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Witness: Gary A. Fleming
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SOUTHWESTERN BELL TELEPHONE, L.P. D/B/A

SBC MISSOURI

CASE NO. TO-2004-0207

REBUTTAL TESTIMONY

OF

GARY A. FLEMING

St. Louis, Missouri

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

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

AFFIDAVIT OF GARY A. FLEMING

STATE OF TEXAS

COUNTY OF COLLIN)

I, Gary A. Fleming, of lawful age, being duly sworn, depose and state:

1. My name is Gary A. Fleming. I am presently a consultant to SBC Management Services, L.P.

2. Attached hereto and made a part hereof for all purposes is my Rebuttal 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.

Gary A. Fleming

Subscribed and sworn to before me this 9th day of January, 2004.

DEBORAH J. STEHLING
NOTARY PUBLIC
STATE OF TEXAS
My Comm. Exp. 07-24-06

Notary Public

My Commission Expires:

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I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Gary A. Fleming. My address is 6820 Creekside Ln., Plano, Texas, 75023.

Q. ARE YOU THE SAME GARY FLEMING THAT SUBMITTED DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. I will address matters raised by various parties taking issue with SBC Missouri positions that (1) Metropolitan Statistical Areas (MSAs) are the most appropriate geographic market definition for the purpose of the Commission's switching impairment analysis for the mass market, and (2) the Missouri Commission should adopt the FCC's 4 line "DS0 cutoff" to distinguish mass market customers from enterprise customers. SBC Missouri's proposal is to utilize the FCC recommended cutoff for defining enterprise market customers as those with 4 or more DS0 lines at a location.

Specifically, I will address portions of the direct testimonies of Christopher C. Thomas and Walter Cecil of the Missouri PSC Staff; John F. Finnegan on behalf of AT&T; Joseph Gillan on behalf of the CLEC Coalition; August H. Ankum on behalf of MCI; Michael Starkey and Robert W. McCausland on behalf of Sage Telecom; and Mark Harper and James M. Maples on behalf of Sprint.

In addition, several CLECs have introduced testimony on other issues beyond those designated for Phase I. Although raising theses issues is inconsistent with the Commission's procedural order, I feel compelled to respond, but will do so only in a general and brief fashion. I will fully address such matters in Phase II in accordance with the Commission's procedural order.

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. **Geographic markets**. My rebuttal testimony, and that of Dr. Tardiff, explains why SBC Missouri, CenturyTel and Sprint's proposal for defining the geographic market as an MSA is the most appropriate, and why proposals for other geographic market definitions should be rejected. For example, the MCI proposal of geographic markets being set at the wire centers level is not in compliance with the market definitional requirement of the FCC's Triennial Review Order (TRO)[1]. AT&T's proposal that geographic markets can only be defined after a full impairment analysis completely ignores the process outlined in the TRO, and the Missouri Commission's procedural order in this case. And while Staff's proposal to use exchanges recognizes that the market is larger than an individual wire center, it nevertheless results in a wire center approach outside the central exchange in each metropolitan area, which does not reflect the realities of the marketplace and should be rejected.

[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"), ¶ 495.

DS0 cutoff. Some parties have proposed a DS0 cutoff ranging from 10 DS0s to 13 DS0s. The CLEC intent is plain: Having elected not to challenge the lack of impairment with regard to switching for enterprise customers, the CLECs now try to define the mass market as broadly as possible, hoping to obtain a finding of impairment and thus perpetuate their use of unbundled switching to serve a large number of business customers. Their analysis, however, has several significant errors, the most noticeable of which is that they focus on the relative costs to provision multiple DS0 lines versus the use of a DS1 loop without taking into account the increased revenue opportunities that come with providing service over a DS1 loop. Those increased revenues, however, are a critical part of any meaningful analysis of the DS0 cutoff, which is why the FCC required that they be included in the cutoff analysis. As a result, the CLECs have failed to present anything close to the "substantial evidence" that the FCC requires in order for the state commission to find that the its default DS0 cutoff of 4 lines, which is the cutoff proposed by SBC Missouri, is unreasonable.

Phase II issues. Several parties raise issues that are not consistent with the Commission's order for Phase I proceedings, but rather should be raised, if all, in Phase II of the Commission's proceedings. These issues include attempts to rewrite the FCC's criteria for "trigger" CLECs and the FCC's impairment analysis process. I address these briefly in my testimony to demonstrate their inconsistency with the FCC's rules. I will address these issues more fully to the extent they are raised in Phase II.

Q. IS SBC MISSOURI SUBMITTING OTHER PIECES OF REBUTTAL TESTIMONY?

A. Yes. Dr. Timothy Tardiff will address the proper definition of the geographic market.

II. DEFINITION OF GEOGRAPHIC MARKETS

Q. WHAT GEOGRAPHIC MARKETS HAS SBC MISSOURI PROPOSED?

A. Based on the evidence and the analysis presented in my direct testimony and Dr. Tardiff's direct testimony, SBC Missouri has proposed Metropolitan Statistical Areas (MSAs) as the proper geographic markets that best meet the FCC's rule.

Q. WHAT GEOGRAPHIC MARKETS HAVE THE CLECS PROPOSED?

A. There are a number of proposals. AT&T, Birch and Z-Tel (Mr. Gillan) do not provide a recommendation but suggest that consideration of UNE-P competition prompts the consideration of relatively large geographic market areas such as the LATA. MCI (Dr. Ankum) and Sage (Mr. McCausland and Mr. Starkey) propose wire centers. Sprint, which has ILEC, CLEC and wireless interests in Missouri, (Mr. Harper) proposes MSAs. CenturyTel, another ILEC in the state, supports the use of MSAs. Staff (Mr. Thomas and Mr. Cecil) proposes the use of exchanges.

Q. HOW DO YOU RESPOND TO THESE PROPOSALS?

A. Dr. Tardiff, the expert economist testifying on behalf of SBC Missouri, addresses these proposals in detail in his reply testimony. I will also provide testimony in response to a number of the issues raised in the CLEC testimony.

Q. WHAT DATA DID YOU USE TO SUPPORT MSAS AS THE PROPER GEOGRAPHIC MARKET?

A. As explained in detail in my direct testimony, I provided verifiable data regarding CLEC switches, the CLECs' use of unbundled loops with their own switches, CLECs' collocation and EEL arrangements, CLECs' ported numbers, CLECs' NXX codes, and testimony regarding the geographic coverage capabilities of CLEC switches. These facts not only demonstrate the location of customers currently being served by CLEC switches, but are also indicative of the CLEC's ability to serve mass markets profitably and efficiently using the scale and scope economies included in the Triennial Review Orders directions for defining geographic markets. I also addressed the variations in factors affecting CLECs' ability to serve customers within the MSA through examination of data associated with variations in UNE loop rates and retail rates, access lines and the capabilities to provide adequate collocation space.

Q. DOES COMMISSION STAFF WITNESS CECIL MISINTERPRET YOUR PROPOSED USE OF AN MSA AS THE APPROPRIATE MARKET DEFINITION?

A. Yes. On page 9 of his testimony, Mr. Cecil suggests that using the MSA is too broad because it might result in a finding of non-impairment for exchanges in small ILEC service territories. His specific example suggests that a finding of non-impairment for the St. Louis MSA would impose a finding of non-impairment in the Steelville exchange of Huzzah where there have been no claims of competition. However, a finding of non-impairment in the St. Louis MSA for SBC Missouri UNE switching would only apply to

the unbundling of SBC Missouri's switching in SBC Missouri's service territory in the St. Louis MSA. The finding on non-impairment would not apply to Steelville and its Huzzah exchange because they are not SBC Missouri exchanges.

Q. HAVE OTHER PARTIES OFFERED ANY DATA TO SUPPORT THEIR PROPOSALS FOR DEFINING THE GEOGRAPHIC MARKET AREA?

A. The majority of the other parties submitted no supporting data. Mr. Gillan submitted data on UNE-P and UNE-L volumes. Mr. Gillan's Exhibit JPG-2 containing UNE-P data confirms data I submitted in my direct testimony regarding the location of mass market customers and supports the definition of the market at a MSA or higher level. I will discuss other points in Mr. Gillan's testimony later. Mr. Thomas of Staff submitted three attachments with his rebuttal testimony that associate Missouri wire centers with exchanges. One of the attachments, Schedule 2 HC, is a copy of Schedule GAF-2HC from my direct testimony with exchange designations added.

Q. MR. MCCAUSLAND (P. 9), MR. STARKEY (P. 30) AND DR. ANKUM (P. 25) SUGGEST THAT THE GEOGRAPHIC MARKET SHOULD BE DEFINED AS THE WIRE CENTER. DO YOU AGREE?

A. No. Such a narrow definition is not consistent with the TRO's clear requirement 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."[2] As indicated in my direct testimony, it would be hard to conceive of a market narrower than a wire center. From a practical perspective, it would

[2] *TRO* ¶ 495.

be neither efficient nor reasonable for a competitor to serve only an isolated wire center. Further, these claims are not consistent with how CLECs actually enter the markets.

Q. DR. ANKUM AND MR. STARKEY DISCUSS HOW A CLEC MIGHT CONSIDER THE COST OF COLLOCATION WHEN EXPANDING BEYOND THE WIRE CENTER LEVEL AND THE AMOUNT OF REVENUE THAT THOSE CUSTOMERS WOULD PRODUCE. DO YOU HAVE ANY COMMENTS REGARDING THEIR STATEMENTS?

A. Yes. Dr. Ankum appears to be claiming at page 36 of his direct testimony that the Commission cannot define the geographic market without first conducting an economic and operational impairment analysis. He has the analysis backwards. The *TRO* clearly states that the Commission must define the market, then determine if any of the triggers are met in those markets, and then lastly, only if triggers are not met, would the Commission conduct a potential deployment analysis and make a full inquiry into alleged operational end economic impairment.[3] The Missouri Commission followed the FCC's directive in establishing the three phase approach for this case.

I demonstrated in my direct testimony that variations in wire center size, retail rate zones and UNE rate zones would not substantively affect a CLEC's ability to serve mass market customers in Missouri MSAs. But more importantly, Schedule GAF-2HC of my direct testimony shows that CLECs have already collocated in the vast majority of offices throughout the MSAs where CLECs have entered the market with their own switches. Therefore, in the majority of cases CLECs will not have to consider "the sunk cost that must be incurred to establish the collocation or other arrangements needed to offer

[3] *TRO* ¶ 494.

service in that wire center" as Dr. Ankum claims at page 28 of his testimony, or as "the costs to interconnect – a substantial amount of which are fixed and sunk" as Mr. Starkey testifies at page 31, because they have already made that decision and found, based on their own analysis, that collocation is justified.

Additionally, both Dr. Ankum and Mr. Starkey fail to consider the availability of enhanced extended loops (EELs) as an alternative to a CLEC establishing collocation in every ILEC wire center. Ultimately, every facilities-based provider must make decisions on how to deploy its network taking into consideration a number of factors, including costs. However, the fact that CLECs must incur a cost to provide a network element is not surprising or dispositive.

Q. IN MR. STARKEY'S TESTIMONY STARTING ON PAGE 17, HE REFERS TO FIGURE 1, WHICH SHOWS A CLEC CURRENTLY SERVING THE HOMES IN REGION A, BUT NOT REGION B. DOES THE ABSENCE OF A CLEC'S FACILITIES IN A PARTICULAR AREA INDICATE THAT IT IS IN FACT UNABLE TO SERVE THAT AREA?

A. Of course not. The absence of a CLEC's network in a specific location within the market does not mean that the CLEC is impaired or that it is not economically feasible to serve that location. Business plans for CLECs are likely to vary in their targeted areas and customers within a market and in the speed at which they will expand the reach of their network within that market area. It is not practical to assume that all facility based CLECs would provision their networks to all areas within a market simultaneously.

Moreover, the availability of cheaply priced UNE-P also can serve to discourage expansion as Dr. Tardiff has addressed in his testimony.

Q. STARTING ON PAGE 32 OF HIS TESTIMONY, MR. STARKEY STATES THAT WIRE CENTERS SERVE AS THE BUILDING BLOCK FOR A CARRIER'S MARKET ENTRY. DOES THIS PROVIDE THE BASIS FOR ADOPTION OF WIRE CENTERS AS THE MARKET AREA AS MR. STARKEY ASSERTS?

A. No. Mr. Starkey is correct that wire centers are the place where access to UNEs can take place, and that CLECs make decisions on prioritizing their entry into individual wire centers within a geographic market. However, he confuses the use of wire centers as a building block with the "building" itself, or in this case the market. CLECs may be using these building blocks as the means to deploy their networks to serve mass market customers in the MSA market but they do not use wire centers as the basis of the geographic market.

Q. MR. MCCAUSLAND SUGGESTS ON PAGE 9 OF HIS TESTIMONY THAT THE COMMISSION SHOULD JUST OVERLAY ITS MARKET DETERMINATION FACTORS ON THE ACTUAL EXISTING CLEC NETWORK DEPLOYMENT TO DETERMINE THE GEOGRAPHIC BOUNDARIES IN MISSOURI. IS THIS CONSISTENT WITH THE TRO?

A. No. The TRO asks states to take into consideration a number of factors, including where CLECs are currently serving mass market customers. To define the market solely on the CLEC network status quo as Mr. McCausland suggests ignores the FCC's other factors

and the reality of the market place. It would be analogous to originally defining the geographic market for Starbucks coffee-related products as the 17 locations that were in place at the end of 1987.

Q. DR. ANKUM ASSERTS ON PAGE 26 THAT CLECS WHICH HAVE ALREADY ENTERED A WIRE CENTER MAY BE LIMITED IN THEIR ABILITY TO SERVE CERTAIN CUSTOMERS WITHIN THE WIRE CENTER. DO YOU AGREE?

A. No. It is illogical to conclude that a CLEC can be impaired on a customer by customer basis within a wire center where it has 1) purchased a switch, 2) established collocation, 3) purchased and installed equipment in its collocation space for access to UNE loops, and 4) acquired transport back to its switch. Dr. Ankum uses hot cuts as an example of such a limitation when he knows that this Commission has already been charged with implementing a batch cut process which would eliminate any such impairment (if in fact impairment ever existed). Perhaps Dr. Ankum feels taking this position will make his proposal of defining the geographic market at the individual wire center level appear to be a reasonable compromise. Nevertheless, Dr. Ankum's statements simply underscore the freedoms CLECs enjoy in targeting the most profitable customers as noted by the DC Court of Appeals in its USTA decision[4].

[4] *United States Telecom Ass'n v. FCC,* 290 F3d 415, 422. (DC Cir. 2002) ("USTA").

Q. PLEASE COMMENT ON DR. ANKUM'S DISCUSSION AT PAGE 19 OF THE RELATIONSHIP BETWEEN THE SWITCH LOCATION AND THE MARKET DEFINITION?

A. Dr. Ankum is correct in stating that from a technical perspective a switch need not be physically located in the geographic market it is serving. I demonstrated in my testimony that some CLEC switches assigned Missouri NPA-NXXs are located in other states. However, Dr. Ankum draws an incorrect conclusion and misleads the Commission when he suggests that the Commission should not focus on the physical area that a switch is capable of serving when establishing the geographic markets.

This switch serving capability is directly relevant to two of the TRO considerations for market determination: 1) the ability of competitors to serve the market economically and efficiently using currently available technologies, and 2) the direction that markets should not be defined so narrowly that 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. Clearly, CLECs would not invest considerable funds to purchase switches, as they have done in Missouri, with the intention of serving a single wire center. In fact, MCI's Vice-President of Federal Advocacy stated in a January 8, 2003 letter to the FCC, "[s]witching, for example, has high fixed costs that must be spread over a large number of customers if a competitive carrier is to achieve cost efficiencies to those enjoyed by the incumbent LECs. To use its switch efficiently, a competing carrier must therefore be able to aggregate traffic from customers served out of multiple incumbent LEC central

offices and transport that traffic to the switch in a cost-effective manner."[5] It is clear that MCI recognizes that switches are deployed to serve customers over a much larger area than a single wire center.

Q. AT PAGE 30 OF HIS TESTIMONY, DR. ANKUM QUOTES A CONNECTICUT DEPARTMENT OF PUBLIC UTILITY CONTROL (DPUC) ORDER TO SUPPORT HIS CLAIM THAT THE GEOGRAPHIC MARKET SHOULD BE DEFINED AT THE WIRE CENTER LEVEL. IS DR. ANKUM CORRECT?

A. No. While Dr. Ankum accurately quoted from the Connecticut October 8, 2003 procedural order, that order does not support his claim. On December 10, 2003 the Connecticut DPUC issued a ruling in response to a Petition for Reconsideration in which the Department stated, "the Department concludes that *data collection* at the wire center level is necessary" for conducting its trigger analysis, but that it had not concluded that wire centers themselves are the right geographic market. See Schedule GAF-Rebuttal 2 for a copy of the complete DPUC ruling.

This ruling shows that the Connecticut DPUC has not designated the wire center as the geographic market for the trigger analysis, but rather is requiring that data be collected at the wire center level for purposes of conducting that analysis. As shown in the attachments to my direct testimony, where wire center level information was available, SBC Missouri has already collected and presented data at that level for Missouri. This data, as explained in Dr. Tardiff's and my testimony, demonstrates that the appropriate geographic market is the MSA.

[5] http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6513401681

Q. DR. ANKUM STATES AT PAGE 41 THAT MSA BOUNDARIES ARE VARIANTS WHILE CENTRAL OFFICE BOUNDARIES DON'T CHANGE EXCEPT FOR THE ADDITION OF NEW CENTRAL OFFICES. IS HE CORRECT?

A. No. First, while MSA boundaries can change, they tend to change infrequently with significant changes occurring with the census schedule interval of every 10 years. There can be changes in intervening years, but they are infrequent and generally less significant. At any rate, as I noted in my direct testimony, the Commission can address that by simply freezing the market boundaries based on the current MSA definitions.

Dr. Ankum is mistaken in saying that wire centers do not change. In fact wire center changes, while also not frequent, are not uncommon. New housing subdivisions, major road work, and feeder cable capacities and locations are all factors that can trigger such a change in wire center serving plans.

Q. DOES MR. MCCAUSLAND'S TESTIMONY ON SAGE'S MARKETING PROCESS SUPPORT HIS POSITION THAT THE GEOGRAPHIC MARKET SHOULD BE DEFINED AT AN INDIVIDUAL WIRE CENTER LEVEL?

A. No. Mr. McCausland at page 6 indicates that Sage uses NPA-NXX combinations to target "many of the suburban areas spread across SBC Missouri's operating area." Further, as demonstrated in Schedule GAF-Rebuttal -1HC, while Sage may refocus its efforts in those areas where initial customer response to its marketing exceeds average customer response rates, it has more than an incidental amount of customers in most of

the wire centers within the MSAs where other CLECs have entered using their own switches.

Q. DO YOU CONCUR WITH MR. STARKEY'S DIRE ASSESSMENT AT PAGE 36 OF HIS TESTIMONY OF THE POSSIBLE CONSEQUENCES OF AN INAPPROPRIATE FINDING OF NON-IMPAIRMENT IN TOO LARGE OF A MARKET AREA?

A. No. First, Mr. Starkey's worst case scenario assumptions are not realistic. As indicated in my direct testimony, CLECs have already established collocation and are using switches to serve local customers in over 80% of the wire centers in the 3 MSAs where they have entered the market. This means that these CLECs have already incurred the fixed costs that Mr. Starkey referenced earlier, and as the WorldCom study referenced in the TRO footnote 1568 indicates, the cost to provide local service is significantly reduced if the competitor already has its own switching and collocation in place. Second, these wire centers account for well over 95% of the residential and business UNE-P lines within these 3 MSAs. Moreover, the 4-5% of UNE-P lines remaining can be served via UNE-L through collocation or EELs. Finally, as I noted earlier, the FCC has explicitly stated that its impairment analysis is to consider an efficient CLEC serving a full range of customers with its own facilities and not a subjective, individualized assessment of CLECs such as Sage who have not invested in their own networks, but rely solely on UNE-P and who have focused on a narrow market segment [6].

[6] TRO ¶ 115.

Q. WHAT IS STAFF'S RECOMMENDATION REGARDING GEOGRAPHIC MARKET AREAS?

A. Staff recommends that the Commission adopt exchanges as the geographic market areas in Missouri.

Q. ARE THERE ANY CORRECTIONS THAT NEED TO BE MADE TO THE SCHEDULES ATTACHED TO STAFF'S TESTIMONY?

A. Yes. Mr. Thomas's Schedules 1HC, 2HC and 3HC show the Fair Grove (FRGVMOPL), Nixa (NIXAMOAA), Republic (RPBLMOPE), Rogersville (RRVLMOPL) and Willard (WLRDMOSH) wire centers as separate exchanges, but they should be included in the Springfield exchange. Similarly, three other wire centers are shown as their own exchanges rather than part of another exchange: the Blue Springs wire center (BLSPMOCA) is part of the Kansas City exchange; the Weldon Springs (WDSPMO01) wire center is part of the Harvester exchange; and the Sunrise Beach (SNBHMOFR) wire center is part of the Gravois Mills exchange.

Q. DO YOU AGREE THAT EXCHANGES ARE APPROPRIATE FOR USE AS GEOGRAPHIC MARKETS?

A. No. If as Staff concludes, grouping certain wire centers within portions of these metropolitan areas makes sense, then it would make equal sense to extend that aggregation to other wire centers within the same metropolitan area that obviously share strong economic and social ties. Staff fails to consider the existence of the Metropolitan Calling Area (MCA) Plan, which exists in the St. Louis, Kansas City and Springfield

MSAs. The MCA areas are larger than the respective exchanges and have strong economic and social ties to those exchanges, as well as consistency with how CLECs provide service.

Q. DOES STAFF ENDORSE WIRE CENTERS AS APPROPRIATE MARKET AREAS?

A. No. Staff recognizes that use of wire centers would result in carriers facing limited scale and scope economies available in larger markets (See Staff witness Cecil's Rebuttal Testimony, pages 8-9). But ironically, the Staff proposal yields just this kind of limited scale and scope economies for those wire centers within the metropolitan area, yet outside of the metropolitan exchange. For example in the St. Louis metropolitan area, it would result in the exclusion of metropolitan wire centers such as Chesterfield, Manchester and Fenton, which can hardly be considered isolated or remote. In fact, of the 160 exchanges in SBC Missouri's serving area 149 (93%) are single wire center exchanges. This demonstrates that Staff's proposal results in a wire center definition for the majority of the state, which Staff itself indicates does not meet the scale and scope economy requirements established by the FCC, and is therefore inappropriate for defining a geographic market.

Q. ARE THERE STEPS THAT COULD BE TAKEN TO IMPROVE THE STAFF APPROACH WITHIN THE METROPOLITAN AREAS?

A. Yes. While SBC continues to believe that MSAs provide the appropriate grouping of wire centers due to the strong economic and social ties, extending the Staff's proposed market area boundary to include the MCA tiers would provide a way to balance Staff's

concerns between maintaining scale and scope economies and avoiding the risk of remote or rural exchanges being underserved.

III. THE DS0 CUTOFF

Q. WHAT IS THE DS0 CUTOFF?

A. As explained in my direct testimony beginning at page 24, the DS0 cutoff serves to distinguish a mass market customer from an enterprise customer. SBC Missouri proposes a DS0 cutoff of 4 DS0s, meaning that a customer with 4 or more DS0s at a location would be in the enterprise market, while a customer with 3 or fewer DS0s would be in the mass market. This is the same default cutoff the FCC has used for density zone 1 in the top 50 MSAs.

Q. WHAT DS0 CUTOFF DO THE OTHER PARTIES IN THIS PROCEEDING PROPOSE?

A. Dr. Ankum (Direct p. 42) on behalf of MCI indicates that he is unable to recommend a cutoff at this time, as does Mr. Gillan on behalf of Birch and Z-Tel (Direct p.4). Mr. McCauland and Mr. Starkey on behalf of Sage similarly do not propose a cutoff but suggest that the mass market and enterprise markets should be defined by the present serving arrangements with those served by DS0 loops being in the mass market and those served by DS1 and higher in the enterprise market. Mr. Maples on behalf of Sprint (direct p.7) proposes a cutoff defining the ceiling of the mass market at 10 DS0s, which equates to a cutoff of 11 for defining the enterprise market. Mr. Finnegan on behalf of AT&T (direct p.2) recommends a cutoff off 13 DS0s defining the enterprise market. CenturyTel recommends use of the FCC's default level of 4 DS0s.

Q. HAVE ANY OTHER CLECS PROVIDED INPUT ON THE DEFINITION OF THE GEOGRAPHIC MARKET?

A. Yes. Based on its highly confidential response to a data request, it appears that Allegiance Telecom treats end user locations with four or more business lines to be part of the mass market, which is consistent with SBC Missouri's view. A copy of Allegiance Telecom's DR response is attached as Schedule GAF-Rebuttal 3HC.

Q. HAVE YOU REVIEWED THE TESTIMONY OF MR. JOHN FINNEGAN ON BEHALF OF AT&T REGARDING THE DSO CUTOFF?

A. Yes. The Commission should reject Mr. Finnegan's analysis because it does not comport with the requirements set forth in the FCC's order.

Q. WHAT ARE THE MAJOR FLAWS IN MR. FINNEGAN'S ANALYSIS?

A. His analysis, which contains a number of problem areas, suffers from two major flaws. First, he compares the costs a CLEC would incur in providing service over a UNE-P and in providing service over a DS1 loop. Second, he completely fails to consider the additional revenues a CLEC could expect to achieve when serving a customer through a DS1 as opposed to multiple DS0s.

Q. WHY IS IT WRONG TO CONSIDER UNE-P COSTS IN DETERMINING THE DS0 CUTOFF?

A. Essentially, Mr. Finnegan is asking when it would make economic sense for a CLEC to serve customers through its own switch and a DS1 loop as opposed to using multiple

UNE-Ps at TELRIC-based prices. That is the wrong question. The question the FCC asks is at what point, *all else being equal*, a CLEC should elect to serve a customer through a DS1 rather than multiple DS0s. Mr. Finnegan's assumption that DS0s will be part of very low-priced UNE-Ps puts a heavy thumb on one side of the scale and makes his comparison meaningless. As the D.C. Circuit Court of Appeals recognized, one cannot compare TELRIC-based prices to non-TELRIC prices and then claim that unbundling is justified because the non-TELRIC prices are higher.[7] Yet that is very similar to what Mr. Finnegan has done. Under the FCC's economic analysis, the appropriate comparison would be between the cost and revenues of serving customers using a basic UNE-L and a UNE DS1 loop. The FCC's clear directive is to analyze the economic crossover point between serving customers with multiple DS0 "loops" and serving customers with a DS1 "loop." Throughout paragraph 497 of the TRO, the FCC refers to the analysis as applying to "mass-market customers," and also refers to "DS0 loops." The FCC never refers to a crossover point between UNE-P and DS1 loops.

Q. CAN YOU EXPLAIN WHY MR. FINNEGAN WAS WRONG IN FAILING TO CONSIDER A CLEC'S INCREASED REVENUE OPPORTUNITIES FROM PROVIDING SERVICE OVER A DS1 LOOP?

A. The other significant error in Mr. Finnegan's analysis, and in the analysis performed by other CLEC witnesses, is the failure to include revenues gained by serving a customer over a DS1 loop rather than multiple DS0s. The FCC's rules couldn't be clearer:

> *Specifically*, in establishing this "cutoff," the state commission shall take into account the point at which the *increased revenue opportunity* at a single location is sufficient to overcome impairment and the point at which

[7] *USTA*, 290 F.3d at 424 n.2.

> multiline end users could be served in an economic fashion by higher capacity loops and a carrier's own switching and thus be considered part of the DS1 enterprise market.[8]

Additionally, it just makes sense. Although I am not an economist, simple logic would say when a firm is determining the most economic way to provide service to customers, it must consider the revenues gained by the various service provisioning methods. Not including potential revenues in the analysis would be analogous to a trucking company comparing the cost of multiple pickup trucks to that of a large tractor-trailer truck, but ignoring the fact that the larger truck has the ability to carry large or heavy cargo that a pickup truck is not capable of hauling, even though that new ability provides additional opportunities for the firm to gain previously unattainable business. The same principle applies to the difference between providing service via DS0 loops and providing service over high-capacity DS1 loops. The analysis must take into account the added revenues the CLEC can obtain by providing the higher capacity services that DS1 loops can provide but DS0 loops cannot. The analysis attached to my direct testimony, Schedule GAF-6, takes into account both costs and revenues.

Q. WHAT IS YOUR ASSESSMENT OF MR. FINNEGAN'S CALCULATIONS?

A. Mr. Finnegan takes an inappropriate approach in using UNE-P figures that not surprisingly result in calculations that are also of limited value. For example, his calculations would have no meaning in a wire center where unbundled switching is not available. In those instances, where Mr. Finnegan would not be able to depend on this inappropriate comparison, the cutoff point would obviously be lower.

[8] 51.319(d)(2)(iii)(B)(4) - emphasis added.

Q. DID YOU FIND OTHER PROBLEMS WITH THE ASSUMPTIONS USED IN MR. FINNEGAN'S ANALYSIS?

A. Yes. Listed below are a number of instances where Mr. Finnegan's assumptions are flawed and only serve to drive the cutoff point higher:

1) Mr. Finnegan uses a 24-month amortization rate. This assumes a churn rate of 4.17% per month for small business customers with DS1 loops, which is excessive. My testimony cited an external source of churn rates for CLECs targeting small business customers.[9] The churn rates were typically less than 1% per month.

2) Mr. Finnegan's equipment costs are excessive. First, he uses the cost of an AdTran750, which includes sophisticated capabilities to integrate both data and voice for an application in which he assumes that only voice is being served. While I have not searched the internet for other equipment, it stands to reason that a more basic channel bank unit would suffice. Second, his costs, even including costs for backup power, are too high. Using a simple internet search, prices for such a system through NexTag.com yielded an average cost of $1485, which is considerably lower than his suggested cost of $2212.70. Third, the assumption of backup power for all customers is inappropriate. If the customer has power backup for its LAN and PBX, it can use this backup power source for the IAD as well. If the customer has no backup for either then it will not need additional backup when its voice and data are provided over a DS1 loop.

[9] See Direct Testimony of Gary A. Fleming, Schedule GAF-6, Page 6

3) Mr. Finnegan included CPE installation and removal costs, yet his analysis ignores the installation charge revenues that would recoup these costs, and in doing so, skews the results.

4) Mr. Finnegan uses a marketing cost differential that is both unsubstantiated and unreasonable. He attempts to apply the costs for marketing to a large national enterprise customer such as Bank of America to the low end of the enterprise market such as a medium or small local law firm. This is clearly inappropriate.

Q. ARE THERE STILL OTHER PROBLEMS IN MR. FINNEGAN'S ANALYSIS?

A. Yes. Some of the UNE costs Mr. Finnegan includes in his analysis do not reflect SBC Missouri's 271 Interconnection Agreement (M2A) prices. Listed below is a comparison of Mr. Finnegan's costs and the M2A prices.

Zone	Finnegan	M2A[10]
UNE-P		
1	16.60	17.15
2	22.84	23.86
3	25.27	26.69
4	21.55	22.65
UNE DS1 Loop NRC		
All	123.77	102.47
Loop Cross Connect DS1 NRC		
All	45.03	60.04

Further, Mr. Finnegan chose not to include nonrecurring rates for UNE-P (the loop NRC is $19.55 for the first and $8.32 additional, and the port NRC is $1.27 for the first and additional). While these are not large numbers, they nevertheless should have been included in his ill-conceived and clearly biased analysis.

[10] M2A, Appendix Pricing UNE, Schedule of Prices, 06/27/03

Q. WHAT CROSS OVER POINT WOULD MR. FINNEGAN'S ANALYIS METHODOLOGY YIELD IF M2A PRICES AND MORE REALISTIC ASSUMPTIONS HAD BEEN MADE?

A. Correcting the UNE prices noted in the previous question and the assumptions addressed above would result in a weighted average cross over using Mr. Finnegan's own analysis model of 9.6 or 10 DS0s. Even using a churn rate twice the amount used in SBC's analysis and a market cost differential of $200 for which there is no real basis, Mr. Finnegan's analysis method would be 10 DS0s. Again, however, his analysis, even correcting for his input errors, does not comply with the FCC's rules and certainly is not the way a CLEC would actually decide how to provision service in the real world.

Q. DO YOU AGREE WITH MR. FINNEGAN'S STATEMENT THAT SERVING A MULTILINE CUSTOMER VIA A DS1 REQUIRES A HOT CUT?

A. Not completely. A disconnect and connect operation by a CLEC technician would be required in those instances where a customer is converted from DS0 based service to DS1 service, similar to the operation that cable telephony providers employ when they win a customer from SBC Missouri. However, Mr. Finnegan mischaracterizes the impacts of the process and the TRO's points about DS1 conversions and hot cuts.

The FCC makes the point that the DS1 conversion, "obviates the need for hot cuts at the *incumbent LEC's central office*, which, as discussed above, is a significant source of impairment."[11] While it is true that both the hot cut process conducted at an ILEC's central office and the conversion process from DS0 to DS1 service at the customer

[11] TRO, ¶ 451(emphasis added).

premise both involve disconnecting and connecting wires, the FCC's point about hot cuts has to do with control of the process. The FCC's findings of impairment were based on complaints by AT&T and others that the ILEC hot cut process "frequently lead to provisioning delays and service outages, and are often priced at rates that prohibit facilities based competition for the mass market."[12]

But as the FCC recognizes in the TRO, the DS1 conversion allows the CLEC control to establish and test the new facility all the way to its switch before performing the conversion. In addition, a DS1 conversion does not require coordination with other carriers. And while the disconnect and reconnect of the inside wire does causes a momentary disruption of service, having a technician at the premise provides the CLEC with full control on the timing of this process to ensure that the customer is not inconvenienced. Additionally, since the CLEC controls both the conversion time and the activation of porting, there is no reason to expect the delays that Mr. Finnegan alludes to in contrast to the occasional 10-30 second loss of incoming call capability that the FCC found in the TRO.[13] In fact the FCC recognizes that that this process is common for all carriers, "Accordingly, competitive LECs generally face the same opportunities and challenges as incumbents on connecting such facilities to their switches." Finally, the CLEC also controls its costs since the work processes are wholly its own, and is likely to recover these costs through an installation charge.

[12] TRO, ¶ 465
[13] TRO, ¶ 451

Q. DO YOU AGREE WITH MR. FINNEGAN'S ASSERTIONS REGARDING REASONS WHY A MULTILINE CUSTOMER WOULD NOT BE INTERESTED IN DS1-BASED SERVICE?

A. No. Initially, I need to point out that this concern is not relevant to the determination of the economic cutoff computation required by the TRO. In any event, the "several" (actually two) reasons Mr. Finnegan identifies simply are not reasonable concerns. First, as indicated in the product specification and features for the Adtran 750[14], Schedule GAF Rebuttal - 4, the chassis is not obtrusive, "The 8.5-inch x 11-inch chassis uses the space about the size of a standard piece of notebook paper." Second the CLEC technician visit and so called service outage which can only be realistically described as an extremely brief disruption in service can be controlled by the CLEC to minimize any convenience to the customer. Again Mr. Finnegan tries to tie this all together with an inappropriate comparison to UNE-P.

Q. DO YOU AGREE THAT CUSTOMERS MAY NOT DESIRE DS1 BASED SERVICE BECAUSE OF THE NEED TO ALLOW A CLEC TECHNICIAN ACCESS TO MAINTAIN OR REPAIR THE EQUIPMENT?

A. No. It is unreasonable to think that business customers would make such a decision on that basis. Most businesses have other electronic devices, such as a telephone CPE system, facsimile machine, computers, and copiers as well as air conditioning, heating, plumbing and their physical structure that requires maintenance and repair. It is not realistic to assume that access for telecommunications service work by a competent technician would pose a barrier.

[14] www.adtran.com/static/docs/DOC001695.pdf

Q. HAVE YOU REVIEWED THE TESTIMONY OF MR. MAPLES ON BEHALF OF SPRINT AND DO YOU HAVE ANY COMMENTS?

A. Yes. I have reviewed Mr. Maples' testimony, which proposes a DS0 cutoff of 10 DS0s to define the mass market, which would equate to a cutoff or 11 DS0s for defining the enterprise market. Like Mr. Finnegan, Mr. Maples fails to include the revenue aspect of the analysis in determining a DSO crossover point. As I explained above, this failure to include potential revenue makes Mr. Maples's analysis materially incomplete. Unlike Mr. Finnegan, Mr. Maples does include some of the DS0 fixed costs. However, Mr. Maples ignores the cost of DS0 hot cuts as does Mr. Finnegan. Mr. Maples also relies on cost assumptions that SBC Missouri is not able to verify. For example, Mr. Maples includes a recurring channel bank cost but fails to include the type or manufacturer of the channel bank used in the calculations and he fails to provide the source for material prices used in his calculations.

Q. DID MR. MAPLES' ANALOGY OF THE DONUTS ACCURATELY DEPICT THE DS0 CUTOFF ISSUE?

A. No. While I appreciate Mr. Maples' attempt to simplify this issue, his analogy had a couple of "holes" or flaws, which prevented it from presenting an accurate picture. First, as indicated above, the analogy violates the directive of the FCC as it only considered the comparative costs rather than potential revenues. Second, this analogy considered these costs from the consumer perspective rather than the provider's perspective. The FCC's rules direct the Commission to consider the point at which end users can be *served* in an economic fashion rather than the point at which it is cheaper for them. A better analogy

might be a baker who delivers donuts to a business every morning. The baker has a choice of delivering the donuts in a container that would hold exactly the number of donuts ordered, or one that could not only hold more donuts, but could also hold coffee, tea or other high margin products. The opportunity to sell these additional value added products might make it economically attractive to use the higher capacity, more versatile container for any orders over 3 donuts.

Q. HAVE YOU REVIEWED MR. THOMAS' TESTIMONY REGARDING THE DS0 CUTOFF?

A. Yes. Mr. Thomas' criticism of the analysis from my direct testimony and his endorsement of the methods proposed by Mr. Gillan, Mr. Maples and Mr. Finnegan are flawed for the same reasons I have noted previously in my comments on Mr. Maples' and Mr. Finnegan's cutoff proposals.

Q. IN WHAT WAY IS MR. THOMAS' ANALYSIS FLAWED?

A. Mr. Thomas not only ignores the increased revenue potential that service via a DS1 loop would provide, but also claims that to expect providers to generate "substantive data revenues to overcome impairment essentially creates an entry barrier that prohibits firms that do not offer data services from entering Missouri's local exchange markets."

Q. DOES THE TRO SPEAK TO THE ISSUE OF INCREASED REVENUE OPPORTUNITY?

A. Yes. It is best to start with the FCC's rule regarding the Commissions determination of the DS0 cutoff in its entirety[15]:

> (4) Multi-line DS0 end users. As part of the *economic analysis* set forth in paragraph (d)(2)(iii)(B)(3) of this section, the state commission shall establish a maximum number of DS0 loops for each geographic market that requesting telecommunications carriers can serve through unbundled switching when serving multiline end users at a single location. Specifically, in establishing this "cutoff," the state commission shall take into account the point at which the *increased revenue opportunity* at a single location is sufficient to overcome impairment and the point at which multiline end users could be served in an economic fashion by higher capacity loops and a carrier's own switching and thus be considered part of the DS1 enterprise market.

As indicated, this paragraph references the preceding paragraph in the FCC rules entitled Economic Barriers in which the FCC charges the state commission with the consideration of potential economic barriers in its analysis of potential deployment. In the body of the TRO beginning at paragraph 506 and extending through 520, the FCC explained in detail what this direction entails. In paragraph 519 the FCC details the revenues that the Commission is directed to consider in its economic analysis:

> 519. *Potential Revenues.* In determining the likely revenues available to a competing carrier in a given market, the state commission must consider *all* revenues that will derive from service to the mass market, based on the most efficient business model for entry. These potential revenues include those associated with providing voice services, including (but not restricted to) the basic retail price charged to the customer, the sale of vertical features, universal service payments, access charges, subscriber line charges, and, if any, toll revenues.[1584] The state must also consider the revenues a competitor is likely to obtain from using its facilities for providing data and long distance services and from serving business customers.[1585] Moreover, state commissions must consider the impact of implicit support flows and universal service subsidies on the revenue opportunities available to competitors. Consideration of potential revenues is consistent with our standard, as described in Part V above, and with the guidance of the *USTA* decision. (emphasis added)

[15] 51.319(d)(2)(iii)(B)(4) (emphasis added)

The FCC did not give the Commission or participants the latitude to simply ignore potential revenues from data or other delineated services. Nor did it allow consideration of the impact on inefficient carriers such as Mr. Thomas identifies, specifying "The analysis must be based on the most efficient business model for entry rather than to any particular carrier's business model."[16]

Q. IS IT REASONABLE TO EXCLUDE REVENUES BECAUSE THEY ARE UNCERTAIN?

A. Absolutely not. That is a normal condition of the marketplace. No one in business is guaranteed revenues. The efficient business recognizes this reality and not only accepts theses risks but also takes them into consideration in developing a business plan.

Q. IS IT REASONABLE TO EXPECT THAT AN EFFICIENT CARRIER WOULD OFFER SUCH DATA SERVICES?

A. Yes. It is not only reasonable, it is a reality. As indicated in my direct testimony, many of the facilities-based competitive providers that operate in Missouri are offering integrated data services.

Q. MR. THOMAS ALSO CRITICIZES THE FCC DEFAULT CUTOFF SUPPORTED BY SBC AND CENTURYTEL BECAUSE IT WOULD RESULT IN A BUSINESS WITH TWO VOICE GRADE LINES A CREDIT CARD TERMINAL AND A DEDICATED FAX LINE TO BE CONSIDERED PART OF

[16]TRO, ¶ 517

THE ENTERPRISE MARKET INSTEAD OF THE MASS MARKET. CAN YOU COMMENT ON THAT?

A. Footnote 432 in the FCC's TRO is instructive here. It states:

> [432] Very small businesses typically purchase the same kinds of services as do residential customers, and are marketed to, and provided service and customer care, in a similar manner. Therefore, we will usually include very small businesses in the mass market for our analysis. We note, however, that there are some differences between very small businesses and residential customers. For example, very small businesses usually pay higher retail rates, and may be more likely to purchase additional services such as multiple lines, vertical features, data services, and yellow page listings. Therefore, we may include them with other enterprise customers, where it is appropriate in our analysis.

It might be helpful to ask here whether the hypothetical four line business that Mr. Thomas describes sounds like a residence customer. Certainly it is likely that such a customer would have a yellow page listing as some of the smallest businesses such as florists, plumbers and other service businesses utilize such listings. Few residences in this day and age have four lines since many of the additional lines have been replaced with wireless service, which the small business may also utilize. Further, I cannot think of a single residence that would have a credit card line. Also, as noted in the footnote, it is not inconceivable that such a small business would have needs for high speed internet access as well. It is rare that one does not see a computer terminal in most small businesses today. Finally, these small business customers do pay higher rates for local service than residence customers. Therefore, it is reasonable to expect that such a business could and should be grouped with other enterprise customers.

Q. HAS THE FCC PREVIOUSLY COMPARED SMALL BUSINESS TO RESIDENTIAL CUSTOMERS IN DETERMINING THE APPROPRIATE CROSS OVER?

A. Yes. In the UNE Remand Order[17], the FCC stated:

> "We find, however, that a rule that provides access to unbundled local switching for requesting carriers when they serve customers with three lines or less captures a significant portion of the mass market. First, virtually all residential customers would be captured by such a rule. While an increasing number of American homes are served by second lines, we believe it is a rare case in which residences have three lines, and even more unusual for a home to have four or more lines. Second, any business that has three or fewer lines is likely to share more characteristics of the mass market customer than a medium and large business. In particular, small businesses are likely to use the same number of lines as many residential subscribers and purchase similar volumes and types of telecommunications services."

Q. DO YOU AGREE WITH MR. THOMAS' COMMENTS ABOUT THE FINNEGAN MODEL?

A. I agree with Mr. Thomas' comment that that Mr. Finnegan has not provided supporting data for his claims. As indicated in my earlier discussion of Mr. Finnegan's analysis, there are a number of costs and assumptions used that are incorrect, and if corrected yield a cross over of 10 DS0s without taking into consideration increased revenues.

Q. DOES MR. GILLAN'S COMMENT AT PAGE 12 ABOUT CUSTOMERS CURRENTLY SERVED BY ANALOG LOOPS HAVING NEEDS FOR HIGHER PRICED SPECIAL ACCESS RATHER THAN UNE-DS1 MAKE SENSE?

A. No. First Mr. Gillan describes mass market customers as primarily relying on POTS, and as those that can be economically served only by DS0 lines. He contrasts these mass market customers on page 9 to enterprise customers, who have a data centric demand for telecommunications service sufficient to justify service at the DS1 capacity or higher. But now he would have us believe that a customer should be considered in the mass

[17] ¶ 293, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, FCC 99-238

market because it has needs for higher priced special access services than a DS1 facility could handle.

Q. ARE CUSTOMERS SERVED BY A DS-1 LOOP MORE VULNERABLE TO A NETWORK FAILURE THAN THOSE SERVED BY MULTIPLE ANALOG LINES AS MR. GILLAN CLAIMS ON PAGE 12 OF HIS TESTIMONY?

A. Not to any significant extent. From a network facility perspective, the multiple DS0 loops and the DS1 loop are likely to be served off of the same cable. If the cable is cut, then service would be disrupted regardless of whether they had four two wire DS0 loops or one four wire DS1 loop. There may be a slightly higher chance of failure due to the channel bank equipment, but this can be expected to be minimal as indicated in AT&T witness Finnegan's assumption of one repair/maintenance every 3 years. Additionally, according to the website for the channel bank equipment used in Mr. Finnegan's calculations, the equipment has a 10 year warranty[18].

Q. IS MR. GILLAN'S SUGGESTED APPROACH FOR CALCULATING THE "DS0/DS1 CUTOVER" POINT CONSISTENT WITH THE TRO?

A. No. Mr. Gillian fails, as has Mr. Finnegan, Mr. Maples and others, to consider the increased revenue opportunity that service with a DS1 loop provides as the FCC has directed in its rules.

[18] See GAF-4 Rebuttal.

Q. DID MR. STARKEY CORRECTLY IDENTIFY THE CUSTOMER CLASS DISTINCTIONS AND THE USE OF THOSE DISTINCTIONS BY THE FCC IN DEFINING THE MASS MARKET ON PAGE 14 OF HIS TESTIMONY?

A. No. The TRO states, "We find here that the economic characteristics of the mass market, small and medium enterprise, and large enterprise customer classes can be sufficiently different that they constitute major market segments." Whether inadvertently or deliberately, Mr. Starkey has replaced the term "enterprise" with the term "business." This unexplained substitution could lead the reader to incorrectly assume that the FCC did not include small business in its definition of the mass market.

Q. IS MR. MCCAUSLAND'S DEFINITION (P. 11) OF THE ENTERPRISE AND MASS MARKETS CONSISTENT WITH THE FCC'S RULES?

A. No. Mr. McCausland asserts that the mass market and enterprise market definitions for a customer should be determined based on the customer's existing service. This is incorrect. The explicit language in the FCC's rules[19] provide that the enterprise market is to include multiline end users that *could* be served in an economic fashion by higher capacity loops and a CLEC's own switching.

Q. MR. STARKEY'S CONCLUDES ON PAGE 21 OF HIS TESTIMONY THAT "THEREFORE THE FCC REQUIRES STATE PUCS TO DETERMINE WHETHER THE MASS MARKET IS BEST DEFINED AT OR BELOW THE DS1 LEVEL AND, IF BELOW THE DS1 LEVEL, HOW MAY DS0S A CUSTOMER

[19] 51.319(d)(2)(iii)(B)(4)

COULD PURCHASE AT A GIVEN LOCATION WHICH WOULD MAKE CROSSING OVER TO A DS1 ECONOMIC." DO YOU AGREE WITH HIM?

A. I agree that the FCC has directed the states to determine the cutoff (or cross over) point which will define the mass market. However, the FCC did not provide the states with the option of defining the enterprise market as to only include those customers currently served by a DS1 (i.e., at the DS1 level). The TRO states "For the purposes of determining whether impairment exists according to our standard, we define "DS1 enterprise customers" as customers for which it is economically feasible for a competing carrier to provide voice service with its own switch using a DS1 or above loop. We determine that this includes all customers that are served by the competing carrier using a DS1 or above loop and all customers meeting the DS0 cutoff described below in paragraph 497. ."[20] Additionally, the FCC did not base the cutoff determination on economics from the consumer perspective (i.e., how many DS0s the end user customer could purchase to make a DS1 economic), but rather, the economics from the provider perspective, taking into account the relative costs such as those of unbundled DS0 loops versus unbundled DS1 loops, plus increased revenue opportunities.

Q. HAVE ANY OF THE CLECS PRESENTED EVIDENCE THAT WOULD JUSTIFY A DEPARTURE FROM A CUTOVER POINT OF 4 DS0S?

A. No. As I explained in my direct testimony, the FCC has established a "default" DS0 cutover point of 4 DS0s in density zone 1 of the top 50 MSAs. SBC Missouri proposes to adopt that default value through the MSA markets at issue here, and has presented evidence to show that such a cutover point is reasonable. The FCC directed state

[20] Footnote 1376 referenced from ¶ 451.

commissions to apply the default DS0 cutover point "absent significant evidence to the contrary."[21] The CLECs and Staff have not presented such evidence. Instead, they have presented flawed analyses that compare apples and oranges, ignore the relevant costs, and ignore the additional revenues available from providing service over a DS1. The Commission should reject those analyses and adopt the FCC's default value throughout the markets here, a result that is fully supported by the record.

Q. IN LIGHT OF AT&T'S AND SPRINT'S PROPOSALS REGARDING A DSO CUTOVER POINT, DO YOU HAVE ANY FURTHER COMMENTS?

A. Yes. I would ask the Missouri Commission to apply what I call the "common sense" factor when determining the DSO cutover point. Numerous times in the TRO, the FCC refers to mass-market customers as including residential and "very small business"[22] customers. I am unaware of residential customers or very small businesses that typically require 10 or 12 telephone lines. But under the definitions proposed by Sprint and AT&T, that is precisely what they are proposing with a DSO cutover point of 11 or 13 lines. Although there may be a few rare exceptions that a very small business may have a need for that quantity of telephone lines, this Commission should not base its decisions on the very rare exception.

Q. BASED ON THE INFORMATION YOU DISCUSSED IN THE PRIOR RESPONSE, HAVE YOU ESTIMATED HOW MANY EMPLOYEES COULD BE SUPPORTED BY THE NUMBER OF POTS LINES PROPOSED BY SPRINT

[21] TRO ¶ 497.
[22] For example at TRO paragraphs 127, 209, 210, 497 and footnotes 432, 624, 1402

AND AT&T AS STILL BEING WITHIN THE DEFINITION OF A "MASS-MARKET" CUSTOMER?

A. Yes. During my career with SBC, I held several positions which used probability theory to size various components of telecommunications networks. The "Erlang B" formula is a table which determines the number of circuits required to meet an offered amount of usage of those circuits. Thus, if one knows the number of employees in a business, and makes an estimate of the average amount of time that employees will be using their telephone and an assumption about the level of service from a blocking perspective that is acceptable, through use of the Erlang B tables a determination can be made of the number of lines the customer would need. The table can also be used in the reverse manner to determine how many employees that a set amount of circuits might support. Using an Erlang B calculator found on the Internet[23] and assuming each employee would use the phone about 500 seconds in the busy hour, I was able to extrapolate the number of employees for each of the DSO cutover proposals. Using this calculation, the 10 DSO lines, proposed by Sprint as still within mass-market, could support a business with over 29 employees. Using AT&T's proposal of 12 DSO lines still being considered a mass-market customer, a business with over 38 employees could be supported.

Q. ARE THERE ANY EXTERNAL DEFINITIONS OF WHAT CONSTITUTES A "VERY SMALL BUSINESS"?

A. While I could find none from a regulatory perspective, I did find a couple of definitions. The Small Business Administration (SBA) defines a "very small business" (VSB) as one

[23] http://www.voip-calculator.com/calculator/ervp/

with 15 or less employees.[24] The Yankee Group defines "very small business" as businesses with 2 to 19 employees.[25] By either of these definitions, it is highly unlikely that the typical very small business would need 10 to 12 DS0s.

IV. OTHER ISSUES

Q. WERE THERE OTHER ISSUES RAISED BY THE CLECS IN THEIR DIRECT TESTIMONY?

A. Yes. Some CLECs raised issues that while not specific to the market definition or DS0 cutoff issues, were tangentially related. I will address them here.

There were also a number of CLECs that raised issues that are to be considered, if at all, in Phase II. Examples include attempts to rewrite the FCC's criteria for "trigger" CLECs and to distort the FCC's impairment analysis process. While raising such issues in this Phase is not consistent with the Commission procedural order, I feel I must make a general response. I will address those issues in more depth in my testimony for Phase II, in accordance with the Commission's procedural order.

Q. MR. GILLAN SAYS IN PAGE 7 OF HIS TESTIMONY THAT THE BASIC ISSUE OF THIS PROCEEDING IS DEFINING THE MASS MARKET AND THEN DETERMINING WHETHER IT WILL ENJOY COMPETITIVE CHOICE. DO YOU AGREE WITH HIM?

A. No. The objectives of this Phase I proceeding are to establish the DS0 cutoff which will define the mass market and enterprise market for purposes of the switching impairment

[24] www.sba.gov/GC/indexprograms-vsb
[25] August 2002 Yankee Group Report, SMB Communications Service Survey 2002: Overview, Page 3

analysis, and to define the geographic market areas. However, Mr. Gillan errs about the direct objective of the Phase II proceeding. It is to determine whether in the geographic market areas, CLECs are impaired in serving the mass market without access to unbundled local circuit switching. This determination of non-impairment certainly will further Congress' and the FCC's goal of encouraging facility based competition, investment and innovation and the benefits that these bring to consumers that dependence on low cost UNE-P has frustrated. If the Commission finds the CLECs are not impaired, that means that customers in the market can be expected to continue to have competitive choices.

Q. DO YOU CONCUR WITH MR. STARKEY'S STATEMENTS ON PAGES 7 AND 8 THAT THE COMMISSION MUST NOT LOSE SIGHT OF THE OBJECTIVES OF THE TELECOMMUNICATIONS ACT OF 1996 TO PROMOTE AND MAINTAIN COMPETITION?

A. Mr. Starkey is only telling part of the story. While retail competition is certainly one of the cornerstones, the Act has other important objectives that must be considered as well. The FCC addressed this in the TRO where it stated, "While it is true that retail competition is a goal of the 1996 Act, it is not the only goal, and a standard that focused exclusively on retail competition would do so at the expense of Congress's other goals, such as investment in new facilities."[26] Moreover, Mr. Starkey is basing his contention on an incorrect premise. A finding of non-impairment by the Commission means that CLECs do not need access to unbundled switching in order to serve customers.

[26] TRO, ¶ 114.

Q. ARE MR. STARKEY'S (PAGE 40) AND DR. ANKUM'S (PAGE 20) PROPOSALS TO SEGMENT A GEOGRAPHIC MARKET INTO TWO MARKET GROUPS (RESIDENTIAL AND BUSINESS) APPROPRIATE OR CONSISTENT WITH THE FCC'S DIRECTIONS?

A. Absolutely not. Dr. Ankum and Mr. Starkey base their claims on footnote 432 which was referenced from paragraph 127 of the TRO. This paragraph is in Section V where the FCC establishes some of the principles that it considered in its impairment analysis of all of the network elements, including among others, loop, transport and switching. First, it is important to note that in the cited footnote, the FCC said, "..we may include them with other enterprise customers in our analysis," not "we will" or "we shall" include them. Second, it is apparent that the FCC decided not to include very small business customers with enterprise customers in its definition of mass market for the purpose of the switching impairment analysis. In Section VI.D, where the FCC defines its unbundling requirements for circuit switching, the FCC explicitly defined the mass market as consisting of both residence and business in Paragraph 459 and footnote 1402:

> "The record demonstrates that customers for mass market services are different from customers in the enterprise market.[1402] The mass market for local services consists primarily of consumers of analog "plain old telephone service" or "POTS" that purchase only a limited number of POTS lines and can only economically be served via analog DS0 loops."
>
> " [1402]Mass market customers are residential and very small business customers – customers that do not, unlike larger businesses, require high-bandwidth connectivity at DS1 capacity and above. Z-Tel Comments at 30-31…"

The FCC confirms this again in Paragraph 497 of Section VI.D:

> "For purposes of the examination described here, mass market customers are analog voice customers that purchase only a limited number of POTS lines, and can only be economically served via DS0 loops. Some mass market

customers (*i.e.*, very small businesses) purchase multiple DS0s at a single location."

Finally, even if for argument's sake I agreed that the FCC *had* decided that the very small business customers should be included in the enterprise market for the switching impairment analysis, Mr. Starkey's and Dr. Ankum's position is also not consistent with that hypothetical decision. Rather than move these very small business customers to the enterprise market as such a ruling would require, Mr. Starkey and Dr. Ankum propose that they be left in the mass market, but be segmented further – a proposal which has no basis in the TRO rules.

Q. IS THE IMPACT OF AN INCORRECT DETERMINATION OF IMPAIRMENT ONLY A TEMPORARY PROBLEM AS MR. STARKEY SUGGESTS AT PAGE 36 OF HIS TESTIMONY?

A. No. Mr. Starkey ignores several key issues. First, use of such a narrow definition as wire centers as he suggests, would hinder the use of the appropriate scale and scope economies to demonstrate in subsequent reviews that CLECs can enter the broader market on an economic basis, and would ignore the relatively large margins that CLECs enjoy from the higher density of business in the more urban areas when considering the overall profitability of market entry. Second, this so called "temporary" inefficiency Mr. Starkey references has been going on for several years already at a high cost to SBC, and further delays, which could also be considerably longer than any reasonable definition of temporary, would simply continue to add to those costs. Finally, the extension of the unnecessary reliance on unbundled switching where CLECs are not impaired is not

consistent with the Act and the FCC's objectives to promote investment and innovation and facility based competition.

Q. MR. STARKEY SUBSEQUENTLY CAUTIONS THE COMMISSION ON PAGES 10-11 THAT IF IT FINDS A GEOGRAPHIC MARKET NOT IMPAIRED, SAGE'S ENTIRE BUSINESS PLAN AND SAGE'S FUTURE WOULD BE IN JEOPARDY. IS IT APPROPRIATE FOR THE COMMISSION TO CONSIDER THE IMPACT OF ITS IMPAIRMENT ANALYSIS DETERMINATION ON SAGE?

A. No. The FCC has also addressed this issue specifically and stated, "We will not, as some commenters urge, evaluate whether individual requesting carriers or carriers that pursue a particular business strategy are impaired without access to UNEs. We recognize that section 251(d)(2) refers to "the telecommunications carrier seeking access," but such a subjective, individualized approach could give some carriers access to elements but not others, and could reward those carriers that are less efficient or whose business plans simply call for greater reliance on UNEs. Providing UNEs to carriers with more limited business strategies would also disregard the availability of scale and scope economies gained by providing multiple services to large groups of customers."[27]

Q. MR. GILLIAN SUGGESTS IN A NUMBER OF PLACES IN HIS TESTIMONY THAT THE COMMISSION SHOULD BE MINDFUL OF THE IMPACT OF THEIR DECISION ON CLECS UTILIZING UNE-P. DO YOU AGREE?

[27] TRO, ¶115 and footnote 396.

A. No. Just as I stated in the previous response, the FCC considered this issue and made a deliberate and reasoned decision that such a consideration was not appropriate in its impairment analysis. There is not a presumption in these proceedings to maintain UNE-P.

Q. DID THE FCC INTEND THAT ITS TRIGGER ANALYSIS WOULD RESULT IN EACH CONSUMER WITHIN A GEOGRAPHIC MARKET AREA HAVING A CHOICE OF 3 FACILITY BASED CLECS AS MR. STARKEY STATES IN SEVERAL PLACES IN HIS TESTIMONY?

A. No. Mr. Starkey is trying to change the impairment analysis rules. While in many instances consumers have the choice of 3 or more facility based providers, the purpose of the trigger analysis is to determine if CLECs are impaired in a geographic market in serving mass market customers. The FCC does not require that a CLEC must be willing or able to provide service to all customers in a geographic market to meet the trigger. In fact, in its Opposition to Mandamus[28], the FCC further clarified its position on this issue:

> In a recent erratum, the Commission corrected paragraph 499 of the *Order*, clarifying that *wholesale* service providers must "be operationally ready and willing to provide wholesale service to all competitive providers in the designated market." *Errata,* FCC 03-227, ¶ 21 (released Sept. 17, 2003) (Attachment B). The corrected paragraph does *not* require that, for purposes of the switching triggers, self-provisioning competitors must be ready and willing to serve all retail customers in the market. The Commission made similar corrections in the *Order*'s discussion of how states should analyze impairment in areas where the triggers are not met. It deleted the fifth sentence of paragraph 519 as well as footnote 1586. *Errata* ¶ 23. These deletions eliminate any suggestion in the *Order* that a state's finding of no impairment is contingent on a determination that a facilities-based competitor could economically serve all customers in the market.

This is not really a surprise however, since the FCC has also stated:

[28] In the United States Court of Appeals for the District of Columbia Circuit, United States Telecom Association v. Federal Communications Commission and United States of America, No. 00-1012, 00-1015.

> We recognize, however, that the self-provisioning trigger discussed above identifies only the existence of *actual* competitive facilities serving the mass market and does not address the *potential* ability of competitive LECs to deploy their own switches to serve this market. For example, 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.[29]

Q. IS IT A REQUIREMENT OF THE TRO THAT SWITCH FACILITY BASED CLECS BE SERVING CUSTOMERS IN EVERY SEGMENT OF THE MSA IN ORDER FOR THE MSA TO MEET THE SWITCHING TRIGGERS AS MR. HARPER SUGGESTS ON PAGE 5 OF HIS TESTIMONY?

A. No. As I stated in the previous question, the FCC does not require that a CLEC must be willing or able to provide service to all customers in a geographic market to meet the trigger.

Q. DO YOU AGREE WITH THE CRITERIA THAT MR. STARKEY ESPOUSES ON PAGE 25 OF HIS TESTIMONY FOR AN INTERMODAL CARRIER TO BE INCLUDED IN THE IMPAIRMENT ANALYSIS?

A. No. First, this phase of the proceeding is on the geographic market area and appropriate DS0 cutoff. Mr. Starkey's testimony regarding application of triggers is not relevant and should be held until Phase II. Notwithstanding this lack of relevance, Mr. Starkey's testimony is again misleading. The paragraph Mr. Starkey references is in the section of the order that explains the principles that the FCC used to determine impairment for various network elements, including loops, transport and switching – not the criteria for use of intermodal competition to satisfy the switching self provisioning or wholesale

[29] TRO, ¶ 506

triggers, which the FCC defines later in the TRO. Mr. Starkey's three "criteria" for inclusion of intermodal competition in the trigger analysis are in fact only his own.

Q. DID THE FCC IDENTIFY CRITERIA FOR INCLUSION OF INTERMODAL PROVIDERS IN THE SELF PROVISIONING AND WHOLESALE FACILITIES TRIGGERS?

A. Yes. The FCC rules only require that the intermodal provider offers service comparable in quality to that of the incumbent LEC.

Q. DID THE FCC REQUIRE THAT AN INTERMODAL COMPETITOR PROVIDE COMPETITIVE ACCESS TO CUSTOMER LOOPS TO BE CONSIDERED IN THE TRIGGER ANALYSIS OR TO ALLOW ACCESS TO OTHER ENTRANTS?

A. No. In fact, the FCC affirmatively discounts such a claim in Paragraph 97 of the TRO, where it states, "We also disagree with commenters that suggest that deployment of intermodal alternatives is irrelevant if the facilities are not available to requesting carriers on a wholesale basis, for reasons discussed in the preceding paragraphs."

Q. DO YOU AGREE WITH MR. STARKEY'S (PAGES 24-27) AND DR. ANKUM'S (PAGES 20-23) ASSERTIONS THAT CMRS AND CABLE TELEPHONY PROVIDERS SHOULD BE EXCLUDED FROM THE COMMISSION'S TRIGGER ANALYSIS?

A. No. Their positions are in direct conflict with the plain language contained in the FCC's rules. I will provide testimony in Phase II of the Commission's proceedings which will

demonstrate that both CMRS and cable telephony providers should be included in the trigger assessments.

Q. DO YOU CONCUR WITH MR. STARKEY'S POSITION (PAGE 27)THAT FIXED WIRELESS SHOULD NOT BE INCLUDED IN THE COMMISSIONS IMPAIRMENT ANALYSIS OF LOCAL CIRCUIT SWITCHING?

A. Fixed wireless technology provides an intermodal alternative to loops, not local circuit switching. As such, it should not be part of the local circuit switching trigger or potential deployment analysis. However, if a CLEC self provisions its own switch and uses fixed wireless loops, that CLEC should be included in the trigger and potential deployment analyses.

Q. IS MR. STARKEY CORRECT IN HIS CONCLUSION ON PAGE 43 THAT INTERMODAL ALTERNATIVES SHOULD NOT BE INCLUDED IN THE DEFINITION OF MARKETS BECAUSE "COMPETITORS GENERALLY DO NOT CONSIDER THEM TO BE CLOSE ENOUGH SUBSTITUTES"?

A. No. First, as Mr. Starkey noted earlier in his response on this issue, the substitution issue is based on whether customers, not competitors, regard other products as close enough substitutes. Additionally, cable telephony has enjoyed tremendous success in the mass market, which proves that from a consumer perspective, they do offer a viable substitute for service provided via SBC Missouri's switches. Similarly, CMRS providers have for some time competed effectively for consumers in the additional line market, and an

increasing amount of consumers have chosen CMRS service as a full replacement for wireline services.

Q. DOES IDLC PRESENT A SIGNIFICANT PROBLEM TO CLECS AS MR. STARKEY (PAGE 38) AND DR. ANKUM (PAGE 35) INDICATE IN THEIR TESTIMONY?

A. No, but again, this portion of Mr. Starkey's and Dr. Ankum's testimony is addressing the application of triggers within a market area, and as such, should be deferred until Phase II. Since they have raised the issue I will try to put it in perspective for the Commission.

First, it is important to understand the actual nature of the "problem" that Mr. Starkey and Dr. Ankum are alluding to. Digital Loop Carrier (DLC) systems digitally encode and aggregate, i.e., "multiplex," the traffic from subscribers' loops into DS1 signals or higher for more efficient transmission and/or more extended range than traditionally permitted by copper loops. The analog signals are carried from customer premises to a remote terminal (RT) where they are converted to digital, mixed with other signals, and carried on a high speed circuit generally over fiber, to the LEC central office. With Universal Digital Loop Carrier Systems (UDLC) the high speed circuit is terminated in a Central Office Terminal (COT) where it is converted back to an analog signal providing access to unbundled loops served by these systems. Integrated Digital Loop Carrier (IDLC) systems establish a direct, digital interface with the switch at the LEC central office, which makes it difficult, or even impossible, for competitors to access individual loops at that location. Next Generation Digital Loop Carrier (NGDLC), which is the technology being deployed in SBC Missouri currently, has the ability to incorporate both UDLC and

IDLC capabilities in a single system. Obviously the concern is with lines served by IDLC where there are no alternative facilities to allow access to an unbundled loop. However, both Mr. Starkey and Dr. Ankum fail to address a couple of key facts that help put this in perspective. First the overall use of IDLC is de minimus, accounting for only about 5.8% of the total lines served in Missouri. Second, in the vast majority of these cases, there are alternative facilities, either home run copper or UDLC/NGDLC which serve the same area and which can be used to provide access to unbundled loops. In fact only 0.023% (23 one thousandths of a percent) of SBC Missouri's total working lines in the state are served by IDLC systems with no alternatives. Third, in the 3 MSAs in which CLECs have entered the market using their own switches, the percent of IDLC lines to the total lines in the MSA is even lower at 4.4%, and the percent of IDLC lines in these MSAs with no alternative facilities is 0.019 % (19 one thousandths of one percent). Thus, the chance that a CLEC would encounter a situation where access to an unbundled loop was not technically feasible is miniscule and thus should not constitute an impairment which would prevent CLECs from entering or serving the market.

Q. IS THERE ANY BASIS IN THE FCC'S RULES FOR MR. ANKUM'S POSITION THAT IN THE TRIGGER ANALYSIS THE COMMISSION SHOULD NOT COUNT A CLEC THAT IS SERVING MASS MARKET BUSINESS BUT NOT MASS MARKET RESIDENCE CUSTOMERS USING ITS OWN SWITCH?

A. Absolutely none. The FCC rules on the trigger analysis are clear that the count is to include competing providers, not affiliated with each other or the incumbent LEC, serving mass market customers (which by definition includes residence and very small

business) in the particular [geographic] market with the use of their own local circuit switches. There is simply no foundation for this repeated erroneous claim.

V. CONCLUSION

Q. PLEASE COMMENT ON THE WARNINGS THAT SEVERAL OF THE CLEC WITNESSES HAVE MADE REGARDING THE CONSEQUENCES OF A FINDING OF NON-IMPAIRMENT ON BOTH THEIR COMPANIES AND ON THE ABILITIES OF CONSUMERS TO ENJOY THE BENEFITS OF COMPETITION.

A. First, as I have stated earlier in this testimony, the ultimate purpose of these proceedings, including the subsequent Phase II, is to determine if CLECs are impaired without access to unbundled local circuit switching in the market, not to ascertain whether CLECs operating in these markets have decided to offer services to all customers in all areas of the market. Second, as the Commission may recognize, these warnings are not unlike the warnings of the dire consequences that would befall CLECs and consumers if this Commission granted SBC Missouri's 271 petition. But, as we all know, that has not happened. In fact, competitors are serving more customers today than they were then. Some would have the Commission believe that these competitive gains are only possible with UNE-P being offered in perpetuity. They ignore the benefits of facility based competition that Congress envisioned. So if these warnings sound familiar, it is not surprising - some of the voices are the same.

Q. PLEASE SUMMARIZE YOUR REBUTTAL TESTIMONY.

A. I have addressed the direct testimony of the CLEC witnesses regarding the definition of the geographic market and the DS0 cutover point as well as several issues raised by the CLECs more appropriate for Phase II. In many instances, the CLEC testimonies have attempted to distort the FCC's TRO requirements and to mislead the Commission by expanding or modifying portions of the FCC's rules. The FCC has established criteria for determining geographic markets and for establishing the DS0 cutoff point. The Commission should insist on strict adherence to the requirements contained in the TRO.

Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?

A. Yes.

NON-PROPRIETARY
SAGE RESIDENCE UNE-P

(This Schedule is Highly Confidential in Its Entirety).

December 10, 2003
In reply, please refer to:
Docket No. 03-09-01PH01:UR&R:PAP
Motion No. 7

Diane C. Iglesias, Esquire
Southern New England Telephone Company
310 Orange Street
New Haven, Connecticut 06510

Re: Docket No. 03-09-01PH01, DPUC Implementation of the Federal Communications Commission's Triennial Review Order – Trigger Analysis

Dear Ms. Iglesias:

The Department of Public Utility Control (Department) acknowledges receipt of the Southern New England Telephone Company's (Telco or Company) October 10, 2003 Expedited Petition for Clarification and Reconsideration (Petition) filed in the above noted docket. The Department is also in receipt of the AT&T Communications of New England, Inc. (AT&T) and the WorldCom, Inc. (MCI) responses to the Petition dated October 14, 2003 and October 22, 2003, respectively.

The Telco filed the Petition in response to the October 8, 2003 Procedural Order (Procedural Order) issued in this proceeding wherein the Department determined in part, that it would consider the market definition for its granularity analysis to be the incumbent local exchange company's (ILEC) wire center.[1] Specifically, the Telco requested that the Department clarify, or in the alternative reconsider, that aspect of the Procedural Order dealing with the market definition, since the definition of the market was substantive and not a procedural issue. The Telco also claimed that the Department has not followed the specific directives of the Federal Communications Commission (FCC) regarding the manner in which the relevant geographic area for evaluating impairment and non-impairment issues must be determined by the states. In addition, the Telco requested that the Department clarify that it did not intend to determine the market definition but that the wire center data would be used as the basic building block to collect sufficient empirical evidence to form its judgment regarding the state of competitive presence in Connecticut and the basis for deciding the appropriate definition of the relevant geographic market. Lastly, the Telco requested clarification as to the Department's expectation in establishing a separate proceeding to investigate a batch hot cut process. Petition, pp. 2-4.

Based on the Petition, the Department requested written comments from all parties, intervenors and interested persons addressing the Telco's requests for clarification and reconsideration.[2] In response to the Notice, the Department received

[1] Procedural Order, p. 5.
[2] See the October 27, 2003 Notice of Request for Written Comments (Notice).

comments from Comcast Phone of Connecticut, LLC and the Telco. MCI also resubmitted its comments that it originally filed on October 22, 2003.

The Department has reviewed the Petition and the comments submitted subsequent to its filing. In the Procedural Order, the Department indicated its intention to use the wire center as a foundation for its analysis because it represented a "consistent point of analysis and comparison for this exercise."[3] The Department also notes the comments of AT&T and MCI acknowledging the merits of having a reference point for compiling data even if that reference point does not equate directly to "the market" that would be defined by the Department.[4] There are distinctions between the process adopted by the Department to fulfill its responsibilities under the FCC's Triennial Review Order[5] and the end-product of that process. Specifically, the Triennial Review Order requires the Department to conduct an exhaustive examination of the Connecticut local exchange services' market before making any proposed changes to the Telco's current unbundled network element obligations. Implicit within that examination is the need to construct an evidentiary record that illustrates the scope and scale of competitive market participation.

It is also incumbent upon the Department to establish a procedural framework that allows the development of evidence that will facilitate an impartial examination of the issues presented by the Triennial Review Order. Any effort to compile information at a level "below" the wire center level could be susceptible to inconsistencies and inaccuracies in the data sources available at that level. Similarly, any decision to limit data collection to some aggregation point "higher than" the wire center level would expose the Department to legitimate criticism that it had effectively ignored information known to be readily available and reasonably accurate. Therefore, by designating the "wire center" as the preferred point for data collection, the Department has elected to use a generally recognized and accepted documentation point for operational data.

For those reasons, the Department concludes that data collection at the wire center level is necessary to ensure a full and accurate evidentiary record. Data collection at this level is also consistent with the Triennial Review Order and does not deprive any party of its rights to a fair review of the available evidence. Accordingly, the Department hereby denies the Telco's request to reconsider that aspect of the Procedural Order dealing with the market definition and reaffirms its intention to designate the wire center as the initial basis for its data collection effort and its

[3] Procedural Order, p. 5.
[4] AT&T Comments, p. 1; MCI Comments, pp. 3 and 4.
[5] Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, CC Docket No. 01-338; Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98; and Deployment of Wireline Services Offering Advanced Telecommunications Capability, CC Docket No. 98-147, FCC 03-36, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking (Triennial Review Order).

preliminary analysis. Nevertheless, such designation does not prevent the Department from utilizing other market measurement points if they are necessary or beneficial to its efforts in defining the extent of competitive participation in the local exchange market.

Lastly, regarding the Telco's request that the Department clarify its expectation in establishing a separate proceeding to investigate a batch hot cut process, the Department notes that it is required to either establish an ILEC batch cut process in each of the state markets that it has defined or provide detailed findings explaining why such a process is unnecessary.[6] The Department has every intention of meeting that requirement. The FCC has established strict deadlines under which the Department must conduct its investigation of all issues raised in the TRO. The time schedule to this proceeding reflects those deadlines. It is for this reason that the Department will begin its investigation of the batch hot cut process prior to the conclusion of Phase One of this proceeding.

Sincerely,

DEPARTMENT OF PUBLIC UTILITY CONTROL

Louise E. Rickard
Acting Executive Secretary

cc: Service List

[6] See for example the FCC rules, Section 51.319(d)(2)((ii).

HIGHLY CONFIDENTIAL INFORMATION
SUBJECT TO PROTECTIVE ORDER IN
MISSOURI PUBLIC SERVICE COMMISSION DOCKET TO-2004-0207

Name of CLEC - Allegiance Telecom, Inc. DR 2513

1. To the extent your company owns its own switch, state whether your company is currently offering wholesale mass market unbundled local switching to CLECs within the State of Missouri.
Response:

** _____
_____
_____.

_____
_____
_____
_____.**

Total Access 750

Modular T1 TDM Integrated Access Device

Product Features

- T1/FT1 integrated access device
- Occupies one half of two rack units (2U)
- Supports wide variety of services – 24 analog voice (FXS/FXO) circuits, Nx56/64 Data, Fractional T1, DDS, ISDN
- Compact rack or wallmount design
- Supports TR-08 signaling
- Automatic gain adjustment on analog units (FXS, FXO)
- Integrated T1 CSU
- AC power option
- Battery backup option
- UL 1950 compliant
- Industry-leading 10-year North American warranty

As competition for dial tone continues, service providers must find integrated access devices that allow cost effective deployment of voice and data services at the customer's premises. ADTRAN's Total Access® 750, a low-cost integrated access device, allows service providers a means to offer combined voice and data traffic over a single T1 terminating at a customer's premises. The Total Access 750 supports a broad service offering including analog voice (FXO/FXS), NxData, Fractional T1, ISDN and DDS.

The Total Access 750 provides seven slots for the user to combine a variety of voice and data services based on the specific requirements of each application. Up to six Quad FXS or FXO access modules provide up to 24 analog voice lines. Data options include a Fractional T1 port, as well as DDS, ISDN, and Nx56/64 access modules. The Fractional T1 Drop-and-Insert port on the rear of the unit provides a convenient method of dropping a number of DS0s to a PBX or other equipment via a DSX-1 signal.

The design of the Total Access 750 lends itself to cost-efficient growth or a "grow-as-you-go" architecture. Many applications require only a limited amount of analog circuits and, therefore, do not warrant purchasing or installing 12 or 24 ports as required with other non-modular designs. The benefits of the Total Access 750 modularity are also found in cost-per-port comparisons and data applications. Because a provider only installs the amount of voice ports needed for the subject application, initial turn-up cost and per-port cost are lower. This is because the provider can defer channel unit cost until it is needed. And in data applications, the Total Access 750 provides the flexibility to mix voice and data units also based on the particular requirements of each application.

When maintenance becomes necessary, the Total Access 750 design allows technicians to reach the access modules, commons, power supplies, and battery back-up system easily. Access modules are hot swappable and accessible at all times. An individual access module may be replaced without disrupting other units. So, the 4-circuit-per-card design ensures a maximum of only four analog circuits are affected when replacing a channel unit (as opposed to 12 with other non-modular systems).

The 2U design of the Total Access 750 uses a minimum amount of wall space. The 8.5-inch x 11-inch chassis uses a space about the size of a standard piece of notebook paper. When rack-mounting is desired, two Total Access 750 systems can be mounted side-by-side in either a 19-inch or 23-inch relay rack.

ADTRAN®

ADTRAN, Inc.
Attn: Enterprise Networks
901 Explorer Boulevard
Huntsville, AL 35806

P.O. Box 140000
Huntsville, AL 35814-4000

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256 963-8699 fax
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Total Access 750

Modular T1 TDM Integrated Access Device

Product Specifications

Total Access 750 Interface

Network Interface

- **Line Rate:** 1.544 Mbps +/- 75 bps

Physical Interface

- **RJ-48C:** Modular, 8-pin

Framing

- D4(SF)/ESF/TR-08
- ANSI T1.403
- **Line Code:** AMI/B8ZS
- **T1 Transmit Timing:** Loop, Local, External

Management Options

Control In / Control Out Ports

- **Interface:** EIA–232, PC Serial Port or Modem
- **Physical Connector:** DB-9

Testing Options

Local and Remote Loopbacks

- Payload and Line
- CSU Loopback

Network Interface Test Jacks

- **Bantam Jack:** RXMON

TR-08 Support

- Conforms with TR-TSY-000008
- TR-08 Mode I, Unconcentrated
- SLC96® framing with alarm reporting/monitoring
- Automatically configures to ORB-13 or ORB-16 alarm messaging formats
- Single Party Ringing (SPR) and Universal Voice Grade (UVG) analog ports supported with FXS modules. CLASS® services also supported with these modules.

Performance Monitoring

- **Reports:** NI information stored for last 8 hours (60-minute increments)
- **PRMS:** ANSI performance report messages

Agency Approvals

- UL 1950
- FCC Part 15 (Class A) and Part 68

Environment

- **Operating Temperature:** - 40° to +70°C
- **Storage Temperature:** –30° to 70°C, (–4° to 158°F)
- **Relative Humidity:** Up to 95%, non-condensing

Physical

- **Dimensions:** 3.5" H, 11" D, 8.5" W
- **Weight:** 8 lbs (fully loaded)

Power

- **AC Power (using external power supply):** 90-130 VAC, 60Hz, 50W Max
- **DC Power:** 40-56 VDC, 50W Max

Ordering Information

Equipment	Part #
Total Access 750 Chassis	1175001L1
Total Access 750 Dual Chassis	1175201L1
750 BCU L1	1175012L1
750 BCU L2 with DSX-1	1175012L2
750/850 Power Supply Unit (PSU)	1175006L2
750/850 Quad FXS Module	1175408L2
750/850 Quad FXO Module	1175407L2
750 V.35 (Nx56/64) Module	1175025L1
750/850 OCU DP Module	1180005L1
750/850 DSO DP Module	1180003L1
750/850 U-BR1TE Module	1180020L1
750/850 Dual V.35 Module	1180025L1
AC Power Supply	1175043L3
750/850 Battery Backup (L1)	
Rack or Wallmount	1175044L1
750/850 Battery Backup (L2) Wallmount	1175044L2
750/850 19" Rackmount Brackets	1175045L1
750/850 23" Rackmount Brackets	1175046L1

61175001L1-8E April 2003