is whether the product can serve as an
6 alternative to consumers in that market. One authoritative treatment of
7 established economic principles for defining markets can be found in the
8 Horizontal Merger Guidelines ("HMG") of the U.S. Department of Justice
9 and the Federal Trade Commission. The market definition analysis
10 presented above is consistent with the procedures of the HMG.

11 **D. THE WIRE CENTER MARKET DEFINITION IS CONSISTENT**
12 **WITH THE HMG**

13 **Q. HOW DOES THE HMG REQUIRE A MARKET BE DEFINED?**

14 A. The HMG calls for markets to be defined as a set of products, and
15 locations at which those products are offered, that consumers regard as
16 close enough substitutes. Procedurally, such a set of products and
17 locations is defined by beginning with a specific product and location as a
18 tentative market definition. The HMG "begin[s] with each product
19 (narrowly defined) produced or sold by each merging firm" for the product

1 dimension and "the location of each merging firm (or each plant of a
2 multiplant firm)" for the geographic dimension.³⁴

3 This initial tentative market definition is expanded by asking
4 whether consumers regard other products or locations as close enough
5 substitutes that a price increase in the narrowly defined tentative market
6 definition would be met by consumers switching to other products or
7 locations. The notion of "close enough" substitutes is given precision by
8 asking whether a "small but significant and nontransitory" price increase in
9 the narrowly defined tentative market definition would be met by a strong
10 enough substitution response by consumers to make the price increase
11 unprofitable, if it were implemented by a hypothetical monopoly provider
12 controlling all of the products and locations in the tentative narrow market
13 definition. The tentative market definition is too narrow if it fails to
14 incorporate substitutes that consumers regard as "close enough," as
15 measured by consumers switching in response to a price increase. If a
16 tentative market definition is found to be too narrow, the definition is
17 expanded to incorporate the next best products or locations that
18 consumers regard as "close enough" substitutes.

³⁴ See HMG 1.11 Product Market Definition Standards and 1.21 Geographic Market Definition Standards.

1 **Q. DID THE FCC ACCEPT THE HMG ANALYSIS, *IN TOTO*, FOR ANALYZING**
2 **IMPAIRMENT?**

3 A. No. Although the FCC rejected certain applications of the HMG for
4 purposes of an impairment analysis, the Triennial Review Order explicitly
5 endorses the relevance of the HMG to the market definition that must
6 underlie any impairment analysis. The FCC states: "[w]e take this lesson
7 of geographic granularity from the HMG without adopting the HMG
8 wholesale."³⁵

9 **Q. HOW IS YOUR RECOMMENDED DEFINITION OF MARKETS CONSISTENT**
10 **WITH THE HMG?**

11 A. I believe that it is very consistent. The logical starting point for defining
12 the market in accordance with HMG principles, for the purposes of our
13 analysis, is the product and location that a requesting carrier could serve
14 with unbundled access to the incumbent's local switching network
15 element. Therefore, the initial location would be the customer's premises
16 to which the unbundled local switching element would provide service,
17 and the product would be the qualifying services that the FCC requires be
18 provided via UNEs. The HMG calls for expansion of this definition based
19 on whether customers regard other products as close enough substitutes
20 that a price increase in the narrowly defined tentative market definition

³⁵ *Id.*, n.439.

1 would be met by consumers switching to other products or locations. With
2 regard to expanding the product definition, I have explained above why
3 the service provided by intermodal competitors should not be included in
4 my proposed definition of the market. For the same reasons, intermodal
5 services would not be included in the HMG analysis because competitors
6 generally do not consider them to be close enough substitutes.³⁶
7 Therefore, the HMG analysis supports my product definition to include
8 telecommunications services that have been traditionally the exclusive or
9 primary domain of incumbent LECs (*i.e.*, qualifying services).

10 **Q. WHAT INSIGHT DOES THE HMG ANALYSIS SHED ON THE**
11 **DETERMINATION OF THE GEOGRAPHIC MARKET?**

12 A. The HMG analysis states that "a relevant market is a group of products
13 and a geographic area that is no bigger than necessary to satisfy the
14 test"³⁷ (that is, the test of the market's response to a non-transitory price
15 increase). One could argue that since the unbundled switching UNE
16 provides access to an individual customer's loop, each individual
17 customer could be considered a market. As mentioned above, with
18 regard to price discrimination and IDLC issues, this customer-specific
19 market definition would produce more accurate results. However, to

³⁶ *Triennial Review Order*, ¶ 98.

³⁷ HMG, 1.0.

1 comply with the FCC's requirement of administrative practicality, the
2 geographic market should be expanded to include customer groupings. In
3 the absence of price discrimination and operational barriers such as IDLC,
4 the logical grouping of customers would be the wire center. Absent
5 competitive switch providers, the group of customers included in a wire
6 center are provided telecommunications services from the same switch of
7 the incumbent. Our impairment analysis therefore must focus on close
8 enough substitutes to the incumbent LEC's switching for the purposes of
9 accessing customer loops and providing qualifying services to each
10 customer location. Since the wire center represents the point at which
11 access to customer's loops must occur, customers must base their
12 substitution decisions on what competitive alternatives are served from
13 their particular wire center. Therefore, the wire center provides a sound
14 basis for expanding the geographic market definition. Expanding the
15 definition even further to include a larger area, however, would be
16 inconsistent with HMG and FCC directives.

17 **Q. DOES THE HMG ANALYSIS ADDRESS THE ISSUE OF PRICE**
18 **DISCRIMINATION?**

19 A. Yes. The HMG analysis recognizes the possibility of price discrimination,
20 and states that price discrimination requires the analysis to be expanded
21 to include additional geographic and product markets (HMG 1.12 and
22 1.22). This is consistent with my recommendation to not count carriers

1 who do not provide services to the entire market towards the satisfaction
2 of the triggers.

3 **CONCLUSION**

4 **Q. PLEASE SUMMARIZE YOUR TESTIMONY?**

5 A. In this testimony I have demonstrated that the relevant geographic market
6 for purposes of determining whether the FCC's national finding of
7 impairment should be reversed is best defined at the wire center level. I
8 have also discussed a number of additional considerations that should be
9 kept in mind when defining the market, such as the presence of IDLC and
10 the traditional price discrimination between residential and business
11 customers.

12 Last, I have discussed the issue of the appropriate mass-market
13 cutoff level and concluded that a recommendation in this regard would, at
14 this time, be premature. I reserve the right to review the market
15 information specific to Missouri's larger telecommunications marketplace
16 before reaching a final conclusion in this regard. I do, however, describe
17 for the Commission the proper decision criteria by which such market
18 segmentation should be accomplished, and suggest at this time, the only
19 conclusion that can be logically reached is that customers using DS1 or
20 higher capacity connections to the public switched network should be
21 considered enterprise, not mass market participants.

1 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

2 **A. Yes, it does.**

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of a Commission Inquiry into)
The Possibility of Impairment without)
Unbundled Local Circuit Switching When)
Serving the Mass Market)

Case No. TO-2004-0207

AFFIDAVIT OF MICHAEL STARKEY

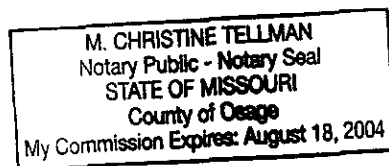
STATE OF MISSOURI)
)
COUNTY OF COLE)

Michael Starkey, being of lawful age, on his oath states: that he has participating the preparation of the foregoing Direct Testimony in question and answer form, consisting of 47 pages to be presented in the above case; that he provided the answers in the foregoing Direct Testimony; that he has knowledge of the matters set forth in the answers; and that such matters are true and correct to the best of his knowledge and belief.



Michael Starkey

Subscribed and sworn to me this 15th day of December, 2003.



MICHAEL STARKEY
PROFESSIONAL INFORMATION

CONTACT INFORMATION:

QSI Consulting, Inc.
703 Cardinal Street
Jefferson City, Missouri 65101

phone: 573.638.2681
fax: 573.638.2683

e-mail: mstarkey@qsiconsulting.com

CURRENT POSITION:

President and Founding Partner, QSI Consulting, Inc.

PROFESSIONAL EXPERIENCE:

Competitive Strategies Group, Ltd.

Founding Partner
*Senior Vice President and Managing Director of
Telecommunications Services*

Maryland Public Service Commission

Telecommunications Division
Director

Illinois Commerce Commission

Office of Policy and Planning
Senior Telecommunications Policy Analyst

Missouri Public Service Commission

Utility Operations Division
Telecommunications Department
Economist

EDUCATION:

B.S. Economics / International Marketing

- Southwest Missouri State University, Springfield, Missouri
- *Cum Laude* Honor Graduate

Graduate Coursework, Finance

- Southwest Missouri State University, Springfield, Missouri
- Lincoln University, Jefferson City, Missouri

MICHAEL STARKEY
PROFESSIONAL INFORMATION

Professional Activities

- Facilitator, *C³ Coalition* (Competitive Carrier Coalition - Ameritech Region). Facilitate industry organization representing 10-15 competitive carriers seeking to share information and "best practices" with respect to obtaining effective interconnection, UNEs and resold services from SBC/Ameritech.
- Former member of the Missouri Public Service Commission's Task Force on FCC Docket Nos. 91-141 and 91-213 regarding expanded interconnection, collocation, and access transport restructure
- Former member of the AT&T / Missouri Commission Staff, *Total Quality Management Forum* responsible for improving and streamlining the regulatory process for competitive carriers
- Former member of the Missouri, Oklahoma, Kansas, Texas, and Arkansas five state Southwestern Bell Open Network Architecture (ONA) Oversight Conference
- Former delegate to the Illinois, Michigan, Indiana, Ohio, and Wisconsin Ameritech Regional Regulatory Conference (ARRC) charged with the responsibility of analyzing Ameritech's "Customers First" local exchange competitive framework for formulation of recommendations to the FCC and the U.S. Department of Justice
- Former member of both the Illinois and Maryland Local Number Portability Industry Consortia responsible for developing and implementing a permanent database number portability solution

Testimony Profile and Experience

Before the Public Utility Commission of Ohio

Case No. 96-1310-TP-COI

In the Matter of the Commission's Investigation into the Implementation of Section 276 of the Telecommunications Act of 1996 Regarding Pay Telephone Services
On behalf of the Payphone Association of Ohio

Before the Wisconsin Public Service Commission

Docket No. 6720-TI-177

Investigation Into Ameritech Wisconsin's Loop Conditioning Services and Practices
On behalf of WorldCom, Inc., AT&T Communications of Wisconsin, L.P. and TCG Milwaukee, McLeodUSA Telecommunications Services, Inc., TDS Metrocom, LLC

Before the Michigan Public Service Commission

Case No. U-11756 - REMAND

Complaint Pursuant to Sections 203 and 318 of the Michigan Telecommunications Act to Compel Respondents to Comply with Section 276 of the Federal Telecommunications Act
On behalf of the Michigan Pay Telephone Association

Before the New York Public Service Commission

Case No. 00-C-0127

Proceeding on the Motion of the Commission to Examine Issues Concerning Provision of Digital Subscriber Line Services

MICHAEL STARKEY

PROFESSIONAL INFORMATION

On behalf of MCI Worldcom Network Services, Inc.

Before the Indiana Utility Regulatory Commission
Cause No. 42236

Complaint of Time Warner Telecom Against Ameritech Indiana Regarding Its Unlawful Market Practice of Issuing Equipment Vouchers in Violation of the Indiana Code and Opportunity Indiana II and Petition for Emergency Suspension of any and all Ameritech Indiana Equipment Voucher Marketing Practices Pending Commission Investigation

On behalf of Time Warner Telecom of Indiana, LP

Before the Pennsylvania Public Utility Commission
Docket No. P-00930715F0002

Re: Verizon Pennsylvania Inc., Petition and Plan for Alternative Form of Regulation Under Chapter 30, 2000 Biennial Update to Network Modernization Plan

On behalf of MCI Worldcom Network Services, Inc.

Before the Illinois Commerce Commission
Docket No. 01-0609

Investigation of the propriety of the rates, terms, and conditions related to the provision of the Basic COPTS Port and the COPTS-Coin Line Port

On behalf of Payphone Services, Inc., DataNet Systems, LLC, Illinois Public Telecommunications Association

Before the Indiana Utility Regulatory Commission
Cause No. 40611-S1 (Phase II)

In the Matter of: The Commission Investigation and Generic Proceeding on Ameritech Indiana's Rates for Interconnection Service, Unbundled Elements, and Transport and Termination under the Telecommunications Act of 1996 and Related Indiana Statutes

On behalf of AT&T, Worldcom, Inc., and McLeodUSA Telecommunications Services, Inc.

Before the State of North Carolina Utility Commission
Docket No. P-7, Sub 980, P-10, Sub 622

Enforcement of Interconnection Agreement Between KMC Telecom III, Inc. and KMC Telecom V, Inc., against Carolina Telephone and Telegraph Company and Central Telephone Company

On behalf of KMC Telecom, Inc.

Before the Illinois Commerce Commission
Docket Nos. 98-0252, 98-0335, 98-0764 (Reopening)

SBC/Ameritech Merger, Reopening to Discuss Settlement Agreement Regarding Merger Savings

On behalf of AT&T, Worldcom, Inc., and McLeodUSA Telecommunications Services, Inc.

Before the Public Utility Commission of Ohio
Docket No. 01-1319-TP-ARB

In the Matter of MCImetro Access Transmission Services, LLC Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Ameritech Ohio

On behalf of MCIWorldcom, Inc.

Before the Illinois Commerce Commission
Docket No. 00-0393 (Rehearing)

Illinois Bell Telephone Company, d/b/a Ameritech Illinois Proposed Implementation of High Frequency Portion of the Loop (HFPL)/Line Sharing Service

On behalf of AT&T Communications of Illinois, Inc. and Worldcom, Inc.

MICHAEL STARKEY

PROFESSIONAL INFORMATION

Before the Wisconsin Public Service Commission

Case No. 6720-TI-167

Complaint Against Ameritech Wisconsin Filed by Wisconsin Builders Association, Inc.
On behalf of Wisconsin Builders Association, Inc.

Before the Public Service Commission of South Carolina

Docket No. 2001-65-C

In the Matter of Generic Proceeding to Establish Prices For BellSouth's Interconnection Services, Unbundled Network Elements and Other Related Elements and Services
On behalf of NuVox Communications, Broadslate Networks, KMC Telecom, New South Communications, ITC^Deltacom Communications

Before the Louisiana Public Service Commission

Docket No. 27821

In the Matter of Generic Proceeding to Establish Interim and Permanent Prices for Docket No. 27821 xDSL Loops and/or Related Elements and Services
On behalf of Covad Communications

Before the Public Utility Commission of Ohio

Case No. 00-942-TP-COI

In the Matter of the Further Investigation into Ameritech Ohio's Entry into In-Region Interlata Service Under Section 271 of the Telecommunications Act of 1996
On behalf of AT&T, WorldCom and XO Communications

Before the Washington Utilities and Transportation Commission

Docket No. UT 003013, Part B

In the Matter of the Continued Costing and Pricing of Unbundled Network Elements, Transport and Termination
On behalf of Focal Communications, XO Washington, Inc.

Before the Illinois Commerce Commission

Docket No. 98-0195

Investigation into certain payphone Issues as directed in Docket No. 97-0225
On behalf of the Illinois Pay Telephone Association

Before the Alabama Public Service Commission

Docket No. 27821

Generic Proceeding to Establish Interim and Permanent Prices for xDSL Loops and/or Related Elements and Services
On behalf of The Data Coalition (Covad Communications and Broadslate Networks of Alabama, Inc.)

Before the Wisconsin Public Service Commission

Docket No. 6720-TI-160

Docket No. 6720-TI-161

Investigation Into Ameritech Wisconsin's Unbundled Network Elements
On behalf of AT&T, Worldcom, McLeodUSA, TDS Metrocom, KMC Telecom, Time Warner Telecom, Rhythms Links,

Before the Tennessee Regulatory Authority

Docket No. 00-00544

Generic Docket to Establish UNE Prices for Line Sharing per FCC 99-355, and Riser Cable and Terminating Wire as Ordered in Authority Docket No. 98-00123
On behalf of Covad Communications, Inc., Mpower Communications and BroadSlate Networks of Tennessee, Inc.

MICHAEL STARKEY
PROFESSIONAL INFORMATION

Before the Public Utilities Commission of the State of Hawaii

Docket No. 7702, Phase III
Instituting a Proceeding on Communications, Including an Investigation of the Communications Infrastructure of the State of Hawaii
On behalf of GST Telecom Hawaii, Inc.

Before the North Carolina Utilities Commission

Docket P100 Sub 133d, Phase II
General Proceeding to Determine Permanent Pricing for Unbundled Network elements
On behalf of a consortium of 13 new entrant carriers

Before the Federal Communications Commission

CCB/CPD No. 00-1
In the Matter of Wisconsin Public Service Commission Order Directing Filings
On behalf of the Wisconsin Pay Telephone Association

Before the North Carolina Utilities Commission

Docket P100 Sub 133d, Phase I
General Proceeding to Determine Permanent Pricing for Unbundled Network elements
On behalf of a consortium of 13 new entrant carriers

Before the State of New York Public Service Commission

Case No. 98-C-1357
Proceeding on Motion of the Commission to Examine New York Telephone Company's Rates for Unbundled Network Elements
On behalf of the CLEC Coalition

Before the Public Utilities Commission of the State of California

Rulemaking 0-02-05
Order Instituting Rulemaking on the Commission's Own Motion into reciprocal compensation for telephone traffic transmitted to Internet Service Providers modems
On behalf of ICG Telecom Group, Inc.

Before the Public Utilities Commission of the State of Colorado

Docket No. 00B-103T
In the Matter of Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with US West Communications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996.
On behalf of ICG Telecom Group, Inc.

Before the Delaware Public Service Commission

PSC Docket No. 00-205
For Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Bell Atlantic – Delaware, Inc.
On behalf of Focal Communications Corporation of Pennsylvania

Before the Georgia Public Service Commission

Case No. 11641-U
Petition of BlueStar Networks, Inc. for Arbitration with BellSouth
Docket No. 11641-U Telecommunications, Inc. pursuant to Section 252(b) of the Telecommunications Act of 1996
On behalf of BlueStar Networks, Inc.

Before the New Jersey Board of Public Utilities

Docket No. TO00030163
For Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Bell Atlantic-New Jersey, Inc.
On behalf of Focal Communications Corporation

MICHAEL STARKEY **PROFESSIONAL INFORMATION**

Before the Pennsylvania Public Utility Commission

Docket No. A-310630F.0002

For Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Bell Atlantic-Pennsylvania

On behalf of Focal Communications Corporation

Before the Michigan Public Service Commission

Case No. U-12287

In the matter of the application, or in the alternative, complaint of AT&T COMMUNICATIONS OF MICHIGAN, INC. against Michigan Bell Telephone Company, D/B/A, Ameritech Michigan

On behalf of AT&T Communications of Michigan, Inc.

Before the Missouri Public Service Commission

Case No. 99-483

An Investigation for the Purpose of Clarifying and Determining Certain aspects Surrounding the Provisioning Of Metropolitan Calling Area Services After the Passage and Implementation Of the Telecommunications Act of 1996

On behalf of McLeodUSA Telecommunications Services, Inc.

Before the Illinois Commerce Commission

Docket No. 98-0396

Investigation into the compliance of Illinois Bell Telephone Company with the order in Docket 96-0486/0569 Consolidated regarding the filing of tariffs and the accompanying cost studies for interconnection, unbundled network elements and local transport and termination and regarding end to end bundling issues.

On behalf of AT&T Communications of Illinois, Inc. and McLeodUSA Telecommunications Services, Inc.

Before the Illinois Commerce Commission

Docket No. 99-0593

Investigation of Construction Charges

On behalf of McLeodUSA Telecommunications Services, Inc., MCI WorldCom, Inc. and Allegiance Telecom, Inc.

Before the Public Service Commission of Wisconsin

Case No. 05-TI-283

Investigation of the Compensation Arrangements for the Exchange of Traffic Directed to Internet Service Providers

On behalf of AT&T Communications of Wisconsin, AT&T Local Services, KMC Telecom, Inc., MCI WorldCom, Inc., McLeodUSA Telecommunications Services, Inc., TDS MetroComm, Time Warner Telecom

Before the Public Utility Commission of Texas

Docket No. 21982

Proceeding to Examine Reciprocal Compensation Pursuant to Section 252 of the Federal Telecommunications Act of 1996

On behalf of ICG Communications, Inc.

Before the Public Service Commission of the Commonwealth of Kentucky

Case No. 99-498

Petition of BlueStar Networks, Inc. for Arbitration with BellSouth Telecommunications, Inc. Pursuant to Section 252 of the Telecommunications Act of 1996.

On behalf of BlueStar Networks, Inc.

Before the Illinois Commerce Commission

Docket No. 00-0027

Petition for Arbitration Pursuant to Section 252(b) of the Telecommunications Act of 1996 to Establish an Interconnection Agreement with Illinois Bell Telephone Company d/b/a Ameritech Illinois.

On behalf of Focal Communications Corporation of Illinois

MICHAEL STARKEY
PROFESSIONAL INFORMATION

Before The Indiana Utility Regulatory Commission

Cause No. 41570

In the Matter of the Complaint of McLeodUSA Telecommunications Services, Inc. against Indiana Bell Telephone Company, Incorporated, d/b/a Ameritech Indiana, Pursuant to the Provisions of I.C. §§ 8-1-2-54, 8-1-2-68, 8-1-2-103 and 8-1-2-104 Concerning the Imposition of Special Construction Charges.

On behalf of McLeodUSA Telecommunications Services, Inc.

Before the Florida Public Service Commission

Docket No. 991838-TP

Petition for Arbitration of BlueStar Networks, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996

On behalf of BlueStar Networks, Inc.

Before the Public Utility Commission of Ohio

Case No. 99-1153-TP-ARB

In the Matter of ICG Telecom Group, Inc.'s Petition For Arbitration of Interconnection Rates, Terms and Conditions and Related Arrangements with Ameritech Ohio

On behalf of ICG Telecom Group, Inc.

Before the Public Utility Commission of Oregon

ARB 154

Petition for Arbitration of GST Telecom Oregon, Inc. Against US West Communications, Inc. Under 47 U.S.C. §252(b)

On behalf of GST Telecom Oregon, Inc.

Before the Michigan Public Service Commission

Docket No. U-12072

In the matter of the application and complaint of WORLDCOM TECHNOLOGIES INC. (f/k/a MFS INTELENET OF MICHIGAN, INC., an MCI WORLDCOM company) against MICHIGAN BELL TELEPHONE COMPANY d/b/a AMERITEHC MICHIGAN, AMERITECH SERVICES, INC., AMERITECH INFORMATION INDUSTRY SERVICES, AND AMERITECH LONG DISTANCT INDUSTRY SERVICES relating to unbundled interoffice transport.

On behalf of WorldCom Technologies, Inc.

Before the Illinois Commerce Commission

Docket No. 99-0525

Ovation Communications, Inc. d/b/a McLeodUSA, Complaint Against Illinois Bell Telephone Company d/b/a Ameritech Illinois, Under Sections 13-514 and 13-515 of the Public Utilities Act Concerning the Imposition of Special Construction Charges and Seeking Emergency Relief Pursuant to Section 13-515(e)

On behalf of McLeodUSA

Before the Public Service Commission of the Commonwealth of Kentucky

Case No. 99-218

Petition of ICG Telecom Group, Inc. for Arbitration with BellSouth Telecommunications, Inc. Pursuant to Section 252 of the Telecommunications Act of 1996.

On behalf of ICG Telecom Group, Inc.

Before the Tennessee Regulatory Authority

Docket No. 1999-259-C

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996

On behalf of ICG Communications, Inc.

Before the New Mexico Public Regulation Commission

Case No. 3131

MICHAEL STARKEY

PROFESSIONAL INFORMATION

In the Matter of GST Telecom New Mexico, Inc.'s Petition for Arbitration Against US West Communications, Inc., Under 47 U.S.C. § 252(b).
On behalf of GST Telecom New Mexico, Inc.

Before the Georgia Public Service Commission

Docket No. 10767-U

Petition of ICG Telecom Group, Inc. for Arbitration with BellSouth Telecommunications, Inc. Pursuant to Section 252 of the Telecommunications Act of 1996.

On behalf of ICG Telecom Group, Inc.

Before the Public Service Commission of New York

Case No. 99-C-0529

Proceeding on Motion of the Commission to Re-examine Reciprocal Compensation

On behalf of Focal Communications, Inc.

Before the Florida Public Service Commission

Docket No. 990691-TP

Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996

On behalf of ICG Telecom Group, Inc.

Before the Louisiana Public Service Commission

Docket No. U-24206

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996

On behalf of ITC^DeltaCom, Inc.

Before the South Carolina Public Service Commission

Docket No. 199-259-C

Petition for Arbitration of ITC^DeltaCom Communications, Inc. with BellSouth Telecommunications, Inc. Pursuant to the Telecommunications Act of 1996

On behalf of ITC^DeltaCom, Inc.

Before the Alabama Public Service Commission

Docket No. 27069

Petition by ICG Telecom Group, Inc. for Arbitration of an Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996

On behalf of ICG Telecom Group, Inc.

Before the State of North Carolina Utilities Commission

Docket No. P-582, Sub 6

Petition by ICG Telecom Group, Inc. for Arbitration of Interconnection Agreement with BellSouth Telecommunications, Inc. Pursuant to Section 252(b) of the Telecommunications Act of 1996

On behalf of ICG Telecom Group, Inc.

Before the Missouri Public Service Commission

Case No. TO-99-370

Petition of BroadSpan Communications, Inc. for Arbitration of Unresolved Interconnection Issues Regarding ADSL with Southwestern Bell Telephone Company

On behalf of BroadSpan Communications, Inc.

Before the Michigan Public Service Commission

Case No. U-11831

In the Matter of the Commission's own motion, to consider the total service long run incremental costs for all access, toll, and local exchange services provided by Ameritech Michigan.

On behalf of MCIWorldCom, Inc.

MICHAEL STARKEY

PROFESSIONAL INFORMATION

Before the Illinois Commerce Commission

Docket Nos. 98-0770, 98-0771 cons.

Proposed Modifications to Terms and Conditions Governing the Provision of Special Construction Arrangements and, Investigation into Tariff Governing the Provision of Special Constructions Arrangements
On behalf of AT&T Communications of Illinois, Inc.

Before the Michigan Public Service Commission

Case No. U-11735

In the matter of the complaint of BRE Communications, L.L.C., d/b/a PHONE MICHIGAN, against Michigan Bell Telephone Company, d/b/a AMERITECH MICHIGAN, for violations of the Michigan Telecommunications Act
On behalf of BRE Communications, L.L.C.

Before the Indiana Utility Regulatory Commission

Cause No. 40830

In the Matter of the request of the Indiana Payphone Association for the Commission to Conduct an Investigation of Local Exchange Company Pay Telephone tariffs for Compliance with Federal Regulations, and to Hold Such Tariffs in Abeyance Pending Completion of Such Proceeding
On behalf of the Indiana Payphone Association

Before the Michigan Public Service Commission

Case No. U-11756

Complaint Pursuant to Sections 203 and 318 of the Michigan Telecommunications Act to Compel Respondents to Comply with Section 276 of the Federal Telecommunications Act
On behalf of the Michigan Pay Telephone Association

Before the Missouri Public Service Commission

Case No. TO-98-278

In the Matter of the Petition of Birch Telecom of Missouri, Inc., for Arbitration of the Rates, Terms, Conditions, and Related Arrangements for Interconnection with Southwestern Bell Telephone Company
On behalf of Birch Telecom of Missouri, Inc.

Before the Public Service Commission of the Commonwealth of Kentucky

Administrative Case No. 361

Deregulation of Local Exchange Companies' Payphone Services
On behalf of the Kentucky Payphone Association

Before the Public Utilities Commission of Ohio

Case No. 96-899-TP-ALT

The Application of Cincinnati Bell Telephone Company for Approval of a Retail Pricing Plan Which May Result in Future Rate Increases
On behalf of the MCI Telecommunications Corporation

Before the Public Utilities Commission of the State of Hawaii

Docket No. 7702

Instituting a Proceeding on Communications, Including an Investigation of the Communications Infrastructure of the State of Hawaii
On behalf of GST Telecom Hawaii, Inc.

Before the Michigan Public Service Commission

Case No. U-11410

In the Matter of the Petition of the Michigan Pay Telephone Association to initiate an investigation to determine whether Michigan Bell Telephone Company d/b/a Ameritech Michigan and GTE North Incorporated are in compliance with the Michigan Telecommunications Act and Section 276 of The Communications Act of 1934, as amended
On behalf of the Michigan Pay Telephone Association

MICHAEL STARKEY

PROFESSIONAL INFORMATION

Before the Indiana Utility Regulatory Commission

Cause No. 40849

In the matter of Petition of Indiana Bell Telephone Company, Incorporated d/b/a Ameritech Indiana for the Commission to Decline to Exercise in Whole or in Part its Jurisdiction Over, and to Utilize Alternative Regulatory Procedures For, Ameritech Indiana's Provision of Retail and Carrier Access Services Pursuant to I.C. 8-1-2.6 Et Seq.

On behalf of AT&T Communications of Indiana, Inc.

Before the Federal Communication Commission

C.C. Docket No. 97-137

In the Matter of Application by Ameritech Michigan for Authorization under Section 271 of the Communications Act to Provide In-Region, InterLATA Service in the State of Michigan.

On behalf of the AT&T Corporation

Before the Indiana Utility Regulatory Commission

Cause No. 40611

In the Matter of the Commission Investigation and Generic Proceeding on Ameritech Indiana's Rates for Interconnection, Service, Unbundled Elements and Transport and Termination under the Telecommunications Act of 1996 and Related Indiana Statutes

On behalf of the MCI Telecommunications Corporation

Before the Public Utility Commission of Ohio

Case No. 97-152-TP-ARB

In the matter of the petition of MCI Telecommunications Corporation for arbitration pursuant to section 252(b) of the Telecommunications Act of 1996 to establish an interconnection agreement with Cincinnati Bell Telephone Company

On behalf of the MCI Telecommunications Corporation

Before the Michigan Public Service Commission

Case No. U-11280

In the matter, on the Commission's own motion to consider the total service long run incremental costs and to determine the prices of unbundled network elements, interconnection services, and basic local exchange services for AMERITECH MICHIGAN

On behalf of the MCI Telecommunications Corporation

Before the Illinois Commerce Commission

Docket No. 96-0486

Investigation into forward looking cost studies and rates of Ameritech Illinois for interconnection, network elements, transport and termination of traffic

On behalf of the MCI Telecommunications Corporation

Before the Public Utility Commission of Ohio

Case No. 96-922-TP-UNC

In the Matter of the Review of Ameritech Ohio's Economic Costs for Interconnection, Unbundled Network Elements, and Reciprocal Compensation for Transport and Termination of Local Telecommunications Traffic

On behalf of the MCI Telecommunications Corporation

Before the New Jersey Board of Public Utilities

Docket No. TX95120631

In the Matter of the Investigation Regarding Local Exchange Competition for Telecommunications Services

On behalf of the MCI Telecommunications Corporation

Before the Michigan Public Service Commission

Case No. U-11104

In the matter, on the Commission's Own Motion, to Consider Ameritech Michigan's Compliance With the Competitive Checklist in Section 271 of the Telecommunications Act of 1996

On behalf of AT&T Communications of Indiana, Inc.

MICHAEL STARKEY

PROFESSIONAL INFORMATION

Before the Public Utility Commission of Ohio

Case Nos. 96-702-TP-COI, 96-922-TP-UNC, 96-973-TP-ATA, 96-974-TP-ATA, Case No. 96-1057-TP-UNC
In the Matter of the Investigation Into Ameritech Ohio's Entry Into In-Region InterLATA Services Under Section 271 of the Telecommunications Act of 1996.
On behalf of AT&T Communications of Ohio, Inc.

Before the Illinois Commerce Commission

Docket No. 96-0404
Investigation Concerning Illinois Bell Telephone Company's Compliance With Section 271(c) of the Telecommunications Act of 1996
On behalf of AT&T Communications of Illinois, Inc.

Before the Commonwealth of Massachusetts Department of Public Utilities

In the Matter of: D.P.U. 96-73/74, D.P.U. 96-75, D.P.U. 96-80/81, D.P.U. 96-83, D.P.U. 96-94, NYNEX - Arbitrations
On behalf of the MCI Telecommunications Corporation

Before the Pennsylvania Public Utility Commission

Docket No. A-31023670002
In the Matter of the Application of MCI Metro Access Transmission Services, Inc. For a Certificate of Public Convenience and Necessity to Provide and Resell Local Exchange Telecommunications Services in Pennsylvania
On behalf of MCI Metro Access and Transmission Services, Inc.

Before the New Jersey Board of Public Utilities

Docket No. TO96080621
In the Matter of MCI Telecommunications Corporation for Arbitration with Bell Atlantic-New Jersey, Inc. Pursuant to Section 252 of the Telecommunications Act of 1996
On behalf of the MCI Telecommunications Corporation

Before the Indiana Utility Regulatory Commission

Cause No. 40571-INT-01
Petition for Arbitration of Interconnection Rates, Terms and Conditions, and Related Arrangements with Wisconsin Bell Telephone Company d/b/a Ameritech Wisconsin
On behalf of AT&T Communications of Wisconsin, Inc.

Before the Public Utility Commission of Ohio

Case No. 96-752-TP-ARB
Petition for Arbitration of Interconnection Rates, Terms and Conditions, and Related Arrangements with Ohio Bell Telephone Company d/b/a Ameritech Ohio
On behalf of AT&T Communications of Ohio, Inc.

Before the Illinois Commerce Commission

Docket No. 96-AB-003
Docket No. 96-AB-004 *Consol.*
Petition for Arbitration of Interconnection Rates, Terms and Conditions, and Related Arrangements with Illinois Bell Telephone Company d/b/a Ameritech Illinois
On behalf of AT&T Communications of Illinois, Inc.

Before the Michigan Public Service Commission

Case No. U-11151
Petition for Arbitration of Interconnection Rates, Terms and Conditions, and Related Arrangements with Michigan Bell Telephone Company d/b/a Ameritech Michigan
On behalf of AT&T Communications of Michigan, Inc.

Before the Indiana Utility Regulatory Commission

MICHAEL STARKEY
PROFESSIONAL INFORMATION

Cause No. 40571-INT-01

In the Matter of the Petition of AT&T Communications of Indiana, Inc. Requesting Arbitration of Certain Terms and Conditions and Prices for Interconnection and Related Arrangements from Indiana Bell Telephone Company, Incorporated d/b/a Ameritech Indiana Pursuant to Section 252 (b) of the Communications Act of 1934, as Amended by the Telecommunications Act of 1996.
On behalf of AT&T Communications of Indiana, Inc.

Before the Missouri Public Service Commission

Case No. TT-96-268

Application of Southwestern Bell Telephone Company, Inc. to Revise P.S.C. Mo.-No. 26, Long Distance Message Telecommunications Service Tariff to Introduce the Designated Number Optional Calling Plan
On behalf of the MCI Telecommunications Corporation

Before the Corporation Commission of the State of Oklahoma

Cause No. PUD 950000411

Application of Southwestern Bell Telephone Company for an Order Approving Proposed Revisions in Applicant's Long Distance Message Telecommunications Service Tariff
Southwestern Bell Telephone Company's Introduction of 1+ Saver DirectSM
On behalf of the MCI Telecommunications Corporation

Before the Georgia Public Service Commission

Docket No. 6415-U and 6537-U cons.

Petition of MCImetro to Establish Nondiscriminatory Rates, Terms and Conditions for the Unbundling and Resale of Local Loops
On behalf of MCImetro Access Transmission Services

Before the Public Service Commission of the State of Mississippi

Docket No. 95-UA-358

Regarding a Docket to Consider Competition in the Provision of Local Telephone Service
On behalf of the Mississippi Cable Television Association

Before the Maryland Public Service Commission

Docket No. 8705

In the Matter of the Inquiry Into the Merits of Alternative Plans for New Telephone Area Codes in Maryland
On behalf of the Staff of the Maryland Public Service Commission

Before the Maryland Public Service Commission

Docket No. 8584, Phase II

In the Matter of the Application of MFS Intelenet of Maryland, Inc. for Authority to Provide and Resell Local Exchange and Inter-Exchange Telephone Service; and Requesting the Establishment of Policies and Requirements for the Interconnection of Competing Local Exchange Networks

In the Matter of the Investigation of the Commission on its Own Motion Into Policies Regarding Competitive Local Exchange Telephone Service

On behalf of the Staff of the Maryland Public Service Commission

Before the Illinois Commerce Commission

Docket No. 94-0400

Application of MCImetro Access and Transmission Services, Inc. For a Certificate of Exchange Service Authority Allowing it to Provide Facilities-Based Local Service in the Chicago LATA
On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0315

Petition of Ameritech-Illinois for 708 NPA Relief by Establishing 630 Area Code
On behalf of the Office of Policy and Planning, Illinois Commerce Commission

MICHAEL STARKEY **PROFESSIONAL INFORMATION**

Before the Illinois Commerce Commission

Docket No. 94-0422

Complaints of MFS, TC Systems, and MCI against Ameritech-Illinois Regarding Failure to Interconnect

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket Nos. 94-0096, 94-0117, and 94-301

Proposed Introduction of a Trial of Ameritech's Customers First Plan in Illinois, et al.

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0049

Rulemaking on Line-Side and Reciprocal Interconnection

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 93-0409

MFS-InteleNet of Illinois, Inc. Application for an Amendment to its Certificate of Service Authority to Permit it to Operate as a Competitive Local Exchange Carrier of Business Services in Those Portions of MSA-1

Served by Illinois Bell Telephone and Central Telephone Company of Illinois

On behalf of the Office of Policy and Planning, Illinois Commerce Commission

Before the Illinois Commerce Commission

Docket No. 94-0042, 94-0043, 94-0045, and 94-0046

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MICHAEL STARKEY
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