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Reply to:
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February 27, 2004

Honorable Deborah Taylor Tate
Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, Tennessee 37243

IN RE: IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER- 9 MONTH PROCEEDING-SWITCHING

Docket 03-00491

Dear Chairman Tate:

Enclosed is an original and thirteen copies of the Consumer Advocate and Protection Division's Rebuttal Testimony in regards to Docket No. 03-00491. Kindly file same in this docket. Copies are being sent to all parties of record. If you have any questions, kindly contact me at (615) 741-1671. Thank you.

Sincerely,

Joe Shirley
Assistant Attorney General

CC: All Parties of Record.

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Before the
TENNESSEE REGULATORY AUTHORITY

IN RE: IMPLEMENTATION OF THE FEDERAL COMMUNICATIONS COMMISSION'S TRIENNIAL REVIEW ORDER- 9 MONTH PROCEEDING-SWITCHING

DOCKET NO. 03-00491

AFFIDAVIT

I, Steve Brown, for the Consumer Advocate and Protection Division of the Attorney General's Office, hereby certify that the attached Rebuttal Testimony represents my opinion in the above-referenced case and the opinion of the Consumer Advocate and Protection Division.

STEVE BROWN
Economist

Sworn to and subscribed before me
this 26th day of February, 2004.

NOTARY PUBLIC

My commission expires:

EMILY KNIGHT
NOTARY PUBLIC AT LARGE
DAVIDSON COUNTY, TENN
My Commission Expires SEPT 22 2007

73058

Table of Contents - CAPD Rebuttal Testimony: TRA Docket 03-00491

I. Introduction

Q_1. **Please state your name.**

A_1. Steve Brown.

Q_2. **What is your job title and where do you work?**

A_2. I am an Economist in the Consumer Advocate and Protection Division (CAPD), Office of the Attorney General.

Q_3. **Are you the same Steve Brown who gave direct testimony representing the opinion of the CAPD in this proceeding of the Tennessee Regulatory Authority (TRA)?**

A_3. Yes, I am.

Q_4. **What testimony are you giving now?**

A_4. The testimony I am giving now is rebuttal testimony regarding the incumbent's testimony about its proposed implementation of the Federal Communications Commission's (FCC) Triennial Review Order (TRO) in Tennessee.

Q_5. **Whose testimony are you rebutting?**

A_5. I am rebutting the testimony of several witnesses who have provided direct testimony for BellSouth. They are:

Kathy K. Blake - BellSouth's Director of Policy Implementation;

Dr. Christopher Jon Pleatsikas of LECG Inc.;

Pamela A. Tipton - BellSouth's Director in Interconnection Services

W. Keith Milner - BellSouth's Assistant Vice-President of Interconnection Operations;

Dr. Debra J. Aron of LECG Inc.;

James W. Stegeman of CostQuest Associates, Inc.

II. Summary

Q_6. **Please provide a summary of your testimony.**

A_6. My summary follows.

Q_7. **What impairment analysis does the incumbent perform?**

A_7. The incumbent performs an impairment analysis that has two parts: a "self-provisioning" part and a "potential deployment" part, as required by the TRO at paras. 460-520. The goal of the analysis is to determine if the Competitive Local Exchange Carrier (CLEC) can substitute its own switch for the incumbent's switch so the CLEC no longer needs unbundled access to the incumbent's switch.

The heart of the entire impairment analysis lies in the assessment of the market's geographic size compared to the geographic area covered by the CLEC's switch, per the TRO's directives for potential deployment and self-provisioning:

"The state commission should consider whether the entire market could be served by this [the CLEC] switch [TRO para 510 – addressing potential deployment],"

and the CLEC switch,

" should be capable of economically serving the entire market, as that market is defined by the state commission. [TRO para. 499 – addressing the self-provisioning trigger]"

To the extent "the entire market" is small enough to be within the geographic scope of the CLEC switch, a market will be "unimpaired" given the TRO's other requirements are met. If the situation is reversed, where "the entire market" area is larger than the switch area, the market is "impaired."

The TRO's geographic impairment analysis proceeds as if requiring the match-up of two rectangles in Tennessee, placing one inside the other as in this figure,  . If the market is the smaller figure  , then the market is "unimpaired" if it fits inside the larger figure  representing the CLEC switch's geographic scope. But if the larger figure is the market, then the market is "impaired."

The geometric figures provide a hint of the impairment analysis's central problem: identifying and locating two sets of boundaries in Tennessee - the boundaries of the market and the boundaries of CLEC switch's geographic coverage. The incumbent recognizes the importance of boundaries because one of its witnesses, Ms. Kathy Blake, testifies:

"By selecting these boundaries for the set of geographic markets to be examined under the state commission's impairment analysis. [Blake, page 7 line 24] "

Another incumbent witness, Dr. Pleatsikas, testifies:

"I would note that CEA boundaries follow county lines, and zones follow wire center boundaries. [Pleatsikas, page 7 line 21]"

While the context of these quotes are not shown at this stage in my rebuttal testimony, these quotes, as well as the geometric analogy that I have just made, establish that the incumbent and the CAPD understand that the impairment analysis requires the identification of boundaries.

The geometric figures also provide a hint of how to show "no impairment:" make the market rectangle small and make the CLEC switch area large, so the market area fits inside the switch area.

However, the incumbent relies on unreasonable methods and unreasonable assumptions to make the markets small. Also, the incumbent does not testify to nor identify nor locate the geographic boundaries of the scope of the CLEC switch. Therefore, the incumbent fails to prove "no impairment" in Tennessee, despite the incumbent's assertions that it has proved "no impairment."

II. A. – The Incumbent's Impairment Analysis Fails Because It Relies On Contradictory Assumptions About The Geographic Boundaries Of The Markets And The Geographic Boundaries Of CLEC Switches

Q_8. In your opinion, why does the incumbent's analysis fail to prove no impairment?

A_8. In my opinion the incumbent's entire impairment analysis fails because it relies on two contradictory assumptions about size: one assumption treats the geographic size of the incumbent's local-circuit-switching market as actually composed of 24 small markets across Tennessee; the other treats the geographic boundaries of the CLEC switch as being very large and encompassing the entire state of Tennessee.

The two polar-opposites assumptions, tiny and huge, shape the incumbent's impairment analysis but do not withstand reasoned scrutiny.

The incumbent's 24 markets are created by subdividing each UNE rate zone in Tennessee by a geographic measure unique to wireless technology – the Component Economic Area (CEA). However, the incumbent and the CLECs are competing with each other via wireline technology, not wireless technology. The CEA is a term used strictly in wireless technology to establish a geographic area for spectrum licensing and spectrum coverage. Neither the

FCC nor the TRA has ever used the CEA to resolve issues in wireline competition. But BellSouth is so confident of the CEA's validity that the incumbent does not fulfill the location-requirement set by the TRO at para. 495, which directs state commissions "to define each market on a granular level, and in doing so...take into consideration the locations of customers actually being served (if any) by competitors..." The incumbent does not identify such locations.

Instead, the incumbent's witness Ms. Tipton testifies that "the actual physical location of the individual end users in each market is not relevant[page 13 line 23]." Said another way, what matters to the incumbent are the boundaries that separate the CLEC-customers from each other, not a customer's physical location per se. Thus the incumbent's impairment analysis depends completely on the CEA being judged a reasonable way to define market boundaries. But the CEA is fatal to the incumbent's analysis because the CEA is a measure of geographic coverage for wireless communications technology and thus is not a rational basis for an impairment analysis of wireline competitors. Therefore, the boundaries separating the 24 wireless-based markets collapse into just the 3 markets set up for wireline competition, UNE zones 1 , 2 and 3. In this situation there is impairment in each UNE zone because the incumbent has not identified 3 different CLECs whose switches serve each zone as a single market, where 3 different CLECs is the minimum number of CLECs required by the TRO.

Ms. Tipton's opinion relies in part on the incumbent's testimony by Mr. Keith Milner, that "[t]ypically, a [CLEC] deploys a switch to serve a large area (often an entire state)...it is not unusual for a CLEC to use one switch to serve an entire state [Milner page 3 line 3]. " Despite his testimony, the incumbent's self-provisioning analysis finds CLEC switches serve only a few fragments of the state. Four of the 24 markets are said to be unimpaired due to self-provisioning -- thus the incumbent identifies 3 more "unimpaired markets" in its "potential deployment" analysis, an unnecessary procedure if CLEC switches have a statewide scope. The fact that the incumbent went to the effort to perform a potential deployment analysis is further proof that the incumbent is unable to identify and locate the geographic boundaries of the CLEC switch.

II. B. – Market Size Does Not Conform To The TRO's Directive On The Minimum Size Of The Market

Q_9. What directives does the TRO provide with respect to the geographic size of a market?

A_9. The TRO provides two directives regarding the geographic size of the market. One specifies how large the market can be and the other directive limits how small the market can be.

The upper limit on market-size is expressed in FCC rule 51.319(d)(2)(i), which prohibits the entire state from being the market. Provided

the defined market is smaller than the entire state of Tennessee, FCC rule 51.319(d)(2)(i) does not affect an impairment analysis. The lower limit on market-size is expressed in economic terms. In the TRO at para. 495 the FCC tells the states:

> *"states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market [TRO para. 495]."*

However, the incumbent does not provide testimony showing how the size of the CEA-established-markets fulfills the TRO's regulatory directive on the minimum size of the market.

Without such testimony, the CEA is the incumbent's arbitrary means of selecting its preferred markets in Tennessee.

Despite clear evidence from the incumbent's contracting and pricing behavior that the incumbent sees its territory as one market to defend from the CLECs, the incumbent "micro-defines" its in-Tennessee local-circuit-switching market as a way of giving it a pick-and-choose-ability to achieve a result of "no impairment" in its preferred geographic markets, leaving the less desired markets to the CLEC.

The pick-and-choose ability is enabled by incumbent's databases, which include: a database showing telephone numbers ported to a CLEC; a database showing directory listings

containing the CLECs' customers' addresses and how many lines serve the address; a loop inventory database showing which loops the CLEC leases and designating the loop as a business or residential service. These databases provide the incumbent with the statistical information to separate its geographically preferred markets from the rest.

II. C. – Incumbent Does Not Testify To Nor Identify The Geographic Boundaries Of The CLEC Switches

Q_10. **How does the incumbent account for market and switch boundaries in its impairment analysis?**

A_10. Although the incumbent identifies market boundaries, it does not identify switch boundaries.

The incumbent identifies "the boundaries for...geographic markets to be examined under the state commission's impairment analysis." The incumbent also pinpoints on a map the boundaries of each market, as in Ms. Blake's Exhibit KKB-1, which is the incumbent's market map. However, the incumbent does not provide a CLEC-switch-map showing the CLEC-switch-geographic boundaries. A CLEC-switch-map is the logical counterpart to the incumbent's market map. If the incumbent had such a switch-map, it could be placed on the market map, Ms. Blake's exhibit KKB-1, to compare the markets' boundaries with the geographic-boundaries of the CLEC-switch-coverage.

The absence of such a switch-map in the incumbent's testimony means the incumbent has not identified the boundaries of the geographic areas served by CLEC switches. At first glance the testimony of Mr. Milner suggests the incumbent has identified such boundaries. But Mr. Milner "assumes" boundaries without testifying to their actual location. The incumbent appears to want the TRA to define the switch-map by reverse-engineering from the result the incumbent wants to reach. But the incumbent fails to prove that "the entire[unimpaired] market" is within the boundaries of the CLEC switch-area. The end result is that neither the incumbent's "self-provisioning" analysis nor its "potential deployment" analysis is supported.

II. D. – Incumbent's Impairment Analysis Fails To Consider An Exceptional Source Of Impairment – The Incumbent's Termination Charges In Its Tariffs And Contracts

Q_11. **How does the incumbent's impairment analysis account for termination charges in its tariffs and contracts?**

A_11. The incumbent's impairment analysis, which relies on the BellSouth Analysis of Competitive Entry model(BACE), does not account for termination charges and their effect on CLECs. This is a major oversight by the incumbent. I have already shown in my direct testimony that termination charges represent the recovery of

monopoly profit by the incumbent, not cost recovery, and that such charges are an exceptional barrier to CLEC market entry. Consider tariff TN03-E612-00, the contract between the incumbent and Captain D's, which I used in my direct testimony to show how the termination charges affected the CLEC were it to attempt serve Captain D's. The incumbent's witness Dr. Aron, in exhibits DJA-06 and DJA-07, lists the customer acquisition costs for various CLECs, and thus provides data proving the importance of such charges to the incumbent. The effect of those charges on the CLECs customer acquisition costs, which Dr. Aron describes as a "key operating metric[Dr. Aron page 9 lines 1-2]," are shown in the table below:

CLEC	CLEC Acquisition Cost Per Customer ($)	Incumbent's Termination Charge in Captain D's Contract ($)	Increase Of CLEC Customer Acquisition Cost If CLEC Pays Termination Charge (%)
Z-Tel	70	47	67%
Talk America	80	47	59%
AT&T	125	47	38%
Choice One	170	47	28%
Allegiance	188	47	25%
Mpower	343	47	14%
Average			39%

The table perfectly explains why the FCC designated the incumbent's termination charges as a barrier to entry: The rational CLEC will not offer service to Captain D's or any customer bound by termination charge and move on to termination-free customers, if there are any. The incumbent's termination charges:

- give the incumbent an incentive to create termination liability for any customer who could be contested by the CLECs;

- give the incumbent an incentive to seek regulatory treatment in Tennessee where customer-termination-liability is considered a normal cost of CLEC market entry even though the FCC has determined such charges to be a barrier to entry;

- prevent the CLEC from achieving the profits that would keep the CLEC in the market as the consumer's continuing and long-term alternative to the incumbent.

Dr. Aron's data prove the incumbent's termination charges are an economic barrier to CLEC entry. Dr. Aron further testifies: "a number of CLECs have gone bankrupt suggesting that, on average, CLECs do not have optimally efficient operations [Dr. Aron page 9 lines 3-4]." Bankruptcy of the CLECs in Tennessee would not be surprising because the incumbent has a regulatory option of raising the CLECs' customer-acquisition costs by as much as 67% and by an average of 39%.

III. Order of Rebuttal

Q_12. What is the order of rebuttal testimony with regard to BellSouth's witnesses?

A_12. My starting point for rebuttal with regard to the incumbent's witnesses is BellSouth's policy witness, Ms. Kathy Blake, who provides a broad "policy sweep" or panorama of the opinions expressed by the incumbent's other witnesses. Because the hub and center of the company's case is her testimony, I return to it several times as I rebut the opinions of the incumbent's other witnesses who provide the foundation for her testimony.

Q_13. What is the order of rebuttal testimony with regard to the issues addressed by BellSouth's witnesses?

A_13. My starting point for rebuttal with regard to issues addressed by the witnesses is the incumbent's definition of geographic markets in Tennessee.

IV. Rebuttal of Incumbent's Market Definitions.

Q_14. What is the starting point of BellSouth's impairment analysis?

A_14. BellSouth starts its impairment analysis by selecting 24 different geographic areas in Tennessee. Each area supposedly is a proper and self-contained geographic area for impairment analysis, one area at a time. Therefore,

BellSouth's selection of 24 areas allows for three possibilities: there is "no impairment" in all 24 areas; there is "no impairment" in some of the 24 areas; there is "impairment" in all 24 areas. Kathy Blake testifies from page 7 line 9 to page 8 line 6:

> *"BellSouth has concluded that the appropriate 'geographic markets' for use . are the individual UNE rate zones...subdivided into smaller areas using the Component Economic Areas (CEA) [which]...are defined by natural geographic aggregations of economic activity and cover the entire state of Tennessee "*
>
> *"By selecting these boundaries .BellSouth offers a . . market definition...result[ing] in 24 separate geographic markets in BellSouth's service area in Tennessee. ...Exhibit KKB-1 is a map of the state of Tennessee showing these 24 geographic market areas."*

Q_15. Which incumbent witness chose the CEA as the method to subdivide the UNE zones into 24 geographic areas?

A_15. Dr. Pleatsikas chose the CEA.

Q_16. What is the geographic basis of each CEA?

A_16. Each CEA's geographic basis is a group of counties in Tennessee, as well as counties in surrounding states, as Dr. Pleatsikas testifies at page 7 lines 19-20, "I would note that CEA boundaries follow county lines..." Also, each county in Tennessee belongs to just one CEA.

IV. A. – Incumbent's Reasons For Using the CEA

Q_17. What reasons does Dr. Pleatsikas provide for choosing the CEA as a method to define geographic markets?

A_17. Dr. Pleatsikas provides several reasons for choosing the CEA as a method to define geographic markets.

1. The TRO requires the states to make different findings of impairment in different markets:

> *"The TRO repeatedly indicates the determination of impairment be 'granular' .. 'State commissions ..should attempt to distinguish among markets where different findings of impairment are likely .. '[Dr. Pleatsikas page 7 lines 4-6]."*

2. Given the TRO's requirement for granular analysis, subdividing UNE zones by a CEA is reasonable:

> *"Having considered several alternatives, I find that superimposing the Component Economic Areas (CEAs) on top of the UNE Zones addresses issues such as this in an economically reasonable manner [Dr. Pleatsikas page 7 lines 17-19] "*

3. The FCC uses CEAs:

> *"CEAs have.. been used by the FCC for its geographical licensing schemes... [Dr. Pleatsikas page 8 lines 15-17] "*

4. The CEA is consistent with the TRO's guidance:

> *" the CEA creates a geographic area with a community of interest... the CEA.. produce[s] a set of granular, economically-meaningful markets consistent with the TRO's guidance[Dr Pleatsikas page 9 lines 15-17] "*

5. Unlike other economic measures of economic activity such as Metropolitan Statistical Areas, the CEA creates a statewide scope for the impairment analysis and thus allows for all areas and all counties in Tennessee to be evaluated in the impairment analysis:

> *"unlike CEAs, MSAs do not cover an entire state... if the TRA chose to use MSAs...parts of Tennessee would be excluded from consideration in any impairment test [Dr. Pleatsikas page 10 lines 10-14]."*

IV. B. – Incumbent's Reasons For Using the CEA Are Arbitrary And Unsupported By The TRO, The FCC, And Contrary To Actual Local-circuit-switching Conditions In Tennessee

Q_18. In your opinion is the CEA a reasonable basis for an impairment analysis?

A_18. No. In my opinion the CEA is an unreasonable basis for an impairment analysis for several reasons.

1. Contrary to the reasoning of Dr. Pleatsikas, the TRO considers UNE zones to be "granular" enough for an impairment analysis, and the TRO has no requirement that UNE zones or any other market definition be subdivided by CEAs or by any other measure to achieve a "granular" analysis.

2. The "CEA" has no application in wireline technology, which is the technology underlying the competition between the incumbent and the CLEC. The CEA is a specialized geographic term applicable to wireless technology. The specialization is evident from the FCC's own regulatory behavior. The agency has never used the CEA to resolve issues in wireline competition. Nor has the agency ever proposed using the CEA to resolve issues in wireline competition. Contrary to Dr. Pleatsikas' reasoning, the CEA is not consistent with the TRO's guidance.

3. Several geographic measures besides the CEA were available to Dr. Pleatsikas from the FCC for defining an economic area, including: Basic Trading Areas, Major Trading Areas, Economic Areas, Rectangular Service Areas, Metropolitan Statistical Areas, Rural Service Areas, Regional Economic Area Groupings, Public Safety Planning Regions, Cellular Market Area, and VHF Public Coast. These are available at the FCC's internet site

http://wireless.fcc.gov/auctions/data/maps/cntysv2000_census.xls.

He chose the CEA to ensure that *"parts of Tennessee would [not] be excluded from consideration in any impairment test,"* thus treating the incumbent as if its local-circuit-switching-market covers every county in Tennessee, when in fact the incumbent does not provide local-circuit-switching everywhere in Tennessee.

4. Neither Dr. Pleatsikas nor any other incumbent witness testifies how subdividing the UNE zones by the CEA fulfills the TRO's minimum market-size requirement stated in the TRO at para. 495, where the FCC tells the states:

> *"While a more granular analysis is generally preferable, states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market."*

Choosing the market's lower limit is central to the impairment analysis, and the analysis must relate the market's minimum size to an economic assessment of the CLECs' scale and scope economies. But the incumbent has not performed such an analysis.

Each rebuttal issue is addressed below.

IV. C. – The TRO Does Not Require That States Make Different Findings of Impairment In Different Markets.

Q_19. In your opinion does the TRO require that an impairment analysis must have different findings of impairment in different markets?

A_19. No. In my opinion there is no requirement that geographic markets must be defined to create different impairment findings in different markets, even though Dr. Pleatsikas testifies at page 7 lines 4-6, that "The TRO repeatedly indicates the determination of impairment be 'granular'" and then quotes the TRO at para. 495:

> *"State commissions. .should attempt to distinguish among markets where different findings of impairment are likely ."*

Taken in the context of his entire testimony, his selection of the quote suggests that the CEA is a way to define "granular" markets so differently that "different findings of impairment" will result.

But just 16 words after the word "likely" which Dr. Pleatsikas quotes, the FCC says in para. 496:

> *". a state commission may choose to consider how UNE loop rates vary across the state, how retail rates vary*

geographically, how the number of high-revenue customers varies geographically, how the cost of serving customers varies according to the size of the wire center and the location of the wire center, and variations in the capabilities of wire centers to provide adequate collocation space and handle large numbers of hot cuts. We recognize that many states have implemented varied administrative tools to distinguish among certain markets within a state on a geographic basis for other purposes including retail ratemaking, the establishment of UNE loop rate zones, and the development of intrastate universal service mechanisms. If a state determines, after considering the factors just described, that these already-defined markets would be appropriate to use in this context as well, it may choose to use these market definitions."

Therefore, the UNE zones alone are "granular" enough for an impairment analysis. There is no need to subdivide the UNE Zones by a CEA to achieve "granularity," contrary to the testimony of Dr. Pleatsikas.

Q_20. **Do you know if the TRA uses UNE loop rate zones as an administrative tool?**

A_20. Yes. The TRA uses UNE loop rate zones as an administrative tool.

Q_21. **Do you know if the TRA has ever used a CEA as an administrative tool?**

A_21. No. I am not aware of any instance when the TRA has used the CEA as an administrative tool.

Q_22. **Do you know if the TRA has ever evaluated a CEA for its potential use as an administrative tool?**

A_22. No. I am not aware of any instance when the TRA has evaluated a CEA for its potential use as an administrative tool.

IV. D. – Incumbent's Market Definitions Are Derived From Wireless Technology And Do Not Represent The Competitive Contest Between The Incumbent And The CLECs.

Q_23. **How do you know that the FCC has used CEAs only in the agency's treatment of wireless issues?**

A_23. I know that the FCC has used CEAs only in the agency's treatment of wireless issues because on January 29 and February 25, 2004 I searched the FCC's internet website looking for documents, orders, and other rulings containing the phrase "component economic analysis."

Each search had the same results. My Exhibit CAPD-SB Rebuttal Testimony, Schedule 1, pages 1 through 9, shows copies of the search's result and shows that 55 documents were found. My Schedule 2 lists in alphabetical order the documents' internet paths on the FCC's internet site for each of the 55 documents. The listing shows that the documents originate through proceedings and orders of the FCC's wireless or engineering bureaus, as those documents relate to the auction of spectrum. Also, there are

occasional listings of news releases, maps and speeches by FCC Commissioner Martin, but all relate to spectrum issues. This proves that the FCC has applied CEAs only to wireless issues.

Also, my Schedule 2 provides no listing of the FCC's wireline competition bureau.

IV. D. – 1. Incumbent's Market Definitions Are Not "Consistent With The TRO's Guidance."

Q_24. **Why is it significant that there are no listings of the wireline competition bureau in your Schedule 2?**

A_24. Because the TRO originates in the wireline competition bureau, the absence of any internet paths to the wireline competition bureau proves there is no record of the bureau considering CEAs relevant to wireline competition. Thus CEAs are not a credible measure to resolve any issue of wireline competition. Thus the FCC's own regulatory behavior provides no support for Dr. Pleatsikas' assertion that the "CEA ...produce[s] a set of granular, economically-meaningful markets consistent with the TRO's guidance."

Q_25. **How do you know that the TRO originated in the wireline competition bureau?**

A_25. I know the TRO originated in the wireline competition bureau because the TRO is listed in the FCC's wireline competition bureau's internet site. By contrast, the TRO is not

listed in the FCC's wireless bureau's internet site.

Q_26. **Do you know of any state or federal agency or regulatory body that has used or is using a CEA to resolve or settle competitive issues in wireline technology?**

A_26. No. I am not aware of any instance when a state or federal agency or regulatory body has used a CEA to resolve or settle competitive issues in wireline technology. Thus, there is no regulatory or economic precedent for using CEAs to resolve wireline issues. Dr. Pleatsikas has isolated the CEA from its genuine regulatory and technical context.

IV. D. – 1.1 The Technical Reason Why The FCC Has Never Used a CEA Outside Of Wireless Technology Issues

Q_27. **In your opinion, if you put aside the fact that the FCC has not used CEAs to resolve wireline issues and just considered the CEA by itself, would the CEA lead to a reasonable result in an impairment analysis?**

A_27. No. The CEA cannot lead to a reasonable impairment analysis because the CEA cannot be considered "by itself." It belongs to a technical field that is quite different than the wireline technology underlying the impairment analysis.

Q_28. **Is there a technical reason why CEAs are limited to wireless issues and not used in wireline issues?**

A_28. Yes, there is a technical reason. Wireline competition is based on point-to-point communication. The notion of 'area coverage' is not intrinsic to wireline communication. However, the CEA is one measure of 'area coverage,' which is fundamental to wireless telecommunications and other forms of wireless technology such as broadcast TV and AM and FM radio, which depend on free space radio-spectrum to carry their information. Radio, TV and cellular licenses are awarded for a certain portion of the radio spectrum to cover a particular geographic area. This is 'area coverage' in wireless technology. When the FCC sets policy regarding what licenses to auction or grant, the license will cover a geographic area, which sometimes is a CEA.

A good example of how CEAs are meaningful in a wireless context is provided in an FCC rulemaking FCC 95-500, *In the Matter of Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands ET Docket No. 95-183.*

Paras. 21-22 show how CEAs reflect wireless issues.

> *"21. TIA originally recommended that all channels in the 37 GHz band be licensed using BTA [Basic Trading Areas] service areas. It argued that BTAs are better adapted to the needs for broadband PCS infrastructure than are the rectangular service areas used in licensing the 39 GHz band However, in its amendment, TIA now proposes that 800 megahertz of the band be channelized into 2.5, 5, 10, 20 and 40 MHz paired channels as addressed above and that this spectrum be licensed on a*

traditional individual link basis TIA states that it is essential that private users of short range microwave links be able to own and control their microwave communication infrastructure for reliability reasons. TIA argues that these private users provide critical services to the public and do not generate profits from their communication infrastructure."

"22. Complementary to our proposal to channelize the entire band into 50 MHz paired and unpaired channel blocks, we propose to license all the channel blocks using BTA service areas. We are proposing BTA service areas for this frequency band because the service areas adopted in broadband PCS are Bats[sic] and Major Trading Areas (MTAs), which in turn consist of two or more Bats[sic]. We believe use of Bats[sic] will provide a more orderly structure for the licensing process than allowing each licensee to define its own service area, as is currently done in the 39 GHz band. Nonetheless, we solicit comment on whether some or all of the channel blocks should be made available for licensing over various and significantly larger geographic areas, such as on MTA, regional and nationwide bases. We also seek comment on the use of service areas based on the 172 Economic Areas (EAs) developed by the Department of Commerce's Bureau of Economic Analysis or on the 349 Component Economic Areas (CEAs) of which the EAs are composed. We request comment on whether these geographic areas would be appropriate for licensing the 37 GHz and 39 GHz bands or whether other alternative licensing areas would be more appropriate."

IV. D. – 1.2 The Direct Correspondence Between Geographic 'Area Coverage' and Radio-Spectrum Coverage.

Q_29. How does the FCC establish the relationship between area coverage and radio spectrum coverage?

A_29. The FCC establishes the relationship between area coverage and radio spectrum coverage by means of the definition shown below. The definition establishes an equivalency between the phrases "geographic area" and "area coverage of spectrum licenses." The definition is available in the FCC's Wireless Bureau's on-line internet glossary at

http://wireless.fcc.gov/auctions/glossary.

For example, consider the definition of Basic Trading Areas:

> *"Basic Trading Area (BTA) A geographic area . used by the Federal Communications Commission to define the coverage of spectrum licenses for certain services [emphasis added by CAPD.] The United States is divided into 487 BTAs. . .*

A BTA is only one of the FCC's several area-coverage forms: Basic Trading Areas, Component Economic Areas, Major Trading Areas, Economic Areas, Rectangular Service Areas, Metropolitan Statistical Areas, Rural Service Areas, Regional Economic Area Groupings, Public Safety Planning Regions, Cellular Market Area, and VHF Public Coast.

Because the FCC treats the CEA as one form of geographic coverage for wireless licensing, it is clear the incumbent has organized its impairment analysis as if the incumbent and the CLECS are wireless competitors, when in fact the parties compete with each other via wireline technology.

IV. D. – 2. Although Many Geographic Measures Of Markets Were Available, The Incumbent Chose The CEA To Invoke FCC Rule 51.319(d)(2)(i).

Q_30. **Why does Dr. Pleatsikas employ the CEA in the incumbent's impairment analysis rather than some other measure?**

A_30. As I have already pointed out, Dr. Pleatsikas uses the CEA because it "...cover[s] an entire state...[Dr. Pleatsikas page 10 lines 10-14]."

Q_31. **Does Dr. Pleatsikas connect the CEA to any FCC rule regarding the definition of markets?**

A_31. Yes. Dr. Pleatsikas connects the CEA to FCC rule 51.319(d)(2)(i), suggesting that the using the CEA as a market definition is way to comply with the rule.

Q_32. **What does FCC rule 51.319(d)(2)(i) direct a state commission to do?**

A_32. FCC rule 51.319(d)(2)(i) directs the states to do many things, but the rule's concluding language says that the market has to be smaller than the state: "A state commission shall not

define the relevant geographic area as the entire state."

Q_33. **How does the incumbent connect the CEA to the concluding language in the FCC rule?**

A_33. Dr. Pleatsikas connects the CEA and the rule's concluding language: he quotes the entire rule in his testimony at page 4 lines 16-17; almost immediately after the quote Dr. Pleatsikas further testifies at page 5 lines 3 to 7, "Based on my consideration of the factors that the FCC has outlined...I recommend that...UNE rate zones...[be] subdivided into [CEAs]."

The sequence in Dr. Pleatsikas's testimony suggests that the CEA was selected as a result of the FCC's prohibition against an entire state being defined as the market. The same reasoning appears in Ms. Blake's testimony because she quotes the rule, but just its prohibition against an entire state being the market, in her testimony at page 7 lines 1-2.

The incumbent's reliance on the concluding language of 51.319(d)(2)(i) suggests the incumbent is saying to the TRA: "the CEA has to be the basis of an impairment analysis because the only other choice is to use Tennessee as whole, but the FCC forbids this approach, so the CEA is the only concept left to define the market."

Q_34. **In your opinion, what would be the incumbent's benefit of attaching the concluding portion of FCC rule 51.319(d)(2)(i) to Tennessee's impairment analysis?**

A_34. By attaching the concluding portion of FCC rule 51.319(d)(2)(i) to Tennessee's impairment analysis, the incumbent equates its service territory with the entire state and then implies that the impairment must be based on 24 very small areas. The incumbent's benefit would be preventing its own large service territory, or sizeable portions of it, from being treated as the market.

For example, the incumbent proposes findings of "no impairment" in Chattanooga, Knoxville, Memphis and Nashville. But these findings are predicated on the 24 areas being valid representations of the competitive market in Tennessee. If Tennessee's four major metropolitan areas are just one market, then the incumbent's impairment findings will not hold. The incumbent wants to avoid this result by using the concluding portion of FCC rule 51.319(d)(2)(i) to condition Tennessee's impairment analysis.

Q_35. **Does BellSouth provide local-circuit-switching in every county in Tennessee?**

A_35. No. BellSouth does not provide local-circuit-switching in every Tennessee county.

BellSouth does not provide local-circuit-switching in several Tennessee counties including Johnson, Carter, Sullivan, Unicoi, Clay, Pickett, Fentress and Macon, just to mention a few.

Q_36. In counties where BellSouth provides local-circuit-switching, is BellSouth always the sole provider of such switching?

A_36. No. In some counties where BellSouth provides switching, other phone companies also provide switching in the same counties. These include Weakley, Henry, and Monroe, just to mention a few.

Q_37. Would FCC rule 51.319(d)(2)(i) be violated if BellSouth's entire local-circuit-switching market were treated as one market?

A_37. No. FCC rule 51.319(d)(2)(i) would not be violated if BellSouth's entire local-circuit-switching market were treated as one market. Therefore, there is no support for the incumbent's apparent reasoning that its local-circuit-switching-market is statewide and must be subdivided into 24 areas for an impairment analysis.

IV. E. – CEA Based Impairment Analysis Would Have Very Inaccurate Results Because TRO Requires Accurate Unbundling.

Q_38. In your opinion what is the logical result of using the CEAs for an impairment analysis?

A_38. In my opinion an impairment analysis driven by CEAs would be very inaccurate because it is very inaccurate to treat the incumbent as if it

provides local-circuit-switching over the entire geographic area of Tennessee. The results would be contrary to the FCC's requirement in the TRO at para. 130 that impairment decisions be based on the accurate unbundling of the geographic markets:

> *"In the Triennial Review NPRM, we sought comment on whether and how to reflect geographic differences in the application of our unbundling standard... Accordingly, in these circumstances, we may delegate authority to state commissions to ensure that the unbundling rules are implemented on the most accurate level possible while still preserving administrative practicality."*

Accuracy is an important criteria for impairment. If the analysis reaches beyond the incumbent's actual scope of local-circuit-switching, the results will not be accurate.

IV. E. – 1. CEA Based Impairment Analysis Suggests Findings of "No Impairment" In Areas Not Served By The Incumbent.

Q_39. **What is the FCC's national finding with regard to impairment?**

A_39. The FCC has made a national finding of impairment regarding all areas where an incumbent provides local-circuit-switching.

Q_40. What is the economic implication of treating BellSouth as if it provides local-circuit-switching everywhere in Tennessee?

A_40. Treating BellSouth as if it provides local-circuit-switching everywhere implies that BellSouth's economic welfare is directly tied to areas where the incumbent does not provide local switching. This reasoning leads to a nonsensical result because it suggests the TRO allows for a regulatory finding of "no impairment" in areas not served by the incumbent.

This result would be unreasonable within the context of the TRO and FCC rule 51.319(d)(2). The rule indicates that an incumbent is not compelled to provide unbundled switching to an area the incumbent does not serve. FCC rule 51.319(d)(2) DS0 capacity (*i.e.*, mass market) determinations states:

> *" An incumbent LEC shall provide access to local-circuit-switching on an unbundled basis to a requesting telecommunications carrier serving end users using DS0 capacity loops except where the state commission has found, in accordance with the conditions set forth in paragraph (d)(2) of this section, that requesting telecommunications carriers are not impaired in a particular market, or where the state commission has found that all such impairment would be cured by implementation of transitional unbundled local-circuit-switching in a given market and has implemented such transitional access as set forth in paragraph (d)(2)(iii)(C) of this section ."*

Because the incumbent's economic welfare is unaffected by the impairment status of areas

where the incumbent does not provide local switching, there is no economic basis for including unserved areas in an impairment analysis.

IV. E. – 2. CEA Based Impairment Analysis Would Be Difficult To Administer

Q_41. **In your opinion is there any administrative advantage to using the incumbent's actual service territory as the geographic market for impairment analysis, rather than 24 different markets?**

A_41. Yes. If the incumbent's actual service territory were used as the geographic market for impairment, then it would make the impairment analysis more manageable because the FCC has said in the TRO at para. 495: "The state commission must use the same market definitions for all of its analysis." Administering 24 different zones may require substantially more administrative effort than the administration of just one, two or three zones.

IV. F. – Market Definition Must Enable CLECs To Take Advantage of "Scale and Scope Economies."

Q_42. Because BellSouth's service territory does not cover the entire state of Tennessee, what portion of BellSouth's service territory could be the basis of an impairment analysis?

A_42. Because the incumbent's service territory is smaller than the entire state of Tennessee, the incumbent's actual service territory, or sizeable portions of it, should be a basis for an impairment analysis. A market definition encompassing most or all of the incumbent's actual service territory would give the CLECs an opportunity to take advantage of available scale and scope economies from serving a wider market, a condition set by the TRO.

Q_43. What does the incumbent testify to regarding the CLECs' scale and scope economies in the 24 CEA-based-markets?

A_43. According to Ms. Blake, each of the 24 areas is "large enough so that a competitor can realize appropriate economies of scope and scale"[Blake testimony, page 8 lines 2-3].

Q_44. What is the TRO's language regarding the CLECs scale and scope economies?

A_44. The TRO's language appears at para. 495:

> *"While a more granular analysis is generally preferable, states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market."*

Q_45. Does Ms. Blake's testimony about the CLECs' scale and scope economies have the same economic meaning as the FCC's language about the CLECs' scale and scope economies?

A_45. No. In my opinion the two statements have very different economic meanings. Ms. Blake suggests the CLEC's "economies of scope and scale" should be limited to what is "appropriate." The FCC's statement has no such limit, specific or implied.

Q_46. In your opinion is there any economic reason to limit the CLECs' "scale and scope economies?"

A_46. No. There is no economic reason to limit the CLECs "scale and scope economies" because the broader and more extensive those economies are, the better the CLECs can compete with the incumbent. On the other hand, the more limited the scale and scope economies are, the less competitive the CLECs become. BellSouth understands this economic fact, judging from the testimony of Dr. Pleatsikas. He testifies at page 11 lines 8-10:

> *"...CLECs today are not limiting the customers they serve from a single switch to those located in a single wire center Rather, they are casting their nets as wide as*

is economically feasible to take advantage of economies of scale. ."

Q_47. In your opinion, does BellSouth's CEA based impairment analysis give the CLECs the opportunity to cast "their nets as wide as is economically feasible to take advantage of economies of scale...?"

A_47. No. In my opinion BellSouth's CEA based impairment analysis prevents them from "casting their nets as wide as is economically feasible."

V. *Incumbent's Self-provisioning Trigger Analysis Depends On CEAs Making Chattanooga, Memphis, and Nashville Into Separate Markets.*

Q_48. Which of BellSouth's witnesses, other than Kathy K. Blake, provides testimony which relies on geographic markets defined by the CEA?

A_48. Other BellSouth witnesses including, Ms. Pamela A. Tipton, Mr. W. Keith Milner, Dr. Debra J. Aron, and Mr. James W. Stegeman rely on the CEA.

Q_49. What is the order of rebuttal testimony with regard to these witnesses.

A_49. My starting point for rebuttal of these witnesses is the testimony of Ms. Pamela A.

Tipton, BellSouth's Director in Interconnection Services.

Q_50. **What does BellSouth's policy witness, Ms. Kathy Blake, testify to regarding Ms. Pamela Tipton's testimony?**

A_50. Ms. Kathy Blake testifies:

> *"Pamela A. Tipton provides evidence that the self_provisioning switching trigger established by the FCC in its TRO is met in 4 of the 24 geographic markets in Tennessee. That is, Ms. Tipton will demonstrate that CLECs are not impaired in 4 geographic markets, because there are mass market customers in those geographic areas actively being served by at least three (and often more) CLECs using self provisioned switching. Ms. Tipton has obtained this evidence from the CLECs themselves and from BellSouth's business records [Blake page 9 lines 4-13] "*

Q_51. **Does Ms. Tipton's testimony rely on Dr. Pleatsikas' use of the CEA?**

A_51. Yes, Ms. Tipton relies on Dr. Pleatsikas' use of the CEA. She testifies at page 7 lines 17-19, "There are 24 markets in BellSouth's Tennessee service area."

Q_52. **What does Ms. Tipton conclude regarding the impairment of CLECs in those 24 markets?**

A_52. Ms. Tipton concludes there is no impairment in 4 markets. In her testimony from page 7 line 21 to page 8 line 11 she provides the following question and answers:

"Q. In how many of these markets is the FCC's self_ provisioning trigger met, such that the authority must make a finding of 'no impairment?'"

"A. The FCC's self-provisioning trigger is met in 4 of the 24 market areas....Attached as Exhibit PAT-4 is a highlighted map of Tennessee showing the markets where the self-provisioning trigger is met."

Q_53. What "markets" are being referred to?

A_53. Ms. Tipton is referring to Chattanooga, Memphis and Nashville, UNE zones 1 and 2.

Q_54. What is the regulatory relationship between the size of the market area and the TRO's self-provisioning trigger in an impairment analysis?

A_54. According to the TRO any geographic market where at least 3 different CLECs have at least one switch serving their customers is a market that is not impaired, and according to the TRO at para. 499, the three different carriers "should be capable of economically serving the entire market, as that market is defined by the state commission." On the other hand, it does not matter how many CLEC-switches are serving a market if there are less then 3 CLECs, i.e., a market served by 4 switches from 2 different CLECs remains an impaired market.

Q_55. Does Ms. Tipton identify the precise customer location for each of the customers of the CLECs who are self-provisioning service in the "unimpaired" areas?

A_55. No. Ms. Tipton does not identify the precise locations. In her opinion it is not necessary.

V. A. - Incumbent's Witnesses Testify That Geographic Scope Of CLEC Switches Greatly Exceeds Geographic Scope of CEA-Defined Markets.

Q_56. What reason does Ms. Tipton give for her opinion that the precise customer-locations are not needed?

A_56. Ms. Tipton testifies that the only condition required is to know that the customers are in the market, but once they are in, it does not matter where they are within the market. In her testimony at page 13 lines 13-22 she says:

> *". We have identified the UNE Zones further subdivided by Component Economic Areas in which these customers are located. As BellSouth witness Keith Milner discusses in greater detail in his testimony, the CLECs have made it clear that their networks are not configured like BellSouth's. .AT&T has stated in a proceeding before the TRA that it 'has the ability to connect virtually any qualifying local exchange customer in Tennessee to one of [its] switches'. Given that, the actual physical location of the individual end users in each market area is not relevant [emphasis added by CAPD] "*

Q_57. What does Ms. Tipton testify to regarding the geographic scope of CLEC switches in areas where the incumbent concludes there is no impairment?

A_57. Ms. Tipton testifies at page 4 lines 3-4:

> *"As described in BellSouth witness Keith Milner's testimony, each switch is capable of serving CLEC customers throughout the entire market (or larger) area."*

Q_58. What does Mr. Milner testify to regarding the geographic scope of the CLECs' switches?

A_58. Regarding the geographic scope of the CLECs switches, Mr. Milner testifies that CLEC switches can serve the entire state of Tennessee:

> *"Typically, a [CLEC] deploys a switch to serve a large area (often an entire state) ..it is not unusual for a CLEC to use one switch to serve an entire state " [Milner page 3 lines 3-17]"*

Not once in his testimony does Mr. Milner use the word "capable" or the phrase "switch capabilities" to describe CLEC switches.

Q_59. Does the TRO have a requirement that the CLEC switch must physically be in the same market that the switch serves?

A_59. No. The TRO has no such requirement. Also, the TRO at para. 495 footnote 1536 specifically allows for the possibility that a switch may be outside the area served by the switch:

> *"Indeed, because we measure alternative 'switching' in a given market, not switches located in that market, the physical location of the switch is not necessarily relevant to defining the geographic market. For example, a switch located in Rhode Island could satisfy the switching*

trigger in Massachusetts if it is serving customers in the relevant market in Massachusetts."

Q_60. Does the testimony of Ms. Tipton indicate the location of CLEC switches?

A_60. Yes. Ms. Tipton provides a list of CLEC switches and their Common Language Location Identifier in Exhibit PAT-1.

Q_61. Does Ms. Tipton identify the geographic scope of those switches?

A_61. No. Ms. Tipton does not identify the geographic scope of those switches. As I have already pointed out, Ms. Tipton testifies, "*As described in BellSouth witness Keith Milner's testimony, each switch is capable of serving CLEC customers throughout the entire market (or larger) area,*" and thus relies on Mr. Milner to define the geographic scope of the CLEC switches.

Q_62. Does Mr. Milner identify the geographic scope of the CLEC switches listed in Exhibit PAT-1?

A_62. No. Mr. Milner does not identify the geographic scope of the CLEC switches listed in Exhibit PAT-1.

Q_63. How many switches are listed in Exhibit PAT-1?

A_63. There are 65 switches listed in Exhibit PAT-1.

Q_64. Do all 65 switches have a geographic scope equal to the entire state?

A_64. I do not know if all 65 switches have a geographic scope equal to the entire state, but

Mr. Milner's testimony, which I have already quoted, suggests they do.

Q_65. **In your opinion, if a CLEC switch has a statewide scope, how many of the 24 geographic areas could be served by the switch?**

A_65. In my opinion, such a CLEC switch could serve all of the 24 areas.

Q_66. **If there were three CLECs with one switch each and each switch had a statewide geographic scope, then would there be impairment in any of the 24 areas defined by the incumbent?**

A_66. No. If there were three such CLEC switches, there would be no impairment in all 24 areas.

Q_67. **How many of the 24 areas are unimpaired, according to the incumbent?**

A_67. According to the incumbent 7 areas are unimpaired: four via the "self-provisioning trigger" and three via the "potential deployment" of switches.

Q_68. **In your opinion is there a contradiction between Mr. Milner's suggestion that the CLECs switches have a statewide scope and the incumbent's conclusion that only 4 areas are not impaired via the self-provisioning trigger?**

A_68. Yes. In my opinion there is a contradiction between the Mr. Milner's suggestion the CLECs switches have a statewide scope but concluding there is no impairment in only 4 areas via the trigger analysis. If the switches did in fact have statewide scope there would be no need for a "potential deployment" analysis and all seven

areas and perhaps the entire state would be unimpaired.

Q_69. **If Ms. Tipton is correct that the "...physical location of the individual end users in each market area is not relevant," then what does this opinion mean for the incumbent's impairment analysis?**

A_69. Because the physical location of the individual end users in each market area is not relevant, Ms. Tipton's opinion means that the market-boundary separating the end users is the fundamental determining factor of the incumbent's impairment analysis. To the extent that a market boundary is based on the CEA, the boundary establishes a geographic area for spectrum licensing and spectrum coverage. The boundary does not establish a market representing wireline competition between the CLEC and the incumbent. Because each boundary has no rational basis in wireline competition, each boundary disappears, one-by-one, until the 24 markets are gone and just three are left, the UNE zones of the incumbent's in-Tennessee service territory.

In this situation there is impairment in each UNE Zone, unless the incumbent identifies 3 different CLECs whose switches serve each zone as a single market.

Q_70. **Does Dr. Pleatsikas acknowledge that there might be just one market for CLECs and not 24?**

A_70. Yes. Dr. Pleatsikas provides indirect acknowledgement that the appropriate market

size for the CLECs might be one rather than the 24 markets.

For example, Dr. Pleatsikas testifies:

> *"That is not to say that UNE Zones 1 in Nashville and Memphis might not be a single market for some CLECs..."*

But having conceded that Memphis and Nashville could be one market, not two, for the CLECs, he quickly moves away from that position by testifying:

> *"..but to be granular in the assessment of impairment, it is necessary to further divide the UNE zones to account for other types of costs that separate Nashville and Memphis into distinct geographic markets Having considered several alternatives, I find that superimposing the Component Economic Areas (CEAs) on top of the UNE Zones addresses issues such as this in an economically reasonable manner [Pleatsikas, page 7, lines 13-19] ."*

V. B. – Incumbent Does Not Relate Its Market Size Or Its Definition Of The CLEC Switch Coverage To The TRO Requirements.

Q_71. Does BellSouth actually employ the CLEC switches' state-wide scope in the impairment analysis?

A_71. No. Just like Dr. Pleatsikas begins with a concession that the markets might be bigger than his definitions, and then repudiates that point, BellSouth begins its CLEC switch analysis assuming a statewide scope for the switches, but then provides no testimony by either Ms. Tipton or Mr. Milner substantiating the incumbent's claim that the CLEC switches have a statewide scope in fact. The only language available from Ms. Tipton is her statement:

> *"As described in BellSouth witness Keith Milner's testimony, each switch is capable of serving CLEC customers throughout the entire market (or larger) area."*

However, Mr. Milner never testifies to the geographic extent of the 65 CLEC switches in Exhibit PAT-1. In his testimony at page 11 he provides lengthy quotes from AT&T and WorldCom to show that their switches cover large areas. Therefore, Bellsouth has provided no testimony of its own describing or specifying the geographic scope of each CLEC switch listed in exhibit PAT-1.

The incumbent appears to have a default assumption that the CLEC switches have a geographic scope slightly larger than the UNE Zone 1 in the Nashville area, judging from Exhibit PAT-4.

But just as Dr. Pleatsikas is unable to set his CEA on a credible regulatory foundation, so too is the incumbent unable to relate the size of the "nonimpaired markets" to any regulatory directive.

Judging from the size of those "markets" in Exhibit PAT-4, the markets are smaller than a LATA. But neither Mr. Milner nor Ms. Tipton offer explanations of how the incumbent's "markets" fulfill the FCC's requirement in the TRO at para. 495 which directs that "states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market."

Therefore, Ms. Blake has no support from her two colleagues for her testimony that the market areas are "large enough so that a competitor can realize appropriate economies of scope and scale."

V. C. - *Incumbent's Impairment Analysis Has Not Determined The Location Of Boundaries For The Geographic Areas Served By CLEC Switches.*

Q_72. **In your opinion, what does the incumbent's finding of "no impairment" and its related testimony reveal about its strategy and its knowledge of the CLEC switches?**

A_72. In my opinion the testimonies of Mr. Milner and Ms. Tipton have revealed that the incumbent knows the location of the CLEC switches. But because the incumbent has not offered testimony defining the geographic scope of any of the 65 CLEC switches, in my opinion the incumbent does

not know the boundaries of the geography served by the those switches.

For example, the incumbent is unable to select any group of 3 carriers from the 65 switches and testify that the group has 3 switches serving the areas of Chattanooga, Memphis and Nashville as a single market.

If the incumbent had been able to find those three switches of three different carriers, it could arguably have killed two birds with one stone. Its witnesses could have testified the three areas are a single market and testified that there is no impairment in that single market, because three different CLECs have at least three switches serving the market.

Therefore, my opinion is that the incumbent's use of the CEA is the incumbent's strategic response to its lack of knowledge about the actual geographic scope of the CLECs' switches. Because the incumbent's testimony does not identify 3 carriers and three switches which serve all of Tennessee, the incumbent is not able to make such an identification. The incumbent compensates by using the CEA to separate a large market into small ones. But even at this point in its impairment analysis the incumbent offers no testimony specifying the geographic scope of the CLEC switches serving the unimpaired markets. The only statements offered as testimony are Ms. Tipton saying, "*As described in BellSouth witness Keith Milner's testimony, each switch is capable of serving CLEC customers throughout the entire market (or larger) area,*" and Mr. Milner saying, "*Typically, a [CLEC] deploys a*

switch to serve a large area (often an entire state)...it is not unusual for a CLEC to use one switch to serve an entire state." Not once in his testimony does Mr. Milner use the word "capable" or the phrase "switch capabilities" to describe CLEC switches.

Therefore, the incumbent has not proved within its own framework that the CLEC switches listed in Exhibit PAT-1 actually cover the incumbent's unimpaired "markets."

Q_73. **In your opinion, what is the effect of the incumbent's maneuverings over the CLEC switch?**

A_73. In my opinion the incumbent's maneuverings over the CLEC switch has the unwholesome effect of providing itself with a pick-and-choose-ability to achieve a result of "no impairment" in the markets the incumbent so chooses.

V. D. - Incumbent's Impairment Analysis Predetermined And Driven By Incumbent's Knowledge of CLECs' Customers.

Q_74. **How does the incumbent know which areas to choose?**

A_74. The incumbent knows which areas to choose because the incumbent's databases provide sufficient information enabling the incumbent's choice.

According to Ms. Tipton, the incumbent has ample knowledge of the CLECs through the incumbent's databases for all of Tennessee. The databases include: a database showing telephone numbers ported to a CLEC; a database showing directory listings containing the CLECs' customers' addresses and how many lines serve the address; a loop inventory database showing which loops the CLEC leases and designating the loop as a business or residential service.

Ms. Tipton testifies from page 10 line 18 to page 13 line 7:

> *" .. BellSouth used the data it had available to determine the total number and the location of the mass market customers. We used one method to identify residential customers and a separate method to identify business customers. With regard to residential customers, we identified all telephone numbers that had been 'ported' from BellSouth to another carrier... Our database reflects the carrier to whom the number was ported. We compared these ported numbers against BellSouth's directory listing database... We identified 'residential' customers by looking at their service classifications in the Directory Listings database... sorted the ported 'residential' numbers by address, so that we could determine how many CLEC lines were provided at that particular address . "*
>
> *"most mass market customers receiving local exchange service from a CLEC . .are still served via a UNE loop that the CLEC leases from BellSouth. Our loop inventory database contains a class of service indicator. Therefore, we extracted a list of all business class loops from BellSouth's database From this database, we learned the identity of the CLECs who lease UNE loops and the service address where each loop terminates We grouped*

the business class service addresses, and identified those service addresses where there were three or fewer loops terminated. By matching those locations to the geographic markets we had identified, we could determine how many CLECs were providing local service to mass- market customers in each of the geographic markets."

Q_75. In your opinion is it inappropriate for the incumbent to use its databases to analyze the CLECs?

A_75. No. I have no reason to consider the incumbent's use of its databases as inappropriate. However, I do consider it inaccurate and impermissibly self-serving to treat the incumbent's wireline-technology databases as if they are organized by a wireless geographic measure, the CEA, which is what Ms. Tipton has done. Her conclusion of "no impairment" is arbitrary and unreasonable because the CEA is an arbitrary and unreasonable measure in wireline competition.

Q_76. What is your opinion of Ms. Tipton's conclusion that 4 market areas are not impaired?

A_76. My opinion is that Ms. Tipton's conclusion of no impairment is not reasonable because it flows directly from Dr. Pleatsikas' use of the CEA and from the assumption that Mr. Milner has specified the geographic scope of the CLEC switches in Exhibit PAT-1, when in fact he has not. My opinion is to disregard Ms. Tipton's testimony and her conclusion that there is "no

impairment" in the 4 geographic areas she identifies.

VI. Incumbent's Potential Deployment Analysis

Q_77. **When should a potential deployment analysis be conducted, according to the TRO?**

A_77. According to the TRO a potential deployment analysis should commence when:

> *"there may well be markets where self-provisioning of switching is economic notwithstanding the fact that no three carriers have in fact provisioned their own switches. In such cases, we expect states to find 'no impairment.' Therefore, we find that where neither of the triggers described above have been satisfied, the state must conduct further analysis to determine whether the market in question is suitable for 'multiple, competitive supply [TRO para. 506].'"*

For example, earlier in my rebuttal testimony I pointed out that any geographic market served by less than 3 CLECS, each with their own switch, fails the self-provisioning trigger test and is impaired according to the TRO. Thus a market served by 4 switches from 2 different CLECs remains an impaired market. But under a potential deployment analysis such a market might be "unimpaired," depending on economic circumstances. Furthermore, even if no CLEC switches serve a market, it may be "unimpaired" depending on economic circumstances.

VI. A. - Incumbent's Treatment Of CLEC Switches In The Potential Deployment Analysis

Q_78. What is the role of CLEC switches in a potential deployment analysis?

A_78. According to the TRO the presence of a CLEC switch in the market area is important:

> *"The existence of a competitor that is serving the local exchange mass market with its own switch provides evidence that the mass market can be served effectively. The state commission should consider whether the entire market could be served by this switch [emphasis added by CAPD]. Although a single self-provisioned switch is not sufficient to invoke the mandatory triggers described above, we conclude that the existence of even one such switch might in some cases justify a state finding of no impairment, if it determines that the market can support 'multiple, competitive supply'" [TRO para 510]*

Q_79. What is the geographic scope of the CLEC switch in BellSouth's potential deployment analysis?

A_79. According to Mr. Milner, BellSouth treats the CLEC switch as if its geographic scope is equal to a LATA's geographic scope, rather than the "typical" statewide scope. In his testimony at page 3 lines 15-16 Mr. Milner says the analysis:

"assumes that a CLEC places a switch in each LATA in which it serves local customers, the results are significantly more conservative than if BellSouth had assumed a CLEC would have only one switch per state."

Q_80. What reason does Mr. Milner provide for making the assumption that "a CLEC places a switch in each LATA in which it serves local customers?"

A_80. Mr. Milner's reason for making such an assumption is that it is "conservative."

Q_81. In your opinion, is it reasonable for Mr. Milner's to treat the CLEC-switch-scope as if it is LATAwide?

A_81. No. In my opinion Mr. Milner's decision to reduce the CLEC-switch-scope is unreasonable because it contradicts his testimony that "*typically a CLEC deploys a switch to serve a large area (often an entire state)...it is not unusual for a CLEC to use one switch to serve an entire state.*"

Despite his testimony, he proceeds to divide that statewide scope by the six LATAs in Tennessee. Thus he reduces the CLEC-switch-scope from 100 percent of the state to just 17 percent [100 divided by 6]. Rather than testify to and identify the actual geographic boundaries served by the CLEC switches listed in Ms. Tipton's exhibit PAT-1, Mr. Milner assumes such boundaries. His assumption is a way of dealing with the incumbent's lack of knowledge regarding the actual geographic boundaries of the area served by a CLEC switch.

His reduction of the CLEC switch-scope from 100 percent of the state to just 17 percent parallels Dr. Pleatsikas' decision to reduce the incumbent's local-circuit-switching-market from statewide coverage to 24 individual markets:

> *"That is not to say that UNE Zones 1 in Nashville and Memphis might not be a single market for some CLECs.... [Pleatsikas, page 7,lines 13-19]"*

The decisions of Mr. Milner and Dr. Pleatsikas can be evaluated by considering the TRO's directive to the state commission regarding the evaluation of the potential deployment analysis:

> *"The state commission should consider whether the entire market could be served by this switch."*

This condition, that the switch's geographic scope cover the entire market, must hold if a market is "unimpaired." If the situation were reversed, where the market area is larger than the switch area, then the market is impaired, regardless of economic circumstances. The decisions made by Mr. Milner and Dr. Pleatsikas reveal the incumbent's strategy in the potential deployment analysis: Make the CLEC-switch-scope small and make the market-scope smaller to fit it inside the switch scope, so the state commission perceives the entire market as being served by the switch.

But potential deployment analysis fails for the same reasons that the self-provisioning analysis fails. Neither Dr. Pleatsikas nor Mr. Milner relate their respective constraints on

market size and size of the CLEC switch-scope to the FCC's requirement in the TRO at para. 495:

> *"states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market "*

Mr. Milner's self-described "conservative" assumption obscures the incumbent's lack of knowledge about the actual geographic scope of CLEC's switch.

VI. B. – BellSouth's Analysis Of Competitive Entry Model(BACE) Does Not Account For Incumbent's Strategic Behavior And Its Barriers To CLEC Market Entry

Q_82. Which incumbent witness testifies to the economic circumstances of the potential deployment analysis?

A_82. BellSouth witness Dr. Aron testifies to the economic circumstances of the potential deployment analysis.

Q_83. What is the basis of Dr. Aron's potential deployment analysis?

A_83. Dr. Aron's potential deployment analysis is based on BellSouth's economic model, the BellSouth Analysis of Competitive Entry (BACE). In her testimony from page 5 line 22 to page 6 line 2, Dr. Aron testifies, "I discuss the

economic model...BACE... and how this model accurately captures the analysis required by the potential deployment test."

Q_84. **What economic conditions are described in the FCC potential deployment analysis?**

A_84. The FCC's potential deployment analysis lists several economic conditions in the TRO at paras. 517-520.

Q_85. **What does Dr. Aron testify to regarding the potential deployment analysis?**

A_85. Dr. Aron testifies at page 7 lines 8-14:

> *" .there are 24 relevant geographic markets in Tennessee. I understand that the FCC's switching triggers are met in 4 of those markets. Applying the 'potential deployment' methodology to the remaining 20 markets leads to the conclusion that CLECs are not impaired without access to BellSouth's unbundled switching in an additional [three] of those markets .."*

Q_86. **What is your opinion of Dr. Aron's conclusion?**

A_86. My opinion is that Dr. Aron's conclusion is not reasonable because it relies on the CEA, a geographic measure of a wireless market rather than the wireline competition between the incumbent and the CLECs. Therefore, Dr. Aron's conclusions suffer from the same flaws as Dr. Pleatsikas' testimony.

My opinion is to disregard Dr. Aron's testimony and her conclusion that there is "no impairment" in the 3 geographic areas she identifies.

Q_87. **What does Dr. Aron testify to regarding the BACE model's capacity to account for the economic barriers to entry that confront a CLEC?**

A_87. Dr. Aron testifies at page 20, lines 4-5, that BACE accounts for all barriers:

> *"Q. Does the BACE model incorporate the economic barriers to entry that may be relevant to CLEC entry, as discussed by the FCC?*
>
> *"A Yes As Mr. Stegeman testifies, the BACE model considers all relevant costs, whether sunk or recoverable, of entry and operation of a CLEC. In addition...the model incorporates the effects of customer churn, of customer acquisition costs, of 'first mover advantages'. including the assumption that the entrant will, even after ten years, achieve only a relatively small share of the market "*

Q_88. **What does Mr. Stegeman testify to regarding the BACE model's capacity to account for the economic barriers to entry that confront a CLEC?**

A_88. Mr. Stegeman testifies at page 49, lines 11-13:

> *"BACE is designed to allow the user to capture all likely potential costs corresponding to CLEC entry.*

And at page 51 lines 9-11:

> *"BACE is designed to be able to capture all of the costs of the CLEC, whether these represent cost disadvantages, or cost advantages (vis-à-vis an ILEC)."*

Q_89. **Do you agree with Dr. Aron's and Mr. Stegeman's assessment that the BACE model accounts for all barriers to CLEC market entry?**

A_89. No. I disagree with their assessments. The BACE model does not consider all relevant barriers to entry.

The BACE model does not account for incumbent's strategic behavior towards its competitors via the incumbent's termination charges on its customers who would switch service to the CLEC when it is the lower-cost service provider to the customer.

In the TRO at para. 75 the FCC said the CLEC could face several barriers and specifically identified termination fees as a barrier if the fees prevented the customer from moving its service to a CLEC. My direct testimony points out that the incumbent's response to the CLECs has been composed of special tariffs, promotions, and contracts which lower the incumbent's prices to its current and new customers and that termination charges are a fundamental feature of the incumbent's tariffs and long-term contracts.

The testimonies of Dr. Aron and Mr. Stegeman do not address customer behavior in the face of the incumbent's termination charges, nor their impact on the CLEC business case which they have created to demonstrate that CLECs can enter a market.

Q_90. **In your opinion, is there any place in BACE where termination charges are modeled?**

A_90. In my opinion there is no place in BACE for modeling termination charges and their impact on customer behavior, despite the first impression that BACE might give.

For example, BACE has two likely places which at first glance may seem the place to handle termination charges. From page 49 line 12 to page 50 line 23, Mr. Stegeman testifies:

> *"Below I list the cost items specifically mentioned in the TRO, and how each item is incorporated into BACE."*
>
> *"11) taking into consideration ... other costs associated with transferring the customer's service over to the competitor (TRO, ¶ 520) - Incorporated into table Cost Input Network."*
>
> *"12) taking into consideration ... the impact of churn on the cost of customer acquisitions (TRO, ¶ 520) - Incorporated into table Churn and table Cost Input Network."*

And at page 142:

> *"NonRecurring Cost which is incurred once per unit (e.g.,sales acquisition costs, where the unit is a customer)"*

But neither item addresses the impact of termination fees on customer behavior or on the CLEC.

Consider the issues I raised in my direct testimony regarding BellSouth's three-year contract with Captain D's that became effective in November 2003: BellSouth's long-term contract gives that mass market customer at

least a 45 percent discount at Captain D's restaurants in Chattanooga, Knoxville, Memphis and Nashville. BellSouth decreased its monthly price for Captain D's to $22 from approximately $41. If by chance a CLEC could offer Captain D's a similar service tomorrow for $17 a month across all four cities, either Captain D's or the CLEC will have to pay the termination liability of $47, which is calculated in Schedule 3 of my direct testimony.

Q_91. **How do you know that the $47 will have to be paid to the incumbent?**

A_91. I know the $47 will have to be paid because the incumbent's letter of November 4, 2003 regarding the Captain D's contract says "*BellSouth will continue to construe the termination liability provisions contained in its related tariffs,*" which implies that the incumbent will enforce the termination provisions in the contract.

Therefore, one way to approach the termination problem within the BACE model is to assume the CLEC pays the $47 and that this amount is treated as "churn" or as "other costs associated with transferring the customer's service." But regardless of the specific treatment, it is appropriate to consider what this does to the CLEC's customer acquisition cost.

Q_92. **Does an incumbent witness provide estimates of the CLECs' customer acquisition costs?**

A_92. Yes. Dr. Aron's exhibits DJA-06 and DJA- provides customer acquisition costs for various

CLECs. If these CLECs were to pay the $47 for the incumbent's termination charges on Captain D's, then the CLECs' customer acquisition cost increases substantially, as I have already shown in my rebuttal testimony at answer 11 on pages 10-11.

But these cost increases are not due to any cost the incumbent has actually incurred. These increases represent the incumbent's recovery of monopoly profit that had been given up to prevent the customer from dropping the incumbent's service and picking up the CLEC's service.

But why would the CLEC pay the termination charge in the first place? The rational CLEC would pass over the customer bound by the incumbent's termination charge and move on to termination-free customers, if there were any.

The large increases in customer acquisition cost perfectly explain why the FCC designated the incumbent's termination charges a barrier to CLEC market entry. Such charges:

- prevent the customer from making the normal economic choice of taking service from the CLEC when the customer would benefit;

- prevent the CLEC from achieving the profits that would keep the CLEC in the market as the consumer's continuing and long-term alternative to the incumbent;

- give the incumbent an incentive to create termination liability for any customer who could be contested by the CLECs;

- give the incumbent an incentive to seek regulatory treatment in Tennessee that treats termination liability as a normal cost of CLEC competitive entry, despite the FCC's decision that the incumbent's charges are a barrier to CLEC entry;

- represent the recovery of monopoly profit by the incumbent.

BACE provides no recognition of these issues, and BACE provides answer to the question: why would the CLEC pay the termination charge for the termination-bound customer?

Q_93. **In your opinion, why does BACE not address the issues you have raised here in and in your direct testimony?**

A_93. In my opinion BACE does not address these issues because there is no reason to expect the incumbent to criticize itself by modeling its very own commercial system of tariffs and contracts to assess the impact of that system's termination charges on its customers and on the CLECs.

Q_94. **In your opinion, do the CLECs have the luxury of serving only those the customers who are the "cream of the crop?"**

A_94. No. I do not agree that CLECs have that "cream of the crop" advantage. To assume that the CLECs have such an advantage is to ignore the incumbent's strategic behavior.

For example, Dr. Aron testifies that the CLECs capture and "target attractive customers selectively."

In her testimony at page 22 lines 3-22, Dr. Aron says:

> *"The ability to target attractive customers selectively is one such advantage that CLECs have exploited in reality and is highlighted in the TRO.. For example, suppose a CLEC determines that it is only profitable to sell to customers who spend at least $60 on local service, features, and long- distance service. The CLEC would then enter the market with a $60 service bundle so that, by self_selection, most of the customers acquired would be profitable. Without a segmentation of customers based on their level of spending, it would be impossible to take into account this kind of 'cream skimming' that an efficient CLEC could perform "*
>
> *"As described by Mr Stegeman, the BACE model reflects both the granular differences in customer spend and the potential for targeting opportunities by dividing the customer base into seventeen segments....Each geographic market (that is, UNE zones subdivided by CEAs, as discussed in Dr Pleatsikas's testimony) is then allocated the appropriate number of customers from each segment to reflect the actual economic profile of that market."*

Q_95. What is your opinion of Dr. Aron's "$60 targeting" example?

A_95. In my opinion Dr. Aron's "$60" "cream-skimming" example is wrong because it does not reflect the evidence of the incumbent's day-to-day commercial strategic behavior which prevents the CLEC from acquiring the $60 dollar customer in the first place.

Q_96. Is Dr. Aron's opinion echoed by other BellSouth witnesses?

A_96. Yes. Dr. Aron's opinion is echoed by Dr. Pleatsikas, who also describes the CLECs' ability to target customers:

> *"..AT&T takes a targeted approach to market entry and enters only those areas where its UNE_P costs are at a 45 percent (or greater) discount to retail prices." [Pleatsikas, page 6 lines 19-21]*

Q_97. What is your about Dr. Pleatsikas and Dr. Aron's conclusions regarding the CLECs targeting of customers?

A_97. In my opinion Dr. Pleatsikas and Dr. Aron's opinions are not well-taken because they do not consider the incumbent's strategic response. For example, the incumbent has already offset AT&T's 45 percent margin described by Dr. Pleatsikas.

Once again, consider the BellSouth's three-year contract with Captain D's that became effective in November 2003.

BellSouth's long term contract gives that mass market customer at least a 45 percent discount, by decreasing Captain D's monthly price from $41 to $22 in Chattanooga, Knoxville, Memphis

and Nashville. Thus the incumbent has removed the 45 percent margin that Dr. Pleatsikas refers to.

Now consider Dr. Aron's testimony about timing and cash flows.

> *".. a business case analysis must identify the amount and timing of cash flows, and the method for calculating the present value of those cash flows....By timing, I mean that the business case analysis must recognize and properly account for the fact that competitive entry is a long-term proposition. It is common to model the business in question for at least 10 years" [Aron, public testimony, page 12 lines 8-15].*

Since 1998 the incumbent's strategic behavior and its associated termination charges have been a regular feature of the incumbent's commercial response to the CLEC's market entry in Tennessee. The incumbent's strategic behavior and its termination charges already have a 6 year history in Tennessee and can be expected to have a life at least equal to the 10 year life of the CLEC in the BACE model.

The incumbent's behavior is likely to last as long as CLECs are present. Thus the CLECs' amount and timing of cash flows must be set to zero for at least 10 years with regard to customers bound by the incumbent's termination liability.

But BACE does not model this aspect of the incumbent. There is no procedure to estimate the proportion of incumbent-customers or the proportion of customers in Tennessee who have

termination liability to the incumbent in the event they switch their service to a CLEC.

My opinion is to disregard Dr. Aron's conclusion of "no impairment" in the three areas she identifies.

VII. Incumbent's Contracting and Pricing Behavior Treats Most Of Its In-Tennessee Local-circuit-switching-market As A Single Market.

Q_98. **What evidence suggests the incumbent treats its in-Tennessee local-switching-market as a single market?**

A_98. In my opinion tariff TN03-E612-00, which is the contract between the incumbent and Captain D's of November 2003, is strong evidence that Chattanooga, Knoxville, Nashville, and Memphis constitute a single market for the incumbent and the CLECs.

The contract is surrounded by the following facts with regard to Chattanooga, Knoxville, Nashville, and Memphis:

- Captain D's pays the same retail monthly price of $22 in each of its restaurants in the four areas;

- the monthly retail price is the same from month-to-month and covers the incumbent's monthly cost of serving Captain D's at each restaurant in each of the four areas;

- the monthly price of $22 is a 45 percent reduction from the incumbent's standard retail price;

- the incumbent has testified that one CLEC, AT&T, "takes a targeted approach to market entry and enters only those areas where its UNE_P costs are at a 45 percent (or greater) discount to retail prices;"

- the match between the CLEC's 45 percent profit margin and the incumbent's 45 percent price reduction, as well as the termination charges, proves the incumbent's contract is a strategic response to deter and prevent CLEC market entry by eliminating or reducing the CLECs' profit margin, as I testified in my direct testimony of January 16, 2004;

- the sameness of the incumbent's prices and costs for Captain D's, and the gathering of the Captain D's restaurants into single contract for Chattanooga, Knoxville, Memphis, and Nashville suggests these areas are not individual markets but a single, unified market being contested by the incumbent and the CLECs.

This concludes my rebuttal testimony at this time.

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