

Exhibit No.:
Issue: Geographic Market/Economic Issues
Witness: Timothy J. Tardiff
Type of Exhibit: Direct Testimony
Sponsoring Party: Southwestern Bell Telephone, L.P.
d/b/a/ SBC Missouri
Case No.: TO-2004-0207 Phase I
Date Testimony Prepared: December 18, 2003

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

CASE NO. TO-2004-0207

DIRECT TESTIMONY

OF

TIMOTHY J. TARDIFF

Cambridge, Massachusetts

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

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

AFFIDAVIT OF TIMOTHY J. TARDIFF

COMMONWEALTH OF MASSACHUSETTS)

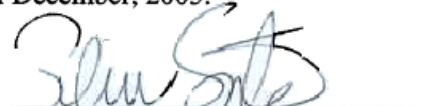
COUNTY OF MIDDLESEX)

I, Timothy J. Tardiff, of lawful age, being duly sworn, depose and state:

1. My name is Timothy J. Tardiff. I am presently a Vice President – National Economic Research Associates.
2. Attached hereto and made a part hereof for all purposes is my Direct Testimony.
3. I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.


Timothy J. Tardiff

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


Notary Public

My Commission Expires:

**SILVIA SANTOS
NOTARY PUBLIC**
My commission expires Sept. 24, 2004

TABLE OF CONTENTS

	<u>Page</u>
I. INTRODUCTION	1
II. ECONOMICALLY CORRECT TESTS FOR DEFINING MARKETS TO EVALUATE IMPAIRMENT	3
A. Market Definition: Product and Geographic Dimensions	4
B. Product Market Definition	5
C. Geographic Market Definition	7
D. Previous FCC Determinations of Geographic Markets	13
III. APPLICATION OF THE TRO’S MARKET DEFINITION RULE	15
A. Properly Interpreted, the FCC’s Rule Supports the Use of MSAs as Geographic Markets	15
B. Areas Smaller than MSAs are Too Narrow to be Used as Geographic Markets	22

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR FULL NAME, EMPLOYER AND BUSINESS**
3 **ADDRESS.**

4 A. My name is Timothy J. Tardiff. I am a Vice President at National Economic Research
5 Associates, 1 Main Street, Cambridge, MA 02142.

6 **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK**
7 **EXPERIENCE.**

8 A. I received a B.S. degree from the California Institute of Technology in mathematics (with
9 honors) in 1971 and a Ph.D. in Social Science from the University of California, Irvine in
10 1974. From 1974 to 1979, I was a member of the faculty at the University of California,
11 Davis. I have specialized in telecommunications economics for over 20 years. My
12 research has included studies of the demand for telephone services, such as local
13 measured service and toll, analysis of the market potential for new telecommunications
14 products and service, assessment of the growing competition for telecommunications
15 services, and evaluation of regulatory frameworks consistent with growing competitive
16 trends.

17 I have extensive experience as a consultant and expert witness in regulatory proceedings.
18 In particular, I have filed testimonies, affidavits, expert reports, and/or appeared as a
19 witness in over 25 state jurisdictions, at the FCC, and in international proceedings. These
20 proceedings dealt with economic issues involving competition policies, such as
21 unbundling, determining the costs of network elements, establishing policies for universal
22 service funding, and measuring the elasticities of demand for telecommunications

1 services. I have published extensively on telecommunications economic issues, as shown
2 in my resume (Schedule TJT-1 to this testimony).

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

4 A. My testimony evaluates, from an economic perspective, the proper way to define the
5 geographic market for determining whether competitive local exchange carriers (CLECs)
6 are “impaired” by a lack of access to unbundled local circuit switching to serve mass-
7 market customers, as contemplated by the FCC’s Triennial Review Order (“TRO”).¹ I
8 also evaluate the information presented in Mr. Fleming’s testimony on entry patterns in
9 SBC Missouri’s service areas and conclude that the appropriate geographic markets
10 produced by both economic reasoning and the geographic market definition rule in the
11 TRO are Metropolitan Statistical Areas (MSAs).

12 **Q. HOW IS YOUR TESTIMONY ORGANIZED?**

13 A. My testimony has two major sections. First, I explain how economists determine the
14 product and geographic scope of economic markets. Based on an assessment of how
15 competitors enter local exchanges, in general, and the important role marketing and
16 advertising plays in these entry decisions, in particular, the MSA is a reasonable and
17 readily available representation of the geographic scope of such markets for local
18 telecommunication services. Indeed, the FCC itself has used metropolitan areas in a

¹ *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers* (CC Docket No. 01-338), *In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996* (CC Docket No. 96-98), *In the Matter of Deployment of Wireline Services Offering Advanced Telecommunications Capability* (CC Docket No. 98-147); Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (released August 21, 2003) (“Triennial Review Order” or “TRO”) at ¶¶ 495-496 and 47 U.S.C. § 51.319(d)(2).

1 number of recent cases that delineated local exchange markets.² Next, I explain how the
2 FCC's specific rule for determining the geography of the markets for analyzing whether
3 mass-market switching should continue to be unbundled leads to the same conclusion that
4 MSAs are the best choice for representing the geographic scope of the relevant markets in
5 Missouri.

6 **II. ECONOMICALLY CORRECT TESTS FOR DEFINING MARKETS TO EVALUATE** 7 **IMPAIRMENT**

8 **Q. PROPERLY PERFORMED, IS THE ANALYSIS OF WHETHER THE ABSENCE**
9 **OF PARTICULAR TELRIC-PRICED INCUMBENT LOCAL EXCHANGE**
10 **CARRIER (ILEC) NETWORK ELEMENTS WOULD IMPAIR COMPETITION**
11 **SIMILAR TO THOSE UNDERTAKEN BY ECONOMISTS AND ANTITRUST**
12 **AUTHORITIES IN OTHER CONTEXTS?**

13 A. Yes. In fact, the FCC itself has used this general type of analysis in assessing
14 competition, e.g., when it decided to grant AT&T's request for nondominant status in
15 interLATA long-distance markets,³ when it approved telecommunications company
16 mergers,⁴ and when it provided additional pricing flexibility for ILEC interstate special
17 access services.⁵

² In a number of cases, e.g., in defining metropolitan areas for the purpose of limiting the unbundling of switching in its previous rules (TRO at ¶ 497), in deciding whether to grant price flexibility for certain interstate access services, and most recently, in allowing wireline customers to port telephone numbers to wireless services, the FCC used MSAs—a widely recognized and used standard definition of metropolitan areas.

³ *In the Matter of Motion of AT&T Corp. to be Reclassified as a Non-Dominant Carrier*, Order (released October 23, 1995).

⁴ See, for example, *In re Applications of NYNEX Corporation Transferor, and Bell Atlantic Corporation Transferee, for Consent to Transfer Control of NYNEX Corporation and its Subsidiaries*, File No. NSD-L-96-10, Memorandum Opinion and Order, Released August 14, 1997 (“*Bell Atlantic-NYNEX Order*”)

⁵ *In the Matter of Access Charge Reform, Price Cap Performance Review for Local Exchange Carriers, Interexchange Carrier Purchases of Switched Access Services Offered by Competitive Local Exchange Carriers*,

1 Such an analysis would ordinarily include three determinations: (1) a definition of the
2 product and geographic dimensions of the relevant market, (2) identification of the extent
3 of competitive entry that has already occurred in the relevant market; and (3) if
4 necessary, a determination of whether barriers arising from natural monopoly conditions
5 have and will continue to prevent economic entry into the relevant market. Consistent
6 with the scope of this proceeding, my testimony focuses the first of these three
7 determinations. I also interpret from an economic perspective the data that Mr. Fleming
8 presents on the scope of competitive entry.

9 **A. Market Definition: Product and Geographic Dimensions**

10 **Q. HOW DO ECONOMISTS DEFINE ECONOMIC MARKETS?**

11 A. As a general matter in assessing competition, the relevant market has two dimensions -- a
12 product market dimension and a geographic market dimension.⁶ The product market
13 methodology (and a separate but similar geographic market methodology) is a conceptual
14 process to identify a gap in the chain of substitute products by starting with the most
15 narrow set of products imaginable and then adding products to the set until the set
16 contains all close substitutes. The conceptual test that defines “close substitutes” is
17 whether a hypothetical monopolist of the set of products could profitably impose a small
18 but significant, non-transitory increase in price above the market level. Thus, a properly

Petition of U S West Communications, Inc. for Forbearance from Regulation as a dominant Carrier in the Phoenix, Arizona MSA, CC Docket Nos. 96-262, 94-1, CCB/CPD File No. 98-63 and CC Docket No. 98-157. Fifth Report and Order and Further Notice of Proposed Rulemaking, Released August 27, 1999 (“*Pricing Flexibility Order*”).

⁶ For example, see Department of Justice and Federal Trade Commission *Horizontal Merger Guidelines*, April 2, 1992, Sections 1.1 and 1.2.

1 defined market will include products to which consumers would switch in substantial
2 numbers if a supplier attempted to charge supra-competitive prices.

3 This process is used to identify both products that are sufficiently close substitutes (e.g.,
4 DSL and cable modem service in broadband markets) and the geographic scope over
5 which firms offering these products compete.

6 **B. Product Market Definition**

7 **Q. HOW DID THE FCC DEFINE THE PRODUCT MARKET FOR THIS** 8 **IMPAIRMENT DETERMINATION?**

9 A. The FCC determined that the product or customer market should be services provided to
10 mass market customers, who “are analog voice customers that purchase only a limited
11 number of POTS lines, and can only be economically served via DS0 loops.” [*TRO*, ¶
12 497]. Therefore, the FCC has already defined the product for purposes of this
13 proceeding.⁷

14 **Q. IS THE FCC’S DISTINCTION BETWEEN THOSE END-USER SERVICES** 15 **PROVIDED TO “ENTERPRISE CUSTOMERS” (BUSINESS LOCATIONS** 16 **WITH MORE THAN A FEW LINES) AND “MASS MARKET” CUSTOMERS** 17 **(RESIDENCES AND BUSINESS LOCATIONS WITH FEW LINES)** 18 **REASONABLE?**

19 A. Yes, and this distinction is important when we assess the scope of the geographic market
20 below. Distinguishing between mass-market and enterprise services is consistent with

⁷ Note that the product market focuses on the end-user services that ILECs and their competitors provide and not on particular components of the ILEC network. Thus, although the emergence of “wholesale markets” for network components is likely to be sufficient to demonstrate the lack of impairment, such markets are clearly not necessary to make such a determination.

1 sound economics and previous FCC market determinations (e.g., in the special access
2 price flexibility decision).

3 From an economic perspective, we examine the potential substitutability of enterprise and
4 mass-market services from the perspectives of both the customers (the demand side) and
5 the suppliers (the supply side). On the demand side, in terms of the familiar standard of
6 the DOJ/FTC *Horizontal Merger Guidelines*, purchasers of mass-market DS-0 services
7 would not shift their demands to high-capacity facilities in response to a “small but
8 significant” increase in the price of their current services, because the minimum monthly
9 cost of high-bandwidth enterprise services far exceeds the cost of meeting their needs
10 with mass-market DS-0 services. Symmetrically, a reduction in the price of DS-0
11 services would not induce enterprise customers to switch because they would still find it
12 cheaper to supply their needs with DS-1 and higher bandwidth services.

13 On the supply side, carriers market services differently to enterprise and mass-market
14 customers. Individual marketing representatives typically serve enterprise customers. In
15 contrast, mass-market customers are often reached by mass-market advertising media—
16 radio, television and print.

17 Thus, the application of the standard economic method of determining a relevant product
18 or service market implies that services supplied to mass-market customers are in a
19 different product market from those supplied to enterprise customers.

C. Geographic Market Definition

Q. HOW DO ECONOMISTS DEFINE A GEOGRAPHIC MARKET?

A. It is a geographic area in which sellers provide products or services that customers treat as substitutes for one another and thus which compete against one another. As a leading text describes the concept:

The geographic limit of a market is determined by answering the question of whether an increase in price in one location substantially affects the price in another. If so, then both locations are in the same market.⁸

For mass-market local telephone service, carriers offering mass-market local telephone service in the core of an urban area would compete in the same geographic market as carriers offering local service in a close suburb because reductions in local exchange prices in the suburb would lead to lower prices in the core area. For example, a reduction in local exchange rates in the suburb would lead to lower prices in the core area, because carriers advertise and promote mass-market services on a metropolitan-wide basis, and customers in the core area would consequently expect to pay the advertised prices for services. Conversely, if a firm attempted to raise rates in the suburb, a competitor in the core area would quickly expand its business in the suburb using the same switch, placing downward pressure on the prices in the suburb.

⁸ D.W. Carlton and J.M. Perloff, *Modern Industrial Organization*, Second edition, (1994), New York: Harper Collins, at 807. Similarly, the *Horizontal Merger Guidelines* (Section 1.2.1) consider firms at different locations to be in the same market when a potential price increase by one firm (assuming other firms maintain their current prices) would be unprofitable, because customers would shift to the products of firms at other locations in the same geographic market.

1 **Q. DOES THE ANALYSIS OF THE GEOGRAPHIC SCOPE OF THE RELEVANT**
2 **MARKET IN THE CASE OF TELECOMMUNICATIONS DIFFER IN DETAIL**
3 **FROM THE TYPICAL DELINEATION OF THE GEOGRAPHIC DIMENSIONS**
4 **OF A PRODUCT?**

5 A. To some extent. The typical case, (e.g., a merger analysis), starts with the products of the
6 firm(s) in question and then poses the question of whether customers would shift to the
7 products of firms *at other locations* in the event of a price increase by the reference
8 firm(s). That is, firms are viewed as having precise locations; consequently,
9 considerations such as transportation costs come into play when determining whether
10 customers would shift their purchases to the competing firms. In contrast,
11 telecommunications carriers have switches that can reach major portions of the
12 geographic market area and market their services throughout the geographic market. For
13 example, in the competition between cable modems and DSL for broadband services,
14 both the cable television company and the telephone company would typically have
15 facilities that covered a large portion of the relevant area. Similarly, CLECs frequently
16 offer service (using resale or UNE-P) in geographic areas where they have no facilities,
17 so the notion of identifying a firm with a location at which it provides service makes less
18 sense for telecommunications carriers than (for example) cement manufacturers.

19 **Q. IN ASSESSING WHETHER ABSENCE OF THE UNBUNDLED LOCAL**
20 **SWITCHING WOULD IMPAIR CARRIERS IN THE PROVISION OF MASS-**
21 **MARKET LOCAL EXCHANGE SERVICES, HOW DOES ONE DETERMINE**
22 **THE GEOGRAPHIC SCOPE OF THE MARKET?**

23 A. In this case, there is a reasonably close alignment with the more traditional geographic
24 market determination. That is, the competing firm can be thought to be located at the
25 location of its switch and to offer the local exchange service product at that location. In

1 order to reach customers throughout the market, the firm incurs “transportation costs” in
2 the form of outlays for unbundled loops, transport of traffic between its switch and ILEC
3 end-offices, certain non-recurring charges, and the like.

4 Specifically, from the perspective of the CLEC, two related considerations come into
5 play, which together determine the geographic area in which the CLEC chooses to
6 compete for mass-market services. First, the CLEC incurs fixed costs (costs insensitive
7 to the number of customers) when it chooses to locate its switch and market its services
8 following the contours of the media markets. That is, when a CLEC enters using mass-
9 market advertising, it has implicitly chosen to reach all potential customers in the
10 geographic area served by the media. Thus, to serve mass-market customers, CLECs
11 implicitly offer service to a geographic area consisting of the intersection of the areas (i)
12 served by a switch and (ii) corresponding to media market geographic reach. Second, the
13 CLEC must decide how to serve customers in particular ILEC wire centers to which it
14 has already offered service: whether to incur fixed costs of collocation or to serve the
15 customers through enhanced extended links (EELs). Putting these two types of costs
16 together, the CLEC entrant determines that it is likely to be profitable to serve this area—
17 *i.e.*, the intersection of the reach of a switch and the reach of mass media—given the most
18 efficient way to connect customers in different ILEC wire centers to its switch.

19 **Q. WHAT GEOGRAPHIC AREA WILL THIS ANALYSIS PRODUCE AS A**
20 **MARKET DEFINITION?**

21 A. As I describe in more detail below, this analysis of how CLECs enter local exchange
22 markets, together with the economic definition of a relevant geographic market discussed

1 above, shows that the MSA is a readily-available geographic area that corresponds to the
2 concept of the geographic market. In individual circumstances, media geographic
3 contours may not align perfectly with MSA boundaries, and switches can certainly serve
4 larger areas than individual MSAs. Circumstances of individual CLECs may favor entry
5 into different geographic areas: *e.g.*, cable companies may initially serve telephone
6 customers in part or all of their cable footprint, or some CLECs may offer service in
7 contiguous areas in a neighboring MSA. Nonetheless, because the MSA approximates
8 how mass-market services are sold (through mass-market advertising) and how services
9 are provided (with a switch that serves a large geographic area), the MSA is the
10 appropriate generic answer to the question: in what geographic areas are CLEC and ILEC
11 services likely to compete.

12 **Q. WHAT ARE METROPOLITAN STATISTICAL AREAS?**

13 A. In concept, a MSA is a county or group of counties having a large clustered population,
14 including adjacent areas having a high degree of community of interest with the core
15 population center. Specifically, the Office of Management and Budget (OMB) defines
16 MSAs as a county or group of counties with (1) a city of population 50,000 or more or
17 (2) an urbanized area (as defined by the Census Bureau) of population of at least 50,000
18 consisting of one or more counties.⁹ According to the OMB:

19 The general concept of a Metropolitan Statistical Area or a Micropolitan
20 Statistical Area is that of an area containing a recognized population

⁹ The OMB defines a conceptually similar set of areas in New England using cities and towns as geographic building blocks, referred to as New England city and town areas (NECTAs)

1 nucleus and adjacent communities that have a high degree of integration
2 with that nucleus.

3 Metropolitan Statistical Area.—A Core Based Statistical Area associated
4 with at least one urbanized area that has a population of at least 50,000.
5 The Metropolitan Statistical Area comprises the central county or counties
6 containing the core, plus adjacent outlying counties having a high degree
7 of social and economic integration with the central county as measured
8 through commuting.¹⁰

9 Specifically, MSAs are carefully developed to reflect demographic and commercial
10 reality based on the application of OMB standards to census data (including commuting
11 patterns). MSAs have a “high degree of integration” with a recognized population
12 nucleus and recognize “economic linkages between urban cores and outlying, integrated
13 areas.”¹¹

14 **Q. WHY DO THESE AREAS DETERMINE REASONABLE BOUNDARIES FOR**
15 **THE GEOGRAPHIC SCOPE OF LOCAL EXCHANGE MARKETS?**

16 A. In general, we would expect carriers to try to serve at least the MSA because the high
17 degree of social and economic integration present in such areas implies that firms would
18 generally market services throughout this geographic area.¹² Mass-market entry is
19 associated with media advertising aimed at a geographic area at least as large as the
20 MSA; thus, we would expect the carrier to serve the entire MSA because advertising

¹⁰ Currently defined metropolitan and micropolitan statistical areas are based on application of the 2000 standards (which appeared in the Federal Register on December 27, 2000) to Census 2000 data and were announced by OMB effective June 6, 2003.

¹¹ 65 Fed. Reg. 82228 (2000).

¹² While these incentives clearly apply to new entrants, there may be circumstances where a CLEC’s existing facilities or customer base may dictate serving, at least initially, a geographic area different from an MSA. Examples might include cable companies that choose to provide telephone service to part or all of their video footprint or CLECs that expand across an MSA boundary into an area contiguous with their existing facilities.

1 throughout the MSA but not serving the entire area raises costs and harms the carrier's
2 reputation. Service offerings, including offerings of discounted bundled services, are
3 frequently rolled out by individual MSA since that is the geographic area covered by
4 newspapers and local radio, television and cable media.¹³ Thus, all potential customers in
5 the MSA are exposed to the same mass-market advertising messages.

6 By the same token, entry into local exchange markets from outside the MSA (e.g., in
7 response to a price increase) is certainly possible, but may be more difficult because
8 potential new entrants have no existing customer base and little brand awareness, except
9 that engendered by the provision of other related services (e.g., AT&T or MCI's long
10 distance services) or by national marketing plans (e.g., MCI's The Neighborhood).
11 Furthermore, potential customers served by ILEC central offices too small or too sparsely
12 populated to justify the CLEC's cost of collocation or backhaul transport to the switch are
13 still exposed to the same marketing messages and can be served through resale of the
14 ILEC's retail local exchange service.

15 In this sense, mass-market consumers in any two central offices in the same MSA
16 generally face similar competitive conditions and have access to similar competitive
17 alternatives. In addition, as Mr. Fleming explains (and the FCC observed in its Pricing
18 Flexibility Order [at ¶ 72]), the MSA reflects the primary geographic scope of

However, of all the existing, pre-defined geographic areas, the MSA comes closest to encompassing the area in which local exchange competition takes place.

¹³ In fact, in its discussion of the metropolitan area to be used in the Bell Atlantic/NYNEX merger, the FCC observed that television and radio advertising markets generally encompassed the geographic area it had designated. *Bell Atlantic-NYNEX Order* at ¶ 55-56.

1 competitive entry from the CLEC's perspective, because the entry decision is generally
2 undertaken first at the level of the MSA. Consistent with the geographic market
3 definitions favored by recent FCC decisions (discussed below) and the geographic market
4 analysis generally used in the antitrust and economic context, such customers are thus
5 part of the same geographic market.

6 **D. Previous FCC Determination of Geographic Markets**

7 **Q. HAS THE FCC PREVIOUSLY DETERMINED THAT METROPOLITAN AREAS**
8 **ARE THE CORRECT GEOGRAPHIC SCOPE OF LOCAL EXCHANGE**
9 **MARKETS?**

10 A. Yes, in at least three contexts. First, in its just-released order that allows customers to
11 port their wireline telephone numbers to wireless carriers, the FCC implemented this
12 requirement on a MSA basis.¹⁴ This order is especially germane to this proceeding,
13 because, as four of the five FCC Commissioners explicitly observed in their separate
14 statements, one of the major implications of the order is to substantially increase the
15 intermodal competition between wireline services (including ILEC offerings) and
16 wireless services.

17 Second, in its assessment of how the merger of formerly independent incumbent local
18 exchange carriers would affect local exchange competition in the merged territories, the
19 FCC identified specific metropolitan areas as the markets subject to a competitive

¹⁴ *In the Matter of Telephone Number Portability and CTIA Petitions for Declaratory Ruling on Wireline-Wireless Porting Issues* (CC Docket No. 95-116) Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, FCC 03-284 (released November 10, 2003) at ¶ 29-30.

1 assessment.¹⁵ Consistent with my previous discussion and the testimony of Mr. Fleming
2 on how CLECs have promoted their offerings in Missouri, the FCC identified the
3 metropolitan scope of advertising markets as a relevant factor in defining the market.¹⁶

4 Third, in its order granting ILECs price flexibility for certain interstate services, the FCC
5 concluded:

6 We will grant pricing flexibility relief for both Phase I and Phase II on an
7 MSA basis. We agree with those commenters that maintain that MSAs
8 best reflect the scope of competitive entry, and therefore are a logical basis
9 for measuring the extent of competition.¹⁷

10 As I describe in more detail below, when properly interpreted, the FCC's market
11 definition rule in its TRO order is entirely consistent with its prior emphasis on the
12 "scope of competitive entry" used to define geographic markets in its price flexibility
13 order.

14 In addition to defining geographic markets for local competition, the FCC has used
15 MSAs in numerous other proceedings, such as in its Biennial Review of spectrum
16 aggregation limits for wireless carriers,¹⁸ in defining the geographic markets for
17 programming distributors¹⁹ and in conducting lotteries and granting the right to acquire

¹⁵ See, for example, *Bell Atlantic-NYNEX Order* at ¶ 43.

¹⁶ *Ibid.* at ¶ 55.

¹⁷ *Pricing Flexibility Order* at ¶ 72.

¹⁸ *In re 1998 Biennial Regulatory Review Spectrum Aggregation Limits for Wireless Telecommunications Carriers*, 15 FCC Rcd. 22072 at ¶16 (October 17, 2000).

¹⁹ *In re Implementation of Section 304 of the Telecommunications Act of 1996*, 13 FCC Rcd. 14775 at ¶ 108 (June 11, 1998).

cellular telephone licenses.²⁰ It also used the MSA as the geographic basis for its switching exemption for CLECs serving high-volume (4-plus line) customers.²¹

III. APPLICATION OF THE TRO’S MARKET DEFINITION RULE

A. Properly Interpreted, the FCC’s Rule Supports the Use of MSAs as Geographic Markets

Q. WHAT IS THE FCC’S RULE FOR DETERMINING THE GEOGRAPHIC SCOPE OF THE MARKET?

A. The FCC’s market-definition rule specifies that

A state commission shall define the markets in which it will evaluate impairment by determining the relevant geographic area to include in each market. In defining markets, a state commission shall take into consideration the locations of mass market customers actually being served (if any) by competitors, the variation in factors affecting competitors’ ability to serve each group of customers, and competitors’ ability to target and serve specific markets profitably and efficiently using currently available technologies. A state commission shall not define the relevant geographic area as the entire state.²²

Paragraphs 495-496 of the TRO refer to specific factors that a state commission may choose to consider in defining the geographic market. All in all, however, the most significant factor is where CLECs have chosen to enter and compete for mass-market

²⁰ The Federal Trade Commission has also noted that MSAs can serve as “close proxies” for detailed geographic analysis and has frequently used MSAs to define geographic markets in the number of cases involving retail sales to consumers. See *In the Matter of CVS Corporation*, File No. 971-0060, Analysis to Proposed Consent Order to Aid Public Comment (June 1997).

²¹ *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, (“*UNE Remand Order*”), ¶¶ 276-298. Specifically, ILECs are exempted from having to provide unbundled switching to CLECs serving customers with four or more lines in density zone one of the top 50 MSAs.

²² 47 CFR § 51.319(d)(2)(i)

1 customers through their own switches and the areas that they do serve and could serve via
2 those switches. The FCC places heavy emphasis on actual marketplace evidence
3 throughout the TRO. At paragraph 93, for example, the FCC states, “As we anticipated
4 in the *Triennial Review NPRM*, we agree with commentators that argue that actual
5 marketplace evidence is the most persuasive and useful kind of evidence submitted. In
6 particular, we are most interested in granular evidence that new entrants are providing
7 retail services in the relevant market using non-incumbent LEC facilities . . .” The
8 market-entry evidence presented by Mr. Fleming implicitly reflects the CLECs’ own
9 economic and business evaluation of all the other potentially relevant factors listed in
10 paragraphs 495-96.

11 **Q. IS THE PRIMACY THAT THE TRO GIVES TO ACTUAL MASS-MARKET**
12 **CUSTOMER LOCATIONS SENSIBLE FROM AN ECONOMIC PERSPECTIVE?**

13 A. Yes. These locations are the outcome of business decisions that very likely required real
14 entrants to consider some or all (and perhaps even more) of the various factors contained
15 in the list suggested in the TRO. Indeed, in its instructions on how states should analyze
16 potential competition, the TRO notes that: “the existence of a competitor serving the
17 mass market with its own switch provides evidence that the mass market can be served
18 effectively.”²³ By the same token, the locations of customers actually being served
19 provide substantial evidence that these locations are part of the area that a CLEC’s scale
20 and scope economies would allow it to serve economically. Therefore, the geographic
21 areas in which CLECs actually serve mass-market customers using their own switching

²³ TRO at ¶ 510.

1 facilities are—at least—areas in which CLECs would not be impaired by the absence of
2 unbundled switching. The actual mass-market customers served by the CLECs’ switches
3 are spread throughout most of SBC’s territory within Missouri’s major MSAs: St. Louis,
4 Springfield, and Kansas City. In particular, in the these MSAs, CLECs have entered and
5 serve with their own switches mass-market customers located in wire centers that account
6 for about 76 percent of SBC Missouri’s lines in these MSAs, indicating that CLECs do
7 indeed enter and serve customers throughout these markets, which they would not do if it
8 were uneconomic.²⁴ In particular, the fact that competitors have established a presence in
9 such a large proportion of SBC Missouri’s territory demonstrates that “competitors’
10 ability to use self-provisioned switches...to serve various groups of customers”²⁵ is not
11 substantially limited within the major MSAs.

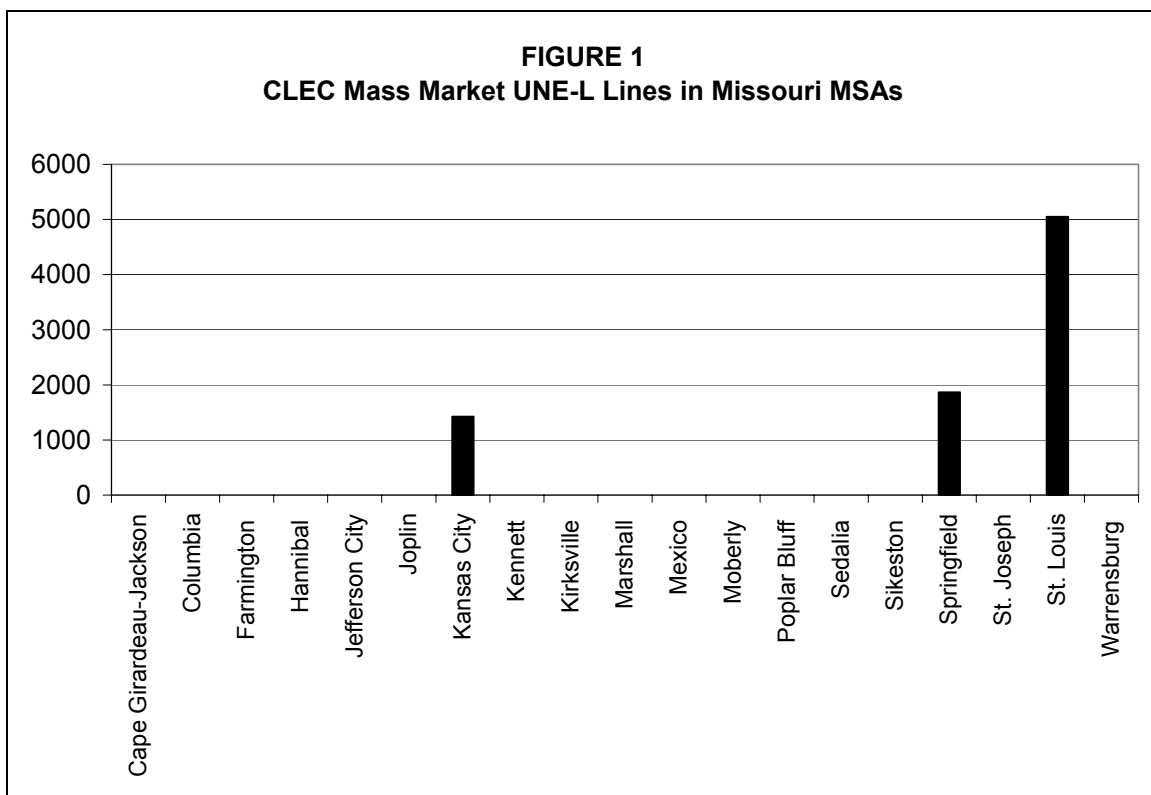
12 CLECs have a large presence in the major MSAs in Missouri. But equally important for
13 determining the contours of the relevant geographic markets for conducting an
14 impairment assessment is where CLECs have not chosen to serve customers using their
15 own switches. Like Sherlock Holmes’ dog that didn’t bark, CLECs have not entered and
16 do not yet serve large groups of mass-market customers in SBC wire centers located
17 outside of these major MSAs. Of the 19 MSAs and Micropolitan Statistical Areas that
18 overlap SBC Missouri’s service territory, CLECs have no presence in and provide no

²⁴ Using data from Mr. Fleming’s testimony and additional SBC data, I identify those wire centers in the MSAs in which CLECs provide UNE-L service to mass-market customers. The ratio of SBC access lines in those wire centers to total SBC access lines in the MSAs is approximately 76 percent. The data and analyses described in Mr. Fleming’s testimony provide further support that CLECs enter and compete within markets reasonably delineated by MSAs.

²⁵ TRO at ¶ 495.

1 mass market UNE-L services in 16. In the remaining three MSAs, CLECs have entered
2 and are providing mass-market services using their own switching facilities. See Figure
3 1.

4 The FCC stated, “if competitors with their own switches are only serving certain
5 geographic areas, the state commission should consider establishing those areas to
6 constitute separate markets.”²⁶ Here, CLECs with their own switches are primarily
7 serving the major MSAs, which thus constitutes their own market, using the FCC’s
8 criteria.



²⁶ TRO, ¶ 495 n.1537.

1 **Q. WHY IS IT IMPORTANT TO CONSIDER WHERE CLECS HAVE NOT**
2 **CHOSEN TO SERVE?**

3 A. Limited or no entry by CLECs deploying their own switches into certain MSAs in
4 contrast with the major MSAs corroborates that once CLECs decide to enter at all, they
5 are indeed entering the marketplace at the MSA level. As the FCC put it in paragraph
6 495 of the TRO, the Commission should, when it determines geographic market
7 definitions, “attempt to distinguish among markets where different findings of
8 impairment are likely.” In view of the extensive CLEC entry into the major MSAs, a
9 finding of non-impairment in those MSAs is very likely. It is much less likely elsewhere,
10 where the level of CLEC entry is limited to date.

11 **Q. DOES IT MATTER THAT IN SOME WIRE CENTERS CLECS MAY BE USING**
12 **THEIR SWITCHES TO SERVE “ENTERPRISE” CUSTOMERS RATHER THAN**
13 **MASS-MARKET CUSTOMERS?**

14 A. No. Some ILEC wire centers may serve predominantly enterprise business customers,
15 and it would not be surprising to find CLECs using their switches to compete
16 predominantly for those customers. What matters for determining the scope of the
17 geographic market in which CLECs and ILECs compete is that CLECs have already
18 incurred the fixed costs (switch location) necessary to offer mass-market services in these
19 wire centers so that CLECs *can* serve mass-market customers—if they choose to—in
20 those wire centers.

21 **Q. HAVE YOU CONSIDERED THE SPECIFIC FACTORS SUGGESTED IN THE**
22 **TRO?**

23 A. Yes. Paragraphs 495-96 of the *TRO* permit a state commission to elect to consider (i)
24 “how competitors’ ability to use self-provisioned switches or switches provided by a

1 third-party wholesaler to serve various groups of customers varies geographically”; (ii)
2 “how UNE loop rates vary across the state”; (iii) how retail rates vary geographically”;
3 (iv) how the cost of serving customers varies according to the size of the wire center and
4 the location of the wire center”; and (v) “variations in the capabilities of wire centers to
5 provide adequate collocation space and handle large numbers of hot cuts.”

6 It is important to note that none of these additional factors is mandatory, and for good
7 reason. Where, as here, the evidence regarding the scale and scope of actual CLEC entry
8 and use of their own switches to serve mass-market customers in a given market (here,
9 the major MSAs), is so strong, there is no need to examine other factors. The CLECs’
10 own conduct proves the geographic market to be the MSA. In this case, the enumerated
11 factors would be redundant: they are fundamentally determinants of the potential
12 profitability (revenue minus cost) of serving particular parts of an overall geographic
13 market,²⁷ and, CLECs’ conduct implies that entry into the MSA is perceived as
14 potentially profitable.

15 As I explained earlier, CLECs are already serving mass-market customer locations in
16 wire centers that account for substantial proportions of SBC Missouri’s access lines in the
17 major MSAs and the wire centers from which CLECs are using mass market UNE loops
18 include each of the four UNE loop rate zones. And even the wire centers with the highest

²⁷ Potential profitability depends on likely revenues and costs. As Mr. Fleming describes in greater detail, on the revenue side, retail prices vary over several rate groups and subgroups. On the cost side, UNE loop rates also vary by rate zone. However, in the three MSAs in which CLECs have entered with their own switches, the large bulk of access lines are in wire centers that have a combination of being in a high retail rate group and a low UNE loop rate zone.

1 UNE loop rates (Zone 3) contain mass-market customers served by CLEC switches:
2 mass-market customers are served by CLEC switches in wire centers that contain over 63
3 percent of SBC Missouri's lines in these wire centers.²⁸ Consequently, the combination
4 of UNE loop rates and other costs does not appear to restrict the geographic scope of
5 markets to any great extent, and certainly does not justify the use of geographic markets
6 smaller than an MSA

7 **Q. DOES THE FACT THAT CLECS DO NOT PRESENTLY SERVE WITH THEIR**
8 **OWN SWITCHES MASS-MARKET CUSTOMERS IN EVERY WIRE CENTER**
9 **IMPLY THAT THE GEOGRAPHIC SCOPE OF A MARKET SHOULD BE**
10 **SMALLER THAN THE MSA?**

11 A. No. As I indicated earlier, a relevant geographic market for purposes of competitive
12 analysis includes not only where competitors currently serve customers, but also where
13 they readily could serve customers if the incumbent were to raise prices. The geographic
14 coverage of CLEC switches, the geographic coverage of radio, television and print
15 media, and the existence of collocation throughout the MSA, as well as the CLEC-owned
16 NXX codes, show that CLECs could easily expand into other areas in the MSA (and
17 likely will do so even if SBC Missouri's retail prices remain the same).

18 Further, because CLECs are free to target their customers, they can choose to serve only
19 the most lucrative customers and/or locations, at least initially. Indeed, to the extent that
20 CLECs may view serving such areas as uneconomic, the most likely cause is not the cost
21 of providing service, but the low regulated retail rates for basic services that SBC

²⁸ Using data from Mr. Fleming's testimony and additional SBC data, I identified the UNE Zone 3 wire centers in the major MSAs in which CLECs serve mass-market customers with their own switch. The ratio of total SBC access lines in those wire centers to total SBC access lines in the three MSAs is 63 percent.

1 Missouri currently charges.²⁹ This would suggest that they are comparably difficult for
2 SBC Missouri to serve profitably as well but would not imply any “impairment” of the
3 kind contemplated by the 1996 Act. Further, unlike SBC Missouri, which continues to
4 serve all areas in its territory with its own facilities despite any uneconomic retail prices
5 for basic services that may prevail, CLECs can choose to have a ubiquitous presence
6 using advantages provided to them by the Telecommunications Act that will continue
7 regardless of whether mass-market switching continues to be a UNE in particular
8 markets. In particular, where CLECs do not offer services completely over their own
9 facilities and/or with UNE loops and their own switches, they could still serve customer
10 locations using resale and/or UNE loops that CLECs could combine with local switching,
11 which will remain available at just and reasonable (rather than TELRIC) prices.³⁰

12 **B. Areas Smaller than MSAs are Too Narrow to be Used as Geographic**
13 **Markets**

14 **Q. DOES THE POSSIBILITY THAT THE COSTS OF SERVING CUSTOMERS**
15 **MAY VARY BY WIRE CENTER SUPPORT A CONCLUSION THAT EACH**
16 **WIRE CENTER IS A SEPARATE GEOGRAPHIC MARKET?**

17 **A.** No. While it is certainly conceivable that costs could differ within different parts of the
18 overall market, the fact that the variation in some cases may coincide with wire center

²⁹ In his statement attached to the TRO, FCC Chairman Michael Powell observed:

Furthermore, it is widely accepted that because of universal service cross subsidies, many residential rates are priced below cost and, thus, the retail revenues associated with those services may, in some cases, not cover the costs incurred to provide the services. The D.C. Circuit, however, rejected the notion that competitors’ decision not to enter subsidized markets with their own facilities demonstrates impairment. [Separate Statement of Michael K. Powell, pp. 14-15]

³⁰ TRO at ¶ 656.

1 areas has no particular significance. Indeed, costs often vary within more traditional
2 geographic markets (e.g., because of differences in transporting goods).³¹ What matters
3 for the economic definition of a geographic market is whether prices and services in one
4 area are constrained by prices and services in another.

5 Of even greater significance is the fact that using wire centers³² as geographic “markets”
6 is entirely inconsistent with both how competitors enter and compete for customers and
7 the specific directives the TRO has established for determining the geographic scope of
8 markets. In particular, the TRO’s primary considerations of “the locations of customers
9 actually being served by competitors” and “not defin[ing] the market so narrowly that a
10 competitor serving that market alone would not be able to take advantage of available
11 scale and scope economies”³³ renders wire center “markets” much too narrow and
12 consequently unreasonable. From an implementation viewpoint, in its *Pricing Flexibility*
13 *Order*, the FCC rejected the use of wire center areas for the geographic scope of a
14 market, partly on the grounds of administrative cost (§ 74) and instead concluded that
15 “MSAs best reflect the scope of competitive entry” (§ 72).

16 In particular, Mr. Fleming’s testimony demonstrates that competitors’ switches serve
17 mass-market customers in multiple wire centers, because to do so allows them to take

³¹ For example, in illustrating their geographic market definition presented earlier in this testimony, Carlton and Perloff use the example of oranges shipped to an urban area. Clearly, the prices would reflect the costs of shipping the product.

³² The reasons why it would be incorrect to consider discrete parts of the proper geographic market (i.e., the MSA) as markets in their own right apply not only to wire centers, but also to any subdivision of an MSA, e.g., counties and/or individual cities.

³³ TRO at ¶ 495.

1 advantage of the scale and scope economies available from deploying their switches.
2 Conversely, the FCC’s suggestion that the existence of possibly “uneconomical” pockets
3 in a larger area (e.g., a LATA) may call for smaller geographic markets³⁴ would be
4 incorrect if the entirety of the end-use customers for which ILECs and CLECs compete
5 includes those areas.³⁵

6 **Q. PLEASE SUMMARIZE YOUR TESTIMONY.**

7 A. Because there has been significant entry by CLECs that use their own switches to serve
8 mass-market local exchange customers, available data permits the Commission readily to
9 “take into consideration the locations of mass-market customers actually being served by
10 competitors.” Consistent with previous FCC determinations, the information presented
11 by Mr. Fleming shows that CLECs in Missouri enter and promote their services on a
12 MSA basis, thus revealing “their ability to target and serve specific markets profitably
13 and efficiently using currently available technologies.” Similarly, the result that CLECs
14 have wide coverage throughout the MSAs into which they have entered demonstrates that
15 “variation in factors affecting competitors’ ability to serve each group of customers” does
16 not limit CLECs only to minor parts of these MSAs.

17 Based on economic reasoning, the requirements of the TRO, and the data (presented in
18 Mr. Fleming’s testimony) on how CLECs have entered local exchange markets in

³⁴ See, for example, TRO at ¶ 495.

³⁵ For example, footnote 1537 suggests that states could define the market for analyzing local switch impairment as being the geography over which competitors are actually serving customers. The fact that a CLEC chooses to serve some customers with resale or UNE-P and others with its own switch should not be used to incorrectly exclude some customers from the relevant geographic market.

1 Missouri, I conclude that MSAs are the appropriate geographic areas to be used in mass-
2 market switching impairment analyses.

3 **Q. DOES THIS COMPLETE YOUR TESTIMONY?**

4 **A. Yes.**