BOULT ▪ CUMMINGS
CONNERS ▪ BERRY PLC

Henry Walker
(615) 252-2363
Fax (615) 252-6363
Email hwalker@boultcummings.com

January 16, 2004

Honorable Deborah Taylor Tate, Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

Re: Implementation of the Federal Communications Commission's Triennial Review Order (Nine-month Proceeding) (Switching)
Docket No. 03-00491

Dear Chairman Tate:

Enclosed for filing is the original and 4 copies of the Direct Testimony, and 1 CD-ROM with the exhibits for Joe Gillan, on behalf of CompSouth.

If you have any question, please contact me.

Very truly yours,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

By: Henry Walker

HW/pp

923542 v1
104724-008
1/16/2004

BOULT ▪ CUMMINGS
CONNERS ▪ BERRY PLC

Henry Walker
(615) 252-2363
Fax: (615) 252-6363
Email: hwalker@boultcummings.com

January 16, 2004

Honorable Deborah Taylor Tate, Chairman
Tennessee Regulatory Authority
460 James Robertson Parkway
Nashville, TN 37243-0505

Re: Implementation of the Federal Communications Commission's Triennial Review Order (Nine-month Proceeding) (Switching)
Docket No. 03-00491

Dear Chairman Tate:

Enclosed for filing is the original and 4 copies of the Direct Testimony, and 1 CD-ROM with the exhibits for Joe Gillan, on behalf of CompSouth.

If you have any question, please contact me.

Very truly yours,

BOULT, CUMMINGS, CONNERS & BERRY, PLC

By: Henry Walker

HW/pp

BEFORE THE TENNESSEE REGULATORY AUTHORITY

In Re:	)	
	)	
IMPLEMENTATION OF THE FEDERAL	)	Docket No. 03-00491
COMMUNICATIONS COMMISSION'S	)	
TRIENNIAL REVIEW ORDER – 9	)	Filed: January 16, 2004
MONTH PROCEEDING – SWITCHING	)	
	)	

DIRECT TESTIMONY AND EXHIBITS OF JOSEPH GILLAN ON BEHALF OF COMPSOUTH

Table of Contents

I. Introduction and Witness Qualification

Q. Please state your name and address.

A. My name is Joseph Gillan. My business address is P.O. Box 541038, Orlando, Florida 32854. I am an economist with a consulting practice specializing in telecommunications.

Q. Please briefly outline your educational background and related experience.

A. I am a graduate of the University of Wyoming where I received B.A. and M.A. degrees in economics. From 1980 to 1985, I was on the staff of the Illinois Commerce Commission where I had responsibility for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry. While at the Commission, I served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing the National Regulatory Research Institute.

In 1985, I left the Commission to join U.S. Switch, a venture firm organized to develop interexchange access networks in partnership with independent local telephone companies. At the end of 1986, I resigned my position of Vice President-Marketing/Strategic Planning to begin a consulting practice. Over the

past twenty years, I have provided testimony and/or sworn affidavits before more than 35 state commissions, five state legislatures, the Commerce Committee of the United States Senate, the Federal Communications Commission, and the Federal/State Joint Board on Separations Reform. In addition, I have provided expert reports to the Canadian Radio-television and Telecommunications Commission, as well as the Finance Ministry of the Cayman Islands. I currently serve on the Advisory Council to New Mexico State University's Center for Regulation. A complete listing of my qualifications is provided in Exhibit JPG-1 (attached).

Q. On whose behalf are you testifying?

A. I am testifying on behalf of CompSouth. CompSouth is an industry trade group committed to policies that would further the development of competitive markets in the Southeast. CompSouth's member companies provide the tangible benefits – in terms of choices, savings, innovations and jobs – that the U.S. Congress and the Tennessee legislature hoped would develop through the policies each adopted to open local telecommunications markets to competition.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to address the FCC's Triennial Review Order (TRO) as it applies to unbundled local switching, particularly as part of the

unbundled network element platform (UNE-P) used to serve "mass market" customers. The TRO lays out a complex path to a simple conclusion, namely that conditions in Tennessee do not warrant reversal of the FCC's national finding that CLECs are impaired without access to unbundled local switching to serve the "mass market," particularly in light of this state's independent determination that unbundling should be one element in the deregulatory reforms that the legislature passed in 1995.

This is not an abstract debate with intellectual appeal but little practical effect – the decisions that the TRA reaches in this proceeding will have a real and immediate impact on the choices available to Tennessee consumers, and on the prices that they pay for their telecommunications services. The stark reality is that before UNE-P became generally and operationally available to CLECs, there was no meaningful mass-market competition. If UNE-P is eliminated prematurely, competition for the average POTS customer would likely disappear, with this important customer segment reverting back to the monopoly that the Tennessee General Assembly, the U.S. Congress and this Authority have worked so hard to reform.

The principal focus of my testimony concerns the so-called "triggers" outlined in the TRO that, in effect, rely on actual competition as a means to judge whether impairment exists. In order to place the trigger (or actual competition) analysis in context, my testimony provides a simplified "roadmap" to understanding the TRO

and the various tasks that the FCC has asked the states to perform. In addition, I summarize for the TRA the status of local competition in Tennessee today, emphasizing the important role played by unbundled local switching as a means to access BellSouth's monopoly loop network in a commercially meaningful way. As my testimony explains, UNE-P is responsible for mass market competition throughout the state of Tennessee and the TRA should take care that it does not limit its availability until it is confident that an alternative is capable of producing comparable results.

Q. In addition to addressing the trigger analysis required by the TRO, does your testimony provide any insight to how the market is likely to develop if access to unbundled local switching is retained?

A. Yes. The final section of my testimony explains why unbundling is so important to the continued evolution of the industry from its monopoly roots to its hoped-for competitive future. Unbundling the legacy telephone network encourages competition, and the more competition that exists for customers today, the more investment that will occur to retain these customers in the future as their needs and options change. UNE-P is a critical step in the market's evolution from voice-centric (i.e., POTS-based) services to an integrated digital environment, but not all customers are poised for (or interested in) moving away from POTS anytime soon.

At the same time, the TRA must appreciate that the process of establishing a competitive local market requires a long-term commitment. There is no miracle technology that offers an immediate solution to overcoming the incumbent's entrenched advantages in the mass market. The incumbent's inherited network represents the cumulative product of decades of monopoly protection. While I also disagree with BellSouth that unbundling discourages the deployment of new facilities, the unbundling at issue here concerns access to legacy facilities used to provide POTS service. There is nothing mystically beneficial about encouraging the deployment of additional switching capacity in a state where switching capacity is already in excess supply. Moreover, there is no question that unbundled local switching is the most efficient, cost effective means to access BellSouth's loop network used to serve mass market customers.

Q. Does your testimony recommend any "follow-on" proceedings that the TRA should schedule here?

A. Yes, I recommend two follow-on proceedings. First, it is important to again emphasize that because of the importance of local switching to local competition; Congress specifically required that BellSouth offer access to this network element in order to be able to offer long distance services in Tennessee. Under the terms of Section 271's social contract, BellSouth has voluntarily accepted the obligation to offer unbundled local switching at rates that are "just and reasonable and

nondiscriminatory" and which provide entrants "meaningful access."[1] In order for this commitment to have practical meaning, the TRA should expect it will need to adjudicate (as the arbiter of interconnection disputes) rates that comply with this pricing standard for any local switching rate (such as the rate for DS-1 switch ports) that is no longer required under Section 251 of the Act. Therefore, for administrative efficiency, I recommend that the TRA initiate, at the conclusion of this docket, a generic proceeding in which BellSouth may request the TRA establish the "just and reasonable" rate for any switching arrangement no longer required to be unbundled under section 251 of the federal Act, but which BellSouth has committed to offer as a result of its choice to invoke the provisions of Section 271 to offer long distance service in the State.[2] Finally, the FCC has requested that states develop procedures to conduct periodic review of the incumbent's unbundling obligations.[3] Consequently, at the conclusion of this proceeding, the TRA should establish the process it will use to conduct future inquiries.

---

[1] TRO ¶ 603.

[2] By recommending that the TRA initiate such a proceeding, however, I do not want to suggest that the rate itself should necessarily change. TELRIC-based rates are "just and reasonable" under federal and state law, and it would be entirely appropriate for the TRA to continue existing rates. At most, any difference between a just and reasonable rate under section 271, and the just and reasonable TELRIC rate, can be no more than a just and reasonable difference.

[3] TRO ¶ 424.

II. POTS Competition and the Unbundling Policy of the State of Tennessee

Q. Has the State of Tennessee adopted a policy concerning unbundling and local competition?

A. Yes. Like many states in the BellSouth region, the Tennessee General Assembly passed legislation that reduced the retail regulation of BellSouth as part of a package of reforms that also included unbundling and encouragement of local competition.

> 65-4-123. Declaration of telecommunications services policy.
>
> The general assembly declares that the policy of this state is to foster the development of an efficient, technologically advanced, statewide system of telecommunications services by permitting competition in all telecommunications services markets, and by permitting alternative forms of regulation for telecommunications services and telecommunications services providers. To that end, the regulation of telecommunications services and telecommunications services providers shall protect the interests of consumers without unreasonable prejudice or disadvantage to any telecommunications services provider; universal service shall be maintained; and rates charged to residential customers for essential telecommunications services shall remain affordable.

> 65-4-124. (a). All telecommunications services providers shall provide non-discriminatory interconnection to their public networks under reasonable terms and conditions; and all telecommunications services providers shall, to the extent that it is technically and financially feasible, be provided desired features, functions and services promptly, and on an unbundled and non-discriminatory basis from all other telecommunications services providers.

Q. Are you recommending that the TRA independently order BellSouth to offer unbundled local switching under state law?

A. No, but only because such an action is unnecessary. The FCC has made a national finding that CLECs are impaired without access to unbundled local switching to serve mass market customers, and the record of this proceeding will demonstrate that there is no basis for overturning that finding in Tennessee. I do believe, however, that the TRA should analyze the issues in this proceeding through the prism of the state law and the policy choices that have already been made, fully cognizant that the Legislature has already granted BellSouth deregulatory freedoms with the *expectation* of the local competition that UNE-P is only just now bringing to the POTS customers of Tennessee

Q. Is POTS competition central to the relaxed regulation of BellSouth?

A. Yes. Once BellSouth is regulated under a price cap regime, the only consumer protection from the incumbent earning unreasonably high profits is competition. The POTS marketplace (here called the "mass market") has long been the focus of traditional regulation. Demonstrating the importance of this customer segment is the fact that a centerpiece of federal and state public policy has been the goal of "universal service" – i.e., assuring the widespread availability of these services at affordable prices. It would make little sense to adopt a commitment to the

availability of POTS (i.e., universal service), without being equally committed to assuring that this same customer segment enjoys competitive choice.

Q. Is competition developing in this important customer segment in Tennessee?

A. Yes. The fact is that mass market competition – that is, competition for the average POTS customer – depends today on competitive carriers being able to access BellSouth's loop network in a commercially meaningful way. For all practical purposes, that access is obtained through the use of BellSouth's unbundled local switching, which provides electronically controlled access to BellSouth's analog loop plant through the combination known as UNE-P. The following summarizes the growth in local competition in Tennessee over the past several years using UNE-P and UNE-L, based on BellSouth's filings with the FCC:

Table 1: UNE-P and UNE-L Activity in Tennessee[4]

	In-Service Lines		Growth	
	UNE-L	UNE-P	UNE-L	UNE-P
December-99	35,605	334		
June-00	41,550	2,002	5,945	1,688
December-00	47,739	15,778	6,189	13,776
June-01	51,721	30,674	3,982	14,896
December-01	53,067	50,555	1,346	19,881
June-02	50,941	75,656	-2,126	25,101
December-02	49,884	134,636	-1,057	58,980
June-03	47,327	179,886	-2,557	45,250
September-03[5]	50,654	204,567	3,327	24,681

[4] Source: BellSouth Form 477 (Local Competition Reports) responses to the Federal Communications Commission.

[5] Source: BellSouth Response to AT&T Request for Information No. 55.

As Table 1 illustrates, 80% of *all* the UNE-based local competition in Tennessee is dependent upon UNE-P (and an even greater percentage of mass market competition is made possible by access to unbundled local switching).

Q. Does UNE-P bear a special relationship to section 271 and the consequences of BellSouth's offering of bundled local/long distance services?

A. Yes. There are a number of important parallels and linkages between UNE-P and BellSouth's offering of long distance services in this state. The first is quite direct – UNE-P is nothing more than the *local*-wholesale equivalent to the wholesale services that BellSouth uses to provide long distance service. Indeed, the concept of unbundled local switching was first developed to provide the same type of electronic access to local loop facilities[6] – and to create a comparable local generic switching and transmission "platform" – that was (and is) commonly available in the long distance market, and which was (and is) readily available to the RBOCs after the legal prohibitions on their offering long distance service were lifted. This is not a coincidence. The expectation at the time the federal Act was passed was that the RBOCs would rely on wholesale long distance arrangements to quickly offer the mass market local and long distance services from a single provider, and the only way to prevent the RBOCs from reasserting

[6] One of the many problems (or impairments, if you will) solved by unbundled local switching is that it supports a customer-migration process that is similar to (in terms of cost and customer experience) to the PIC change process used by consumers when they change long distance carriers.

their dominance would be if other carriers had a comparable opportunity to compete.

The social contract embodied in section 271 fully recognized the importance of local switching to achieving the balance of reforms contained in the federal Act. Section 271 specifically requires BellSouth to offer local switching if they want to offer long distance services in the states where they are the incumbent. It is remarkable that BellSouth (as well as the other RBOCs) continuously denigrate a local entry method that parallels their own strategy for offering long distance service (i.e., leasing the requisite switching and transmission functionality through a wholesale arrangement), as though one (their interLATA offerings) provides public benefits, while the other (competitive local services), does not.

Q. Was it wise for BellSouth to accept the terms of section 271 and offer UNE-P in exchange for the opportunity to provide long distance services?

A. Yes. Even with the availability of the UNE-P wholesale offering, BellSouth is dominating its competitors in the race to provide customers with bundled local and long distance service obtained from a single carrier. In the third quarter of 2003 (the most recent quarter for which the information is available), BellSouth gained more than 3.5 long distance lines (to add with its local service) for every local line gained by all of its competitors (using UNE-P) combined.[7] BellSouth

[7] Source: BellSouth Quarterly Earnings Statements, 2nd Q 2003 and 3rd Q 2003.

now provides long distance service to 24% of the residential market and 34% of the business mass market, while complaining that it should not be required to offer (even though it was an explicit part of its 271 commitments) a similar local arrangement that is enabling competitors using UNE-P to serve less than 10% of the local market (regionwide).

Q. Are the local competition statistics for Tennessee consistent with data in other states?

A. Yes. Although a leader in local competition, the Tennessee statistics are also consistent with national data filed at the FCC during the Triennial Review proceeding (and summarized below). As the following table shows, UNE-P is critical to POTS competition for residential customers *and* small businesses that desire analog-based telephone service.

Table 2: UNE-P Penetration in Mass Market[8]

Holding Company	Penetration Rate	
	Business	Residential
BellSouth	12.2%	4.6%
Qwest	7.4%	2.1%
Verizon (Bell Atlantic)	7.6%	7.7%
SBC	6.2%	8.5%
Total	7.6%	6.7%

[8] Source: UNE-P lines are from RBOC *Ex Parte* Filings in CC Docket 01-338, or as reported by Commerce Capital Markets, December 20, 2002. Vintage of data varies, but is generally from August or September, 2002. Relative penetration rate calculated as UNE-P lines (business or residential) as a percentage of residential and business analog lines. Source: ARMIS 43-08.

Q. What type of carrier is using UNE-P to compete in the POTS market?

A. Not surprisingly, the largest competitors using UNE-P to compete in the mass market are the traditional long distance carriers, AT&T and MCI. More recently, Sprint has announced its intention to compete in the local exchange POTS market using UNE-P. The fact that Sprint, the nation's largest incumbent local exchange carrier not affiliated with an RBOC, has concluded that UNE-P is needed to compete for mass market customers provides further validation that UNE-P is the efficient, economic choice (and, conversely, that other approaches simply will not produce comparable results).

Because each of the traditional long distance carriers had a relatively large preexisting base of voice customers (and the need to offer local/long distance bundles referenced earlier), these carriers have become the largest *individual* competitors using UNE-P. The largest *collective* purchaser of UNE-P, however, is the new wave of competitive entrants that rely on UNE-P to bring fresh energy and innovative ideas and services to this market segment. It is estimated that more than 40% of the UNE-P lines are purchased by non-IXC CLECs (nearly 1/3 more than AT&T or MCI), demonstrating the importance of UNE-P to reducing entry barriers in the POTS market.[9]

[9] Source: *UNE-P Fact Report*, published by the PACE Coalition, July 2003.

III. A Roadmap to the Triennial Review Order

Q. Did the FCC conduct a *comprehensive* evaluation of the impairment that limits mass market local competition?

A. No. It is important to remember that the FCC focused its analysis – and rested its conclusion -- on only one source of impairment, the manual hot cut process used to provision analog loops to CLEC switches. Based on this single factor, the FCC concluded that impairment exists on a national scale.[10] Significantly, the FCC did not determine that the hot-cut process was the only source of impairment – rather, having *already* found impairment nationally, it left it to the states to identify other sources of impairment that would remain (even if it were possible to correct the problems created by the manual hot-cut process).

Q. What tasks did the FCC outline for the states in the Triennial Review Order (TRO) as it relates to mass market local switching?

A. The basic structure of the TRO is essentially a three-pronged analysis:

* An "actual competition" analysis (i.e., triggers) to determine if there are markets where the level of actual competition is so vigorous, that the national finding of impairment must be wrong.

[10] TRO ¶ 423.

* A "potential competition" analysis to determine whether, despite the absence of "actual" competition and the finding of national impairment, there are factors that would make competition possible nonetheless.

* A "can impairment be fixed" analysis that looks at possible changes to provisioning systems – specifically, a batch hot-cut process combined with "rolling access" to unbundled switching – to determine whether the hot-cut impairment can be corrected.

It is important that the TRA not become distracted by the "scavenger hunt" feel of the various analyses that the FCC asked it to undertake in the TRO. Certainly the TRO instructs state commissions to evaluate a number of issues (at least to the extent that the ILEC demands that the state commission undertake such a comprehensive task). However, it is useful for the TRA to remember that this proceeding *starts* with a national finding that CLECs are impaired in serving mass market customers without access to ILEC unbundled local switching; the FCC simply asks the Authority to confirm there are no exceptions to this national finding.

Q. Which of these basic analyses specified in the TRO – i.e., actual deployment (triggers), potential deployment (the business case analysis), and operational improvements – does your direct testimony address in most detail?

A. The principal focus of my testimony is the role and application of the FCC's "actual competition" or "trigger" analysis set forth in the TRO. The FCC believed that the "principal mechanism" to judge impairment should be actual marketplace activity.[11] Such an approach does make sense, but only so long as the analysis is conducted in a fashion structured to determine whether potential trigger candidates do, in fact, provide evidence of non-impairment.

One cannot overstate the potential importance of the actual competition (or trigger) test. If the triggers are satisfied, the test *overrides* the FCC's national finding that CLECs are impaired without access to unbundled local switching to serve the mass market and *short circuits* further state review regarding the extent of economic and operational barriers (at least under the federal Act). Given the critical role the trigger analysis plays, it is essential that the TRA apply the trigger analysis with a care that is scaled to the important consequences that could *potentially* follow if the trigger test is satisfied.[12] Given this role, a discussion of the requirements for the FCC's "triggers" analysis forms the most detailed area of my testimony.

---

[11] TRO ¶ 498.

[12] As I indicated earlier (and will explain in more detail in the final section of this testimony), BellSouth is still obligated to offer unbundled local switching under Section 271 of the Act at rates that must be just and reasonable and, therefore, should differ (little if at all) from those currently in effect.

Q. Does your testimony also address the "potential deployment" analysis required by the TRO?

A. Yes, but not to the same extent as my discussion of "actual competition." I believe that the FCC's "potential deployment analysis" is mostly useful as a forensic examination designed to understand the *causes* underlying the CLECs' post-Act experience. This is not a case where CLECs *have not* tried to enter local markets with their own facilities and the TRA must rely on *predictions* about profitability and competition. The widespread failure of CLECs over the past several years is a "fact" of actual market experience that cannot be ignored. The FCC's requirement that the states conduct a potential deployment analysis (at least where the incumbent insists) is useful mostly to determine *why* the CLECs' competitive results have been what they are, and as a means to help illustrate the additional impairments (beyond the manual hot-cut process) that the FCC did not consider.

Q. Would it be reasonable for the TRA to remove a network element based on a potential deployment analysis?

A. I realize that the BellSouth has the opportunity (under the TRO) to attempt to "explain away" the absence of local competition in the mass market by sponsoring a "model" that shows such competition *should* occur, even if it has not yet done so. But is it really reasonable to conclude that local competition for

mass market POTS customers in the absence of UNE-P is possible, in direct contradiction of the past seven years of experience, and with the most relevant measure of existing competition (i.e., the actual competition test) showing that alternative approaches to serving the mass market have yet to work? No, I do not believe so.

The "potential deployment" analysis should not be about placing the TRA in the role of an omniscient "super investor," able to design through a regulatory contested case the ultimate business case that has eluded real investors over the past seven years. If the ILECs were really interested in demonstrating that providing POTS services to mass market customers by deploying competitive switches to connect analog loops is feasible and profitable, they have had the same seven years to demonstrate this point by actually competing using this entry strategy in each other's regions. That they have not done so speaks volumes about the credibility of any potential deployment business model that the ILECs may present in this proceeding. Rather than enter and compete for mass market customers in other ILEC regions, the chosen "entry" strategy of the RBOCs has been to buy other RBOCs in an ever increasing spiral of consolidation.[13] As previously discussed, the largest non-RBOC ILEC (Sprint) has concluded that the to serve mass market customers outside of its ILEC territory is to utilize

[13] I recognize that Qwest has recently announced its intention to purchase the assets of Allegiance Telecom through the bankruptcy auction process. Its public statements, however, indicate that its purpose has more to do with reducing the access costs of the Qwest interLATA network than any strategic entry to the mass market.

unbundled local switching and UNE-P. Conclusions supported by the ILECs' actual behavior should be given more weight than any model they present.

The point here is that a "potential deployment" model may be useful to explain why entry has *not* occurred, but only a flawed model with unrealistic revenue and/or cost assumptions would show that entry is possible after so much CLEC time, effort and capital has already been expended to actually test that claim in the real world.

Q. Should the TRA expect that a batch hot-cut process would eliminate impairment?

A. No, it should not. Although the operational impairment issues are discussed more fully in the testimony of other witnesses, the point that I would like to make here is that the manual batch hot-cut and rolling access "solution" that the FCC has suggested would be meaningful only if the manual hot-cut process were the only impairment preventing CLECs from serving mass market customers with their own switches. Although the FCC requires the states to consider such a "solution," in the end, the process would still require the manual provisioning and movement of mass market customers' analog loops from the ILEC switch to the CLEC switch. There is no reason to believe that such an approach would be satisfactory to serve the mass market POTS customers who "have come to expect the ability to move freely from carrier to carrier in a seamless and rapid

manner,"[14] similar to the consumers' change of long distance carrier with an automated PIC change.

Moreover, as indicated above, the "solution" would only materially reduce impairment if the manual hot-cut process were the *only* impairment – that is, if the only reason entrants relied on unbundled local switching to serve the mass market was to avoid the operational and economic impairments created by the manual hot-cut process, then the batch-cut system (with significantly lower loop migration costs) might alleviate those impairments. There are, however, other impairments and cost disadvantages that the approval of a batch hot-cut approach does nothing to lessen, including impairments and cost disadvantages associated with the requirement to digitize and backhaul traffic from the ILEC switch where all mass market analog loops terminate to a distant CLEC switch, as well as other cost consequences of the economies of scale and scope that the ILEC inherited, but that the new entrant must overcome.

Finally, there is no reason to believe that a batch hot-cut "solution" would be as reliable, cost-efficient and, perhaps most importantly, transparent to the customer as the "electronic hot-cut" effected when a CLEC customer is provisioned on UNE-P. In effect, the batch hot-cut approach presupposes that competitors can build a relatively stable customer base, with virtually all of the customers won from the incumbent (and few from each other). The FCC never explains in the

[14] TRO ¶ 474.

TRO *why* a competitive local market would exhibit these characteristics – certainly these are not the lessons learned in the years after the long distance market became competitive, with customers frequently moving between carriers, including moving *among* competitive carriers and not just from AT&T (the long distance incumbent).

As a practical matter, in order for a new hot-cut system to materially change competitive conditions in the "mass market," it would have to facilitate rapid and inexpensive customer changes between competing providers on a scale comparable to the electronic process that currently exists for provisioning of a CLEC customer via UNE-P. Thus, while it is important that the TRA work to improve the "hot-cut" process, it should not begin that work under the assumption that a batch-system is what will be needed to have a meaningful effect in the marketplace.

IV. Defining the Mass Market

Q. What threshold questions must the TRA address in order to apply the "actual competition test" to the "mass market"?

A. The first layer of the actual competition test is the definition of the "mass market." As noted earlier, the mass market is generally defined by the FCC as the POTS market – that is, the market of customers obtaining analog voice

service. There are two parameters, however, that the FCC has asked the state commissions to establish in order to define the "mass market" in its state. The first is to determine the "cross-over" that will define the upper boundary of the mass market in terms of the number of voice lines a customer may have before the customer should be viewed as an "enterprise customer." The second parameter is that the FCC has asked the states to determine the appropriate "geographic boundary" of the mass market in which it will conduct its impairment analysis.

Q. As a threshold question, does your direct testimony recommend a specific crossover and geographic area for the TRA to use in evaluating impairment?

A. No, not at this time. As I have noted before, this proceeding begins with a national finding of impairment that justifies the unbundling of local switching to serve analog customers. I believe it is BellSouth's obligation in the first instance to explain *why* and *where* impairment does not exist, so that the claim can then tested by other parties in this proceeding. As a result, my testimony provides overall guidance as to how the TRA should approach these questions. Specific recommendations will be provided after I have reviewed BellSouth's claims in its direct testimony.

A) Establishing the Upper Bound of the Analog Mass Market

Q. How does the TRO define the mass market customer?

A. The TRO provides a basic definition of the "mass market customer" and contrasts it with the "enterprise customer." The mass market customer is (a) primarily interested in basic voice-grade POTS service; (b) widely geographically dispersed; and (c) unaccustomed to complex or disruptive provisioning schemes. As the FCC explains, "mass market customers are analog voice customers that purchase only a limited number of POTS lines, and can only be economically served via DS0 lines."[15] Unlike enterprise customers, mass market customers are not predominantly located in concentrated geographic locations, such as central business districts; rather residential and small business customers are spread across all urban, suburban, and rural locations. These customers expect that using their telephone services, as well as changing service providers, will not be a complicated transaction.[16]

Q. Does the mass market include both residential and business customers?

A. Yes. Perhaps because we are all residential customers, we intuitively appreciate the fact that the residential marketplace is part of the mass market. The forgotten

---

[15] TRO ¶ 497.

[16] TRO ¶ 467: "Most importantly, mass market customers demand reliable, easy-to-operate service and trouble-free installation."

customer of telecommunications policy, however, is the average (which is to say in this context, voice-centric) small business customer. There are many business customers that still rely on traditional POTS service for the telecommunications needs (for example, restaurants, garages, plumbers, florists and others for whom higher speed enterprise services are simply unnecessary).

One of the important roles for local competition is to eliminate discrimination by driving prices towards their costs. Traditionally, an artificial price difference has been used to separate the residential POTS customer from the business POTS customer. One benefit of local competition will be that this price differential will decline, as competitors offer more cost-based products to *both* the residential and small business market. Small businesses will benefit from lower prices, while residential customers will see more value-laden offerings, such as MCI's Neighborhood offering. These competitive offerings are already at work erasing the *artificial* boundary in the POTS marketplace between the residential and small business customer, as the *technological* boundary separating the analog (POTS) and digital (i.e., enterprise) market emerges in its place.

Q. How does an "enterprise" customer differ from a "mass market" customer?

A. Enterprise customers demand a level of service and capacity – particularly for data services – that is quite different from that demanded by the mass market customer. As the FCC explained: "DS1 enterprise customers are characterized by

relatively intense, often data centric, demand for telecommunications services sufficient to justify service via high-capacity loops at the DS1 capacity and above."[17]

Q. Does the TRO recognize this distinction in the DS0/DS1 cutover analysis to be performed by the TRA?

A. Yes. The TRO provides that a customer should be considered part of the DS1 enterprise market when "it is economically feasible for a competitive 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."[18] The cutoff is defined as "the point where it makes economic sense for a multi-line customer to be served via a DS1 loop."[19]

Q. How should the DS0/DS1 cutover point be established?

A A very simple approach would be to establish the cutover through a straightforward calculation that determines when the cost of a UNE DS1 (including non-recurring activities and the installation of customer premises

---

17 TRO ¶451.

18 TRO ¶421, n.1296.

19 TRO ¶497.

equipment necessary to utilize DS1 level service) is less than continued use of multiple UNE analog loops for voice service. This point would form the "upper bound" of the analog mass-market, i.e., the point at which a mass market customer should be considered an enterprise customer based on the number of analog lines used to obtain voice service.

Generally, to estimate the line-count of mass-market lines at which a DS-1 is the more efficient choice, the following formula should be used:

$$\text{Crossover} = \frac{(\text{CPE} + \text{UNE DS-1})}{\text{UNE Loop}}$$

In this formula, "CPE" includes all the costs associated with the equipment and inside-wire changes needed to make the customer's analog service compatible with a DS-1 loop, and the values for "UNE DS-1" and "UNE Loop" include all relevant costs of leasing these facilities from the incumbent (including non-recurring charges to establish service). There are other factors not included in the simple formula above that would more accurately capture real-world constraints that would (as I explain below) increase the crossover. Moreover, a more realistic calculation would include additional costs to use UNE-L (such as collocation and backhaul) that are not incurred to use UNE-P. Although additional complication could be added to the formula, at a minimum the crossover should comply with this simplified approach.

Q. Are there other considerations that the TRA should keep in mind when it adopts the "DS0/DS1" crossover?

A. Yes. The role of the crossover is to establish a governmentally drawn upper boundary to the mass market – in effect, substituting the TRA's judgment of how a customer *should be* served (via a DS-1) for the customer's judgment of how it *has chosen* to be served (multiple analog loops). While the above formula complies with the direction of the TRO, the TRA should be aware that this simple calculation does not take into account a number of factors that, in the real world, would explain why a customer with multiple voice loops might not want to move its POTS service to a higher-capacity facility.

For example, a customer may not desire a DS1-based service because of the requirement that it make space available for channel bank equipment on its premises. Customers may not want to give up the space for such equipment, or may resist the telecommunications provider's need to have access to the premises to maintain or repair the equipment. Alternatively, because of provisioning problems or the customer's individual traffic patterns, the CLEC might need to use higher priced special access rather than UNE DS1 facilities (which would significantly increase the crossover). In these circumstances, the customer would have good reasons to preserve its analog POTS service, even if it were at or above the theoretical cutover point described above. In addition, a customer served by multiple analog lines is less vulnerable to network failure than a customer whose

entire service is being provisioned over a single DS-1. And finally, as noted above, the calculation does not consider any of the additional costs associated with using a UNE loop (such as collocation and backhaul) that are not incurred when service is provided using UNE-P.

By failing to consider these factors, the minimalist DS0/DS1 cutover as calculated above will strand some customers from competitive choice because they will not *really* be in a position to take advantage of a DS-1 connection, they will only be *presumed* able to do so. Consequently, the TRA should be aware that a crossover calculated under the above formula would represent the *lowest* reasonable crossover and, while simple, would still be likely to adversely affect some customers.

B) The Appropriate Geographic Area for the Evaluation of Impairment

Q. What general approach should the TRA use in selecting the geographic area for its impairment analysis?

A. The basic approach should be to look at areas being served by a particular network element and determine whether an alternative could reasonably produce the same result. The basic approach described in the TRO is obviously (and correctly) customer-centric, with the states being directed to consider, among other things:

* The locations of customers actually being served (if any) by competitors;

* The variation in factors affecting competitors' ability to serve each group of customers; and,

* The competitors' ability to target and serve specific markets economically and efficiently using currently available technologies.[20]

The only bounds that the FCC placed on the state's discretion in determining the geographic contours of a "market" (or, more properly stated, an impairment evaluation zone) is that the area must be smaller than an entire state. At the same time, it must not be so small that "...a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market."

Q. Have you reviewed data that identifies "the locations of customers actually being served (if any) by competitors?"

A. Yes. My review of Tennessee specific data demonstrates that UNE-P exhibits a very distinct – and very important -- competitive profile: that is, UNE-P brings competitive choice throughout the serving territory of BellSouth. As the TRA approaches its impairment analysis, it is important that it define "geographic areas" in a manner that permits it to recognize the unique competitive signature of

[20] TRO ¶ 495.

UNE-P, so that it may test other entry strategies to see whether they could produce the same level of competitive choice.

Q. Have you quantified the competitive profile of UNE-P in Tennessee?

A. Yes. Exhibit JPG21 analyzes the competitive profile of UNE-P in the exchanges served by BellSouth.[21] The bar chart in Exhibit JPG-2 plots the competitive share achieved by UNE-P in each of BellSouth's wire centers in Tennessee, ranked by the size (measured in POTS access lines) of the exchange. BellSouth's largest exchange is farthest on the left, while BellSouth's smallest exchange is on the right. BellSouth's remaining exchanges are arranged in-between according to size.

As the Exhibit JPG-2 clearly shows, CLECs utilizing UNE-P to serve mass market customers have brought competition to *every* BellSouth exchange in Tennessee, irrespective of the size of the exchange. The significance of this competitive profile cannot be overstated – the competitive signature of the UNE-P entry strategy is its ability to serve the mass market across the *entire* mass market without geographic limitation. No other competitive entry strategy can provide this result.

[21] Source: BellSouth Response to AT&T 1st Interrogatory, No. 55.

Q. What conclusion should the TRA draw from the competitive profile illustrated in Exhibit JPG-2?

A. The competitive profile of UNE-P clearly demonstrates that "the locations of customers actually being served (if any) by competitors" is, in fact, the entire territory of the incumbent. This is clear marketplace evidence that the UNE-P entry *strategy* supports competition in each wire center. As the TRA judges alternatives to UNE-P, it should do so fully aware that UNE-P produces statewide competition – and it should not restrict the availability of unbundled local switching and UNE-P unless it can conclude that an alternative will produce a similar competitive profile.

Q. Have you also analyzed the competitive profile of UNE-P more recently?

A. Yes. To better understand how the market is operating *today*, I also looked at competitive UNE-P lines added in the past six months.[22] This information is presented in Exhibit JPG-23. As Exhibit JPG-3 shows, UNE-P providers continue to actively provide service throughout the state, adding lines in every wire center in Tennessee over the past 6 months, without demonstrating any preference for urban over rural areas.

[22] Source: BellSouth Response to CompSouth 1st Interrogatories, No. 3.

Q. What do Exhibits JPG-2 and JPG-3 mean for the geographic areas selected by the TRA to evaluate impairment?

A. As I indicated earlier, I intend to first wait to evaluate the area suggested by BellSouth before making a final recommendation. Based on the "profile of customers actually being served," however, it is important that the TRA not select an area for the evaluation of impairment that is so small that it fails to appreciate the unique competitive signature of UNE-P. This factor would suggest relatively large areas for impairment evaluation (such as the LATA), so that the TRA not mistake some limited entry, over a smaller area, as evidence of non-impairment.[23]

Q. Do you believe that statewide competition was intended by the federal Act?

A. Yes. It is clear that one of the goals of the federal Act is to encourage broad competition throughout an entire state. For instance, the Act fundamentally judges whether local markets are open (in Section 271) on a state-by-state basis:

> The requirement of an operational competitor is crucial because ... whatever agreement the competitor is operating under must be made generally available throughout the State. Any carrier in another part of the State could immediately take advantage of the "agreement" and be operational fairly quickly. By creating this potential for competitive alternatives to flourish rapidly throughout

[23] Of course, if the Commission adopts relatively large areas in order to *avoid* the mistake of interpreting some geographically limited entry as evidence that impairment does not exist, it is critical that the Commission retain this understanding as it evaluates potential candidates to be included as "triggers." Specifically, as I explain below, the Commission should only include switch trigger candidates that exhibit a competitive profile similar to that achieved by UNE-P.

> a State, with an absolute minimum of lengthy and contentious negotiations once an initial agreement is entered into, the Committee is satisfied that the "openness and accessibility" requirement is met.[24]

In addition, the general assembly has declared that the "policy of this state is to foster the development of an efficient, technologically advanced, statewide system of telecommunications services by permitting competition in all telecommunications services markets,"[25] clearly demonstrating that there should be no preference of particular geographic areas over others, permitting selected forms of competition in some areas, while denying customers in other areas of the state the same choices.

The bottom line is that the TRA is observing in the market exactly the type of statewide competitive activity that the Tennessee General Assembly and the U.S. Congress hoped to see when they opened these markets to competition. Consequently, the TRA should take great care that it not take any action to curtail UNE-P based competition, unless it is confident that an alternative would produce the same result.

Q. Should the TRA *expect* UNE-L to produce the same result?

---

[24] *Ameritech Georgia Order*, Federal Communications Commission, CC Docket 97-298, Footnote 169, *citing* House Report, emphasis added.

[25] 65-4-123.

A. No. There are material differences between UNE-L and UNE-P that make UNE-L ill-suited to the type of broad entry that necessary to address the mass market. To begin, as noted by the FCC, the manual provisioning (i.e., the "hot cut") processes used with UNE-L do not have the scale, reliability or cost structure necessary to support mass market services. Equally important, however, are the *additional* costs that the FCC did not expressly evaluate and which add significantly to CLECs' economic impairment. These include a CLEC's costs to extend an analog loop from the wire center where it is currently located to the CLEC's switch location. These additional collocation, "signal preparation" and transport costs are significant and compounded by the fact that BellSouth has a large number of relatively small wire centers in Tennessee.

The UNE-L business strategy fundamentally requires that CLECs can efficiently access loops at the wire center and transport those loops back to their switch without incurring a cost penalty so large that they may not reasonably compete with the ILEC (that incurs none of these costs). However, even if all of these costs could be wiped away, CLECs would still have to deal with the fact that the ILEC network was never designed to provide a few locations where all the loops may be accessed. Rather, the ILEC network is relatively dispersed – that is, the loops are spread among hundreds of wire centers, some of which aggregate very few loops. The bottom line is that the TRA should not expect that UNE-L would be able to produce competitive results on a scale comparable to UNE-P in the analog POTS market that is the subject of this proceeding trigger inquiry.

V. Applying the Actual Competition Test: Triggers

Q. How should the TRA approach the trigger analysis?

A. When the FCC asked the states to look at actual competitive activity, it did so with the expectation that the states would apply the "trigger test" with judgment as well as actual data. As the FCC indicated, "We find that giving the state this role [as fact-finder on triggers and other impairment issues] is most appropriate where, in our judgment, the record before us does not contain sufficiently granular information and the states are better positioned than we are to gather and assess the necessary information."[26]

The FCC is relying on the states to examine local markets based on the State commissions' knowledge and familiarity with local conditions. The TRA's role in this context obviously is not to merely review the data that was already provided to the FCC regarding the deployment of CLEC switches, but rather to conduct a full inquiry into whether the trigger criteria set forth in the TRO are satisfied.

The application of the triggers requires an in-depth approach that gets at the central question of whether actual, non-UNE-P based competition for mass

[26] TRO ¶ 188.

market customers exists in a given market, sufficient to show that CLECs have been able to overcome impairment. The FCC creates triggers that are "keyed to objective criteria,"[27] (which are described in more detail below) and provided insight into the judgment that the TRA should apply.

For example, the FCC determined that CMRS providers should not be considered by a State commission in its analysis the triggers,[28] and the FCC reiterated the importance of distinguishing between "enterprise switches" and "mass market switches" in the trigger analysis.[29]

Q. What criteria are included in the FCC's framework for the "Self-Provisioning Trigger"?

A. In the TRO, the FCC provides guidance and criteria as to the basic qualities a competitive LEC must exhibit in order to be considered a legitimate candidate for the "self-provisioning" trigger. At each step, these criteria are designed to conform to the touchstone purpose of the trigger evaluation – to determine whether there is sufficient actual mass market competition being offered by switch-based CLECs to justify a "no impairment" finding in a market in *spite* of the national finding of mass market switching impairment.

---

[27] TRO ¶ 498.

[28] TRO ¶ 499, n.1549.

[29] TRO ¶441 and n. 1354, ¶ 508.

The self-provisioning trigger criteria can generally be organized into six categories. Before a "trigger candidate" can be found to qualify as satisfying the self-provisioning trigger, the criteria contained in the TRO for each of these categories must be satisfied. The six categories are as follows:[30]

* The self-provisioning trigger candidate's switches must be "mass market," not "enterprise" switches.

* The self-provisioning trigger candidate must be actively providing voice service to mass market customers in the designated market, including residential customers, and is likely to continue to do so.

* The self-provisioning trigger candidate should provide services exhibiting a ubiquity comparable to UNE-P within the area chosen for the analysis.

* The self-provisioning trigger candidate should be relying on ILEC analog loops to connect the customer to its switch or, if a claimed "intermodal" alternative, its service must be comparable to the ILEC service in cost, quality, and maturity.

[30] As the TRA is well aware, the page-length of the TRO is matched only by its potential importance to local competition. While I believe that these 6 categories are the core requirements needed to qualify as a Self-Providing Trigger candidate, additional issues may arise after I review the testimony of BellSouth and the other parties in this proceeding that would require additions to this preliminary list.

* The self-provisioning trigger candidate may not be affiliated with the ILEC or other self-provisioning trigger candidates.

* The existence of the self-provisioning trigger candidate should be evidence of sustainable and broad-scale mass market competitive alternatives in the designated market.

Only if each of these trigger criteria is met does a candidate qualify as one of the three self-provisioning providers necessary to satisfy the FCC's self-provisioning trigger.

Criterion 1: Enterprise Switches Do Not Qualify as Triggers

Q. You identify the first criterion as requiring that the self-provisioning trigger candidate's switches must be "mass market" switches rather than "enterprise" switches. Please describe the FCC's discussion of this criterion in the TRO.

A. The analytical importance of the distinction between the "mass market" and "enterprise market" pervades the TRO. The FCC found that, even based on the limited record before it, there was a clear distinction between the mass market and

the enterprise market, both in terms of typical customer profile and the state of CLEC switch deployment.

I have already explained the difference between mass market and enterprise customers. Similarly, the FCC found that CLEC switch deployment is significantly different in the mass market and the enterprise market: "[W]e find that the record demonstrates significant nationwide deployment of switches by competitive providers to serve the enterprise market, but extremely limited deployment of competitive LEC circuit switches to serve the mass market."[31]

Based on the demonstrated differences between mass market and enterprise switches deployed in the marketplace, the FCC specifically rejected ILEC arguments that mass market switches and enterprise switches should be reviewed together in the mass market triggers analysis.[32] While the FCC allows deployment of an enterprise switch to be considered as a factor in the mass market "potential deployment analysis,"[33] the FCC recognized that the existence of an enterprise switch has no weight in determining whether a mass market switching trigger has been satisfied: "[S]witches serving the enterprise market," the FCC held, "do not qualify for the triggers" applicable to mass market switching.[34] The TRO thus

---

31 TRO ¶ 435.

32 TRO ¶ 441.

33 TRO ¶ 508.

34 TRO ¶ 508.

directs the TRA to consider only mass market switches in the mass market switching trigger analysis.

Q. How does the FCC distinguish between "mass market" and "enterprise" switches?

A. To begin, the FCC recognized that enterprise switches may serve some non-enterprise customer lines.[35] This recognition is based on the simple fact that there are a variety of reasons a CLEC serving the enterprise market with its own switch may provide some analog service and, therefore, obtain some analog loops as an ancillary extension of its operations. For instance, this could occur if a CLEC's enterprise customer requests fax lines (which require use of an analog line to provide a data need, but do not provide evidence that a mass market POTS service is provided). Similarly, a large, multi-location enterprise customer may require a package of services from a CLEC that includes some analog lines for a particular branch office. It would be contrary to common sense, as well as to the FCC's trigger criteria, to declare that a switch serves the mass market when the number of analog loops provisioned to that enterprise switch is minimal compared to the number of digital loops serving enterprise customers. Consequently, the TRA must examine the type of customer loops (analog versus DS1 and above) being provisioned to a CLEC switch to determine whether the switch is reasonably

[35] TRO ¶ 441.

categorized as a "mass market switch" that potentially satisfies the requirements for the self-provisioning trigger.

Criterion 2: Self-Providers Must Be Actively Providing Mass Market Service

Q. The second trigger criterion you describe requires that the self-provisioning trigger candidate must be actively providing voice service to mass market customers in the designated market, including residential customers, and is likely to continue to do so. Please identify the provisions of the TRO that discuss this criterion.

A. This measure summarizes several criteria that the FCC requires before a CLEC may satisfy the self-provisioning trigger. To break this category into its component parts, the TRO requires that a self-provisioning trigger candidate: (a) provide voice service to mass market customers;[36] (b) that it is "actively" providing such service;[37] and (c) that the self-provisioning trigger candidate is likely to continue actively providing voice service to mass market customers in the future.[38]

---

36 TRO ¶ 499.

37 TRO ¶ 499.

38 TRO ¶ 500.

Q. How should the TRA determine whether a CLEC is providing "voice service to mass market customers"?

A. In determining whether this criterion is met, the TRA must first *exclude* potential trigger candidates who do not provide stand-alone *voice service* and who do not serve *mass market customers*, including those that do not serve residential customers. For example, as noted above, some analog loops that have been provisioned to a CLEC switch are used for purely data purposes (e.g., DSL or fax lines), and thus do not provide voice service. Such lines should not be included in determining whether the self-provisioning trigger candidate provides voice services to the mass market.

Perhaps more significantly, the TRA must ensure that the voice services provided by self-provisioning trigger candidates are being provided to mass market customers rather than to enterprise customers. A customer purchasing voice and data services provisioned by a DS1 loop is by definition an enterprise customer[39] and not a mass market customer (even if a few voice lines are being served along with the data pipe). The TRA's trigger analysis must focus on the appropriate customer market, and exclude self-provisioning trigger candidates that are not serving customers who are the focus of the mass market switching impairment analysis.

[39] TRO ¶ 451.

Moreover, to qualify as a mass market trigger, a potential trigger candidate should be serving the core of the mass market, the residential customer. Region wide, more than 70% of the switched voice access lines are purchased by residential customers.[40] It makes no sense to qualify a potential self-providing trigger candidate as providing "mass market" service if it does not even offer service to the largest portion of the mass market, i.e., residential customers.

Q. How should the TRA determine whether a self-provisioning trigger candidate is *actively* providing voice service to mass market customers?

A. The FCC recognized the importance of evidence that a CLEC is actually in the marketplace and actively marketing POTS services to mass market customers. Without evidence that a self-provisioning trigger candidate is actively providing POTS services, a CLEC that no longer serves mass market customers could satisfy a trigger that is intended to assess actual competition in the present rather than the past. In the real world (the world the triggers seek to analyze), this is a significant concern. There are CLECs who attempted to serve mass market customers using their own switches, but found the operational and economic impairments too formidable to overcome. As a result, these CLECs essentially abandoned the mass market. Those CLEC switches may still serve some "legacy" analog loops connected to customers who took advantage of an early CLEC offering and may still be served even though the CLEC is no longer adding mass market customers generally. It would be nonsensical for such legacy analog lines

[40] Source: BellSouth 3rd Quarter 2003 Earnings Release, Access Line Counts.

(which are remnants of business plans scrapped precisely because of impairment) to serve as evidence that the CLEC's switch today is being used to "actively" serve the mass market. The FCC captures this concern by requiring that self-provisioning in the mass market must be occurring in an active manner today, that the providers "are currently offering and able to provide service."

One way to assess whether a self-provisioning trigger candidate is "actively" serving mass market customers is to review the types of unbundled loops recently provisioned to the CLEC's switch (for instance, in the last 6 month period). If the loops provisioned to the switch in the last 6 months are predominantly DS1 and above, that is strong evidence that the self-provisioning trigger candidate is not actively providing POTS services to mass market customers. Moreover, as previously discussed, even where there are analog loops being provisioned to the CLEC's switch, the TRA should evaluate whether the carrier is actively marketing to mass market customers, or whether the analog lines that it is adding are the by-product of sales to enterprise customers, pre-existing UNE-L customers, or some other anomaly.

Q. How should the TRA determine that the self-provisioning trigger candidate is likely to continue actively providing POTS services to mass market customers in the future?

A. The TRO asks the TRA to determine whether the self-provisioning trigger candidate is "likely to continue" offering and able to provide voice POTS services to mass market customers in the future. This determination requires that the TRA make an informed assessment of the viability of the self-provisioning trigger candidate's mass market offerings in the future. This assessment, if it is to be meaningful, should include evidence regarding the CLEC's future business prospects. If a CLEC is on the verge of exiting the market for providing mass market services (or has already left it), then it is demonstrably not "likely to continue" providing POTS services to mass market customers in the future. Moreover, if a CLEC is competing using a mix of its own facilities and UNE-P, then the TRA cannot determine that it would "likely continue" if UNE-P were no longer available.

Admittedly, the FCC complicated the TRA's work in this regard with its comment that "states shall not evaluate any other factors, such as the financial stability or well-being of the competitive switching providers."[41] State Commissions are directed to carry out the FCC's mandate to consider whether CLECs are likely to continue providing competitive switching alternatives, while simultaneously indicating that they not review what might be the most salient evidence on the topic – i.e., whether the CLEC's business plan has been successful to date. Nevertheless, the TRA must conduct the necessary review of financial information to determine whether a self-provisioning trigger candidate is "likely to continue" to provide POTS services to mass market customers after the

[41] TRO ¶ 500.

close of the record in this proceeding. Otherwise, the competitive choices that supposedly would be available to consumers if UNE-P were eliminated due to the trigger analysis would likely be illusory. Consequently, the TRA should evaluate CLEC financial information to judge the CLEC's *future* performance, even if it may not use that information to judge *past* actions.

Criterion 3: Self-Providers Should Exhibit a Ubiquity Comparable to UNE-P

Q. Why is it important that a self-provisioning trigger candidate exhibit a geographic reach (i.e., ubiquity) comparable to UNE-P?

A. The purpose of a qualifying a trigger candidate is to demonstrate, through actual marketplace behavior, that other carriers are not impaired without access to unbundled local switching because the qualifying candidate has demonstrated an ability to serve the same market without the element. In order for the comparison to be valid, it is important that the trigger candidate *actually* cover a comparable geographic area with its services.

Q. Does the TRO draw conclusions about impairment by evaluating whether alternatives exhibit a ubiquity comparable to that of the element under consideration?

A. Yes. In a number of instances, the FCC applied this same reasoning in determining why an alternative claimed by the ILECs to demonstrate non-impairment should be rejected. For example, the ILECs argued that wherever the ILEC qualified for special access pricing flexibility, that the FCC should also find non-impairment for transport. The FCC rejected this reason because its special access pricing flexibility scheme did not assure the availability of a *ubiquitous* alternative:

> Additionally, the pricing flexibility trigger based on alternative transport-based collocation requires no consideration of the ubiquity of the competitive transport facilities throughout an MSA.[42]

In addition, the FCC determined that CMRS is not an intermodal alternative to unbundled local switching, in part based on its view that CMRS is not sufficiently ubiquitous:

> For example, we note that CMRS does not yet equal traditional incumbent LEC services in its quality, its ability to handle data traffic, its ubiquity, and its ability to provide broadband services to the mass market.[43]

Ubiquity is clearly a critical dimension in the mass market, as the FCC already recognized with respect to unbundled local switching. A State clearly would be incorrect to count as a mass market trigger any provider with a ubiquity materially

---

[42] TRO ¶ 397 (emphasis added).

[43] TRO footnote 1549 (emphasis added).

less than UNE-P as demonstrating non-impairment, when the FCC already rejected CMRS as qualifying as a trigger, in part because of the limited ubiquity of that technology.

Criterion 4: Self-Providers Must Be Relying on ILEC Loops or Offer Service of Comparable Cost, Quality and Maturity

Q. The fourth criterion you reference is that self-provisioning trigger candidates should be relying on ILEC loops. What is the reference point in the TRO for this trigger criterion?

A. Although the FCC stated that the TRA should "consider" intermodal alternatives in the switching trigger analysis, it also indicated the states should review them carefully before determining whether (and how) they may legitimately qualify under the triggers. The TRO recognizes that for most entrants in a world without unbundled local switching, access to the ILEC's loops will be critical. It would make little sense, therefore, to eliminate unbundled local switching and UNE-P switching if the only alternative in a market was, for example, used by an entity that utilizes its own loops. That atypical situation would provide no meaningful evidence of whether new entrants could compete on a UNE-L basis. The FCC made this point several times in the TRO. For example:

> Specifically, many of the [CLEC residential] lines cited by the incumbents are served by carriers that, for one reason or another, are able to use their own loops. We have made detailed findings that competitors are impaired without access to incumbents' voice-

grade local loops. Indeed, no party seriously contends that competitors should be required to self-deploy voice-grade loops. *Thus, for the typical entrant, entry into the mass market will likely require access to the incumbents' loops, using the UNE-L strategy. ... Indeed, as discussed above, a crucial function of the incumbent's local circuit switch is to provide a means of accessing the local loop.*"[44]

***

"*We note that an important function of the local circuit switch is as a means of accessing the local loop.* Competitive LECs can use their own switches to provide services only by gaining access to customers' loop facilities, which predominantly, if not exclusively, are provided by the incumbent LEC. Although the record indicates that competitors can deploy duplicate switches capable of serving all customer classes, without the ability to combine those switches' with customers' loops in an economic manner, competitors remain impaired in their ability to provide service. *Accordingly, it is critical to consider competing carriers' ability to have customers' loops connected to their switches in a reasonable and timely manner.*[45]

***

"We are unaware of any evidence that either [cable or CMRS] technology can be used as a means of accessing the incumbents' wireline voice-grade local loops. Accordingly, *neither technology provides probative evidence of an entrant's ability to access the incumbent LEC's wireline voice-grade local loop and thereby self-deploy local circuit switches.*"[46]

Q. What does the TRO direct the TRA to do when considering evidence regarding switch-based CLECs that do not rely on ILEC unbundled loops?

A. The TRO notes that State commissions may give such evidence less weight in the

---

[44] TRO ¶ 439, emphasis supplied

[45] TRO ¶ 429, emphasis supplied.

[46] TRO ¶ 446, emphasis supplied.

trigger analysis than evidence regarding a self-provisioning trigger candidate that relies on ILEC unbundled analog loops (i.e., a UNE-L based provider). In describing the self-provisioning trigger, the TRO states: "We recognize that when one or more of the three competitive providers is also self-deploying its own local loops, this evidence may bear less heavily on the ability to use a self-deployed switch as a means of accessing the incumbents' local loops."[47] Notably, a self-provisioning switch trigger candidate that does not rely on the ILEC's loops provides no evidence that problems with the hot-cut process (which formed the basis of the FCC's national finding of impairment) have been addressed.

Q. If the TRA does evaluate whether to include a provider using its own loop facilities, what factors must it consider?

A. The TRO does permit states to consider intermodal alternatives, but it advises that: "In deciding *whether to include* intermodal alternatives for purposes of these triggers, states should consider to what extent services provided over these intermodal alternatives are comparable in cost, quality, and maturity to ILEC services."[48] Thus, any time an intermodal trigger candidate is considered, the TRA must first examine the nature of the mass market voice services it offers before declaring the company has satisfied the self-provisioning trigger.

---

[47] TRO ¶ 501, n.1560.

[48] TRO ¶ 499, n.1549, emphasis supplied.

As noted above, the FCC already conducted such an analysis in the TRO with respect to CMRS (wireless services) as an intermodal alternative. The FCC found that CMRS services do not meet the trigger criteria standard. Accordingly, the FCC held, "just as CMRS deployment does not persuade us to reject our nationwide finding of impairment ... at this time, we do not expect state commissions to consider CMRS providers in their application of the triggers."[49]

The FCC's analysis of CMRS providers and services under the "cost, quality, and maturity" standards in the TRO is instructive and demonstrates that the states should carefully consider all other intermodal trigger candidates under this same standard.[50] An intermodal provider that may be proffered as an self-provisioning trigger candidate and may appear to be a mass market competitive alternative on the surface – either due to industry hype or ILEC wishful thinking – may not hold up to the trigger criteria when the facts are carefully analyzed by the TRA.

Criterion 5: ILEC Affiliates Do Not Qualify as Triggers

Q. The fifth trigger criterion you identify is that the self-provisioning trigger candidate not affiliated with the ILEC or other self-provisioning trigger candidates. Please explain the TRO basis for this criterion.

---

[49] *Ibid.*

[50] As noted earlier, the FCC also rejected CMRS on the basis that its ubiquity was too limited to qualify it as an alternative to unbundled local switching.

A. The FCC held that the "competitive switch providers that the state commission relies upon in finding either trigger to be satisfied must be unaffiliated with the incumbent LEC and with each other."[51] The FCC added that affiliated companies will be counted together as a single entity in the trigger analysis. The FCC held that this restriction is necessary to prevent the ILECs from "gaming" of the trigger criteria. It is also important that "CLEC affiliates" of nearby ILECs also be carefully reviewed, to assure that the CLEC affiliate is not merely benefiting from its affiliation with an incumbent in a manner that no unaffiliated CLEC could match.

Criterion 6: De Minimus Competitive Activity Does Not Qualify as a Trigger

Q. Please explain the final trigger criterion you recommend the TRA apply: "The self-provisioning trigger candidate should be sufficiently large to offer sustainable broad-scale mass market competitive alternatives in the designated market."

A. The TRO establishes trigger analysis as something of a "sudden death" round of analysis, in which the outcome of the analysis could potentially eliminate unbundled local switching and UNE-P in a market without further analysis of economic and operational impairment, at least under section 251 of the Act. When it established the trigger analysis, the FCC pointed out that it believed the

[51] TRO ¶ 499.

application of the trigger-based analysis would identify where competition for mass market customers by CLECs using their own switches and ILEC analog loops was actually occurring, and thus it would achieve the policy goal of ensuring the continued existence of mass market competition.[52] Therefore, it is critical that the TRA not undertake its "trigger analysis" untethered from the reality of the marketplace in Tennessee.

In addition, the FCC rejected ILEC attempts to have it conclude that impairment had been overcome where there is only a relatively low level of competitive penetration. Specifically, the FCC rejected BOC arguments that CLECs were not impaired in the mass market by noting the low relative number of residential lines served by CLEC-deployed switches.[53] The FCC expressly dismissed the BOCs' argument finding that, at best, "less than three percent of the ... residential voice lines" were being served by CLEC switches. The FCC thus understood – and applied – the common sense notion that a *de minimus* level of competition is simply not a rational basis upon which to find that impairment has been overcome.

The need to recognize market reality in the trigger analysis is particularly acute here. Today, UNE-P (the bedrock of which is unbundled local switching) is responsible for the vast majority of the bundled services (local and long distance)

---

[52] *See, e.g.*, TRO ¶ 501.

[53] TRO ¶ 438.

competition that is reshaping the voice services marketplace. As shown above, only UNE-P has enabled competition to reach broadly and deeply into both urban and rural markets throughout the state. Before determining that UNE-P availability should be diminished or eliminated based on evidence of "triggers," the TRA must have reasonable assurance from the record evidence that, in the real world, a UNE-L-only strategy would offer a comparable alternative (in terms of size and scale) to the statewide competitive choices that CLECs already offer to the mass market today using UNE-P.

The FCC could find no such assurances in its record when it rejected the BOC arguments that there is "no impairment" with respect to mass market switching based on the presence of existing CLEC switches. In that context, the FCC made clear that it would not eliminate access to local switching as a section 251 UNE when the record showed only *de minimus* levels of mass market competition were being provided by alternative approaches.

Q. Must each of the trigger criteria be met before a State Commission declares that the "Self-Provisioning Trigger" is satisfied in a market?

A. Yes. Each of the trigger criteria for self-provisioning are rooted in the TRO. Each of them is tied to one of the specific rationales or findings the FCC made in establishing the trigger analysis as the "sudden death" playoff of the impairment analysis. It is up to the Authority to apply the trigger framework through an

informed analysis of the trigger criteria established by the FCC. Only by applying judgment, experience and knowledge of local competitive conditions can the Authority implement the switching triggers as they are formulated in the TRO.

VI. The False Tension Between Unbundling and Facilities Deployment

Q. If the TRA retains the incumbents' obligation to unbundle local switching as you recommend, would this discourage facilities investment?

A. No. The "unbundling discourages investment" argument is a bogeyman used by the ILEC to wrap their narrow self-interest in the public interest. There is no evidence that unbundling local switching discourages the deployment of new facilities or the introduction of advanced services. For its part, the FCC *rejected* the incumbent's claims that unbundling discourages investment, finding that the evidence was inconclusive.[54] To the contrary, unbundling the legacy network encourages competition, and the more competition that exists for *today's* customers, the more investment will occur to retain these customers in the *future* as their needs and options change.

Although I would *also* disagree with the incumbents that unbundling discourages them from investing in new technologies, it is important to leave that debate for a future date. The issue here concerns access to the legacy switched network to

[54] TRO ¶ 447.

offer the most basic of telecommunications services, POTS. As I explain in this section of the testimony:

* The incumbent would be financially harmed by a shift of UNE-P lines to UNE-L. The only reason for an incumbent to dismantle UNE-P is if it expects a return of UNE-P lines to its retail services, thereby strengthening its local monopoly. If the lines were to shift to UNE-L, the incumbent would see a significant reduction in its wholesale revenues, without any decrease in its costs.

* The incumbent's network would be disrupted by a shift of UNE-P lines to UNE-L. The incumbent's interoffice network is designed to handle the traffic from UNE-P lines through a network of first-route and final trunk groups starting at the originating end-office, with the filter of the initiating end-office directly terminating all traffic to nearby subscribers without ever relying on interoffice facilities. If the base of UNE-P lines were shifted to UNE-L, this traffic would re-enter the ILEC network at a different point in the interoffice network, increased by the minutes that must be returned to their initial end-office for termination. The result to the ILEC: a redesigned network and higher costs.

* The deployment of competitive advanced services to the consumer/small business market would be reduced substantially without access to unbundled local switching, in direct conflict with the *only* facilities-goal in the Act (i.e., to encourage the deployment of *advanced* technologies). With the elimination of line-*sharing* by the FCC, the only meaningful vehicle to market competitive DSL services to smaller users is through line-*splitting*. The effect has been to reduce the addressable market for a competitive xDSL provider (such as Covad) from the 2.4 million lines served by BellSouth,[55] to the 200,000 lines served by UNE-P providers.[56] If UNE-P is eliminated, the mass market closes entirely.

Q. Before you address each of these points in more detail, does it make sense for an incumbent to want its competitors to develop duplicative networks?

A. No. The TRA should be highly suspicious of ILEC claims that they support the elimination of unbundling so as to "encourage" CLEC investment. Why would an ILEC desire the replication of its network, when the effect of such a strategy (if successful) would be lower revenues, higher costs, and the very real possibility of excess capacity that produces a permanent reduction in the value of its network?

---

[55] Source: FCC Local Telephone Competition as of June 30, 2003.

[56] Source: BellSouth's Response to AT&T 1st Interrogatories, No. 55.

The issue here is whether the incumbent should make available local switching at cost-based, wholesale rates to competitors so that they may offer competitive POTS. There is *already* sufficient local switching capacity across the state. There is no inherent gain to the economy or society – much less the incumbent – by encouraging/forcing additional investment in a commodity (analog switch ports) that is already in over-supply.

Q. Are you saying that a CLEC would never choose to install a competitive switch?

A. No. There are a number of reasons why a CLEC would decide to install and use a local switch if it were otherwise economically and operationally viable; my point is that there is no reason for the ILEC to encourage that result unless it stood to gain financially by forcing its rival into such an investment.

One reason that a CLEC would install its own switch is to realize the same cost-structure as the incumbent. Because the ILEC leases switching at its forward looking average total cost (i.e., TELRIC), the additional cost to the CLEC is the *same* for each and every switch port that it orders. As a result, a CLEC that leases unbundled local switching pays the average cost for every switch port. In economics terms, this means that the CLEC's variable and marginal cost of switching is the same as its average cost (a fixed cost per port), and, unlike the ILEC, under TELRIC it never gets the benefit of pricing down to its marginal cost.

The point is that a CLEC leasing switching would still face the appropriate economic incentive to invest, even with the option of unbundled local switching (assuming that the cost to move a loop to a new switch were rendered inconsequential through an automated hot-cut system that does not exist).

Q. Are entrants precluded from offering new services when they lease switching capacity from the incumbent?

A. No. First, it is important to emphasize again that this proceeding is fundamentally about competition – more precisely, the impairments that would otherwise prevent competition – in the POTS market. The reason that the market is known as "plain old telephone service" is because it is provided over technically standardized facilities, including the circuit switches that have been deployed in the ILEC network. These are *generic* facilities, deliberately engineered to provide a uniform, reliable and predictable customer experience. Whether a carrier leases capacity in a Lucent 5E – or purchases and installs an essentially identical Lucent 5E – does not fundamentally change the services that can be offered.

It is important to understand that most new services in the POTS marketplace have generally been the product of pricing and service innovations unrelated to the underlying legacy network. Network-related innovations generally remove the customer from the POTS market, which is defined as basic voice service.

There are major consumer benefits that result from pricing and service-related innovations – bundling, the elimination of distance from landline pricing, and more personalized customer service, not to mention lower prices, are useful and highly valued by customers. Moreover, competition is showing that there are ways to derive additional value from the existing network, by integrating other services with basic POTS.

Q. Why would an ILEC want to force its competitors to install their own switches, thereby increasing the excess supply of switch ports in the market?

A. Obviously, an ILEC would not want to force its competitor to make any investment that *improved* its rival's competitive position. The only reason an ILEC would want to encourage "facilities-based" competition would be if it believed that the result would be *less* competition, not more. Indeed, that is the great irony of the ILECs' arguments that additional CLEC investment, especially in current technology, is appropriate or required by the federal Act.

Nowhere are the ILECs' incentives clearer than with respect to arguments suggesting that competitors make additional investment in local switching capacity. The financial performance of CLECs that installed circuit switching capacity has been abysmal, with most CLECs declaring bankruptcy to reduce/eliminate the debt they incurred to obtain their installed switching capacity. The investment community is well aware of this track record, and is

unlikely to provide more capital to pursue a business strategy that has a documented pattern of failure.

Thus, the only rational reason that the incumbents are so interested in forcing their rivals into a switch-based entry strategy is because they expect that the new entrants will fail, and that most UNE-P lines will return to it as retail lines if UNE-P were eliminated.

Q. Are there other effects on the ILEC from a forced UNE-P to UNE-L migration?

A. Yes. In Tennessee today, there are more than 200,000 UNE-P lines, spread over nearly 200 wire centers. If each of those lines were actually forced to move to a UNE-L arrangement (assuming *arguendo* the ILECs' claims that it could actually be done successfully from the CLEC's – which is to say the customer's – perspective), there would be a significant impact on the incumbent's local network.

The ILECs' networks have been engineered with the expectation that all of the traffic from these 200,000 UNE-P lines will originate at the end-office currently serving the line today. The incumbents have engineered their interoffice networks recognizing that much of this traffic will terminate on lines served by that same end-office (and, therefore, requiring the use of no interoffice facilities).

For minutes that do require interoffice transport to other end-offices, the ILEC has engineered the shared transport network to efficiently use "first-route" dedicated facilities where justified, with "overflow" traffic relying on more costly tandem-routes during peak periods (or for all traffic from very small end-offices).

If these minutes are forced into a UNE-L arrangement, however, they will no longer "originate" at the existing ILEC end-office, but instead would "reappear" on interconnection trunks that are located elsewhere in the ILEC's network. Suddenly, the minutes that had terminated directly on lines connected to the same end-office as the customer had been served by, and which had required no interoffice transport, would now need to be transported back to the original end-office. Moreover, the remaining minutes would need new interoffice facilities to reach destination end-offices, and would frequently rely on tandem-switched transport facilities due to the relatively (compared to the ILEC) small traffic volumes of the CLEC.

Once again, the bottom line is clear: BellSouth would only want to eliminate UNE-P if it was confident that significant impairments actually exist and that the *primary* consequence of a forced migration to UNE-L would be the return of (former) UNE-P lines to the incumbent's retail monopoly.

Q. In your view, does UNE-P availability encourage investment?

A. Yes. As I have explained above, this proceeding is about whether CLECs should be allowed to use the legacy LEC network to offer conventional POTS services. Although I disagree generally with the claim that unbundling discourages investment, there should be no debate that sharing the inherited legacy network to offer conventional POTS does not have that effect.

First, a UNE-P entry strategy (like any business) requires investment – investment in billing systems, computer systems, offices and, perhaps most importantly, human capital (or, more colloquially, jobs). There is nothing magical about Class 5 circuit switching equipment that makes having more such investment socially desirable. These switches perform a commodity switching function that is necessary to offer basic POTS, but it is not a facility investment endowed with any particular opportunity for creativity. Indeed, the most useful new function offered by the circuit switch is its important role "... as a means of accessing the local loop"[57] – i.e., the access to customers that makes POTS competition possible through UNE-P.

Second, where new investment does hold the opportunity of dramatically changing the types of services that a customer receives (such as broadband capability), UNE-P is now the primary voice-option for carriers (such as Covad) that are making just such an investment. With the elimination of line-sharing, providers of advanced services can no longer provide their data service over the

[57] TRO ¶ 429.

same loop as the incumbent provides its voice service. Consequently, in order to approach the mass market, these providers require a different "voice partner" so that they may offer data in combination with voice over the same facility (as so many mass market customers desire). Only UNE-P provides that capability in a commercially reasonable manner for the mass market.

Third, the mere fact that that a carrier does not invest in Class 5 circuit switching does not mean that it is not investing in other facilities. As noted earlier, AT&T and MCI are two of the largest UNE-P purchasers in the nation, and each have invested billions of dollars in (what are commonly called) long distance networks. Ironically, the RBOCs compete in long distance in *exactly* the same manner that AT&T and MCI (and now Sprint) compete in local markets: leasing wholesale services that provide the generic capability of switching and transmitting voice calls.

UNE-P is central to mass market competition for basic POTS in the same way that wholesale long distance is central to mass market competition for long distance services. The POTS market is shrinking as customers choose (for themselves, and not under regulatory direction) to move to more advanced services. There is no valid policy reason to encourage additional investment in the generic local exchange facilities that underlie UNE-P. POTS competition is essential, however, to the development of competition for more advanced

services where investment is likely. Thus, the relevant question is "will there be more advanced services investment if the POTS market is competitive, or less?"

Q. Should the TRA expect more investment in advanced services if the POTS market is competitive?

A. Yes. First, the initial focus of mass market competition is bundling – offering consumers "packages" that combine local and long distance services into a seamless offering. Over time, however, this form of differentiation will reach a competitive balance, and companies will need to find other ways to differentiate themselves and their services. Moreover, as noted earlier, the POTS market is shrinking, with a natural evolution towards more advanced digital services. Consequently, with the market moving away from POTS, and the principal source of POTS differentiation (bundling) losing its advantage, companies will have to respond with different strategies. But it is critical to recognize that the more companies there are in the POTS market today, the more companies there will be who need to differentiate their services in the future, and the more investment (in new technologies, not duplicative facilities) that will result.

Q. Assuming that UNE-P remains available, how would you expect to see the market evolve in the future?

A. As I indicated earlier, UNE-P is part of a natural market transition whose duration is unknown because it is in the hands of customers themselves. The POTS market is shrinking, as customers increasingly desire services with higher bandwidth (for data) or different features. As the market changes, carriers that rely on UNE-P (to one degree or another) will have to evolve in response.

There are two directions where the evolution appears most likely. The first will be a greater integration of voice/data customers onto shared platforms using soft-switch technology. In lay terms, soft-switches (i.e., software-defined switches) essentially treat voice conversations as a special type of "data" session that is governed by unique instructions. Second, there would be greater innovation in the use of the "advanced intelligent network" (AIN) architecture that BellSouth has deployed, but which has not yet been fully exploited.

Q. Is the "integrated voice/data" evolution you refer to (i.e., VOIP), a part of that trend?

A. Yes. Voice over Internet Protocol (VOIP) refers generally to the provision of voice services in a packet format. While this innovation is clearly exciting, it is still unclear how quickly (and how deeply) the service will fundamentally change customer options. In the near term, for those customers with high-speed data connections, VOIP will likely provide inexpensive alternatives. But it is still unclear how VOIP will really change local market conditions. Critically, to use

VOIP requires a high speed data connection – a threshold requirement that today is the province of the enterprise market, not the mass market. At this point, VOIP does not reduce the impairments that justify continued access to unbundled local switching to serve mass market customers. Thus, soft-switches and VOIP will become increasingly prevalent in the enterprise market because they (in the first instance) enable the digital pipe to the customer to be used more efficiently. One consequence of this will be that more customers that are mass market today will choose to become enterprise-like customers in the future.

Q. Please explain the second evolutionary path you have identified – the use of AIN by UNE-P based CLECs.

A. AIN will make possible a different evolutionary path to serve the market of voice-oriented customers. Over the past several years, a silent transformation has been underway in the circuit switch network through the deployment of the "advanced intelligent network" (AIN) architecture. In lay terms, the AIN architecture is a system that moves the software that defines a particular service from the switch itself to a remote database. Various "triggers" (unrelated to those in the TRO) are incorporated into the traditional local switch that, when activated, suspend call processing and signal a remote database (a "Service Creation Point" or SCP) to request an instruction as to how it should proceed. In an AIN environment, service definition is no longer controlled by the switch

manufacturer when it releases a generic upgrade to its switch, but rather can be developed by the incumbent or CLEC.

Q. Why do you characterize the AIN architecture as effecting a "silent" transformation of the network?

A. The reason I characterize this as a "silent" evolution is because the architecture is generally underutilized, with few new services being introduced despite the fact that the architecture is now widely deployed. The reason, however, is that the AIN architecture is not yet open to *competitive* innovation and the incentive to deploy new services is different for an incumbent than an entrant. To the incumbent, a new service should produce incremental revenues, largely from existing customers; for a new entrant, however, a service can be justified by its ability to attract new subscribers, even if no discrete revenues are the result.

For instance, AIN could be used to replace the familiar dial-tone with an announcement (of the time, the weather or even the number of voice mails awaiting action). It is unlikely that an incumbent could charge its customers a higher price based on a different dial-tone, but a unique dial tone could be a way for an entrant to differentiate its services from the incumbent.

I offer these observations not as criticism of the incumbent, but rather to again emphasize that competitive differentiation (and consumer benefit) can arise from

a variety of strategies, almost none of which requires duplication of the Class 5 switching hierarchy of the ILEC. It would be far more useful for regulators to assure that the AIN architecture is open. This would allow non-ILEC service-defining databases to be accessed by switch triggers activated on switch ports leased from the incumbent, without creating uneconomic incentives for wasteful duplication of circuit switching investment.

Q. So far you have explained the benefits of a competitive POTS market. What would be the consequence of the ILEC maintaining a POTS monopoly?

A. If the ILEC retains its POTS monopoly, it will enjoy a base of captive customers and revenues that it will be able to leverage against rivals in those narrow submarkets where other entry strategies are beginning to take hold. The nation cannot afford to permit the ILECs to leverage their inherited monopoly through narrowly targeted rate reductions or other strategies that foreclose competition in other areas. The only way that competition can thrive and endure is if the core of the incumbent's monopoly – the POTS market – is the beneficiary of aggressive competition.

VII. Next Steps

Q. Are there other issues that the TRA should prepare to address?

A. Yes, there are two follow-up proceedings that the TRA should prepare to conduct at the conclusion of this case. The first concerns how the "post-251" price of unbundled local switching is determined, should there be any circumstance where a finding of non-impairment applies (such as switching used to serve enterprise customers). The second concerns the procedures that should be used to develop prescribed filing windows and other requirements to govern future challenges to impairment (for switching or other network elements).

As to the first point, it is important to recall that BellSouth is required to provide meaningful access to switching at just and reasonable rates, irrespective of whether it is also required to be offered under section 251 of the Act. This is because the social contract in section 271 establishes a separate obligation to offer items listed in the checklist, which includes the requirement to offer switching. Although the FCC has determined that such rates need not necessarily be TELRIC, they must still be "just and reasonable":

> Thus, the pricing of checklist network elements that do not satisfy the unbundling standards in section 251(d)(2) are reviewed utilizing the basic just, reasonable, and nondiscriminatory rate standard of sections 201 and 202 that is fundamental to common carrier regulation that has historically been applied under most

federal and state statutes, including (for interstate services) the Communications Act.[58]

Even if one accepts the FCC's apparent view that there may be a difference between a just and reasonable TELRIC rate and a just and reasonable non-TELRIC rate, the difference surely cannot be more than a just and reasonable difference. For instance, the section 271 rate could be established to produce a higher profit (i.e., return on equity), so long as it remained within just and reasonable levels.

For purposes of administrative efficiency, I recommend that the TRA initiate a new proceeding to establish the "replacement rate" for any network element that is no longer required under section 251 so as to avoid having to address this same issue in multiple, parallel arbitrations. Moreover, because the existing cost-based rate has already been found to be just and reasonable, that rate should remain in effect until the TRA establishes a new rate.

Q. How should the TRA approach developing procedures for subsequent hearings following this "9-month" case?

A. In addition to issues that the TRA must address within the 9-month proceeding, the FCC has also requested that states develop procedures to conduct periodic

[58] TRO ¶ 663.

review of the incumbents' unbundling obligations.[59] Given the substantial requirements already outlined for the current proceeding, I recommend that the TRA take two actions here, to set the stage for any subsequent investigation.

First, I recommend that the TRA initiate a rulemaking to determine the "pre-filing" requirements that an incumbent must satisfy before requesting a reduction in its unbundling obligation. Because the FCC generally requires that a state must complete its review of any such request within six months, it will foster administrative efficiency to have agreement in advance as to the information needed to conduct such a review.

Second, I recommend that the TRA adopt "prescribed filing windows" that specify when an incumbent LEC may first request a further reduction in its unbundling obligations. The FCC specifically invites states to establish "prescribed filing windows,"[60] and I recommend that the TRA do so here. By establishing specific windows for additional review, the TRA can provide needed certainty to the industry. Following the FCC's lead, I recommend a 2-year quiet period during which the incumbent LEC may not seek further reduction of its obligations at the conclusion of the 9-month proceeding:

> We [the FCC] conclude that reopening every issue on a biennial basis is not in the public interest because it would increase

[59] TRO ¶ 424.

[60] *See*, for instance, footnote 1291.

> regulatory uncertainty unnecessarily in this area. We also note that in the period between biennial reviews, it will be the policy of this Authority not to entertain *ad hoc* motions or petitions to remove or add UNEs, and we will summarily dismiss such petitions to ensure certainty in the marketplace.[61]

By establishing a prescribed filing window for the "next round" of impairment analysis, the TRA and the industry can better anticipate their workload over the next two years.

VIII. Summary

Q. Please summarize your testimony.

A. Tennessee is one of the nation's leaders in establishing a competitive local exchange market for mass market customers. Even so, competitors are only now beginning to make inroads into the local market, while BellSouth has responded aggressively. A very simple truth is captured by the following quotation from John Gaule:

> A complex system that works is invariably found to have evolved from a simple system that works.

The reason that UNE-P is under pressure from the incumbents is because it works. Given time, local competition will transform industry pricing (through, for instance, the elimination of distance from telephone rates), and it will set the

[61] TRO ¶ 710.

foundation for a competitive future using the legacy POTS network as its baseline.

In my testimony, I have explained that UNE-P is critical to POTS competition, and why POTS competition is critical to competition overall. No other strategy is going to produce the competitive benefits in this market that have come from UNE-P.

The TRA should stay the course. There is no reason – and no basis – to overturn the FCC's national impairment finding in Tennessee.

Q. Does this conclude your initial testimony?

A. Yes.

CERTIFICATE OF SERVICEI

I hereby certify that on January 16, 2004, a copy of the foregoing document was serviced on the parties of record, via US mail:

Martha M. Ross-Bain, Esq.
AT&T Communications of the
South Central States, LLC
1200 Peachtree Street, Suite 8062
Atlanta, GA 30309

Ms. Carol Kuhnow
Qwest Communications, Inc.
4250 N. Fairfax Dr.
Arlington, VA 22203

Charles B. Welch, Esq.
Farris, Mathews, et. al.
618 Church St., #300
Nashville, TN 37219

Jon E. Hastings
Boult Cummings Conners Berry, PLC
P. O. Box 198062
Nashville, TN 37219-8062

Timothy Phillips, Esq.
Office of Tennessee Attorney General
P. O. Box 20207
Nashville, TN 37202

Dale Grimes
Bass, Berry & Sims
315 Deaderick St., #2700
Nashville, TN 37238-3001

H. LaDon Baltimore, Esq.
Farrar & Bates
211 Seventh Ave., N. #320
Nashville, TN 37219-1823

Mark W. Smith, Esq.
Strang, Fletcher, et. al.
One Union Square, #400
Chattanooga, TN 37402

James Wright, Esq.
United Telephone – Southeast
14111 Capital Blvd.
Wake Forest, NC 27587

Nanette S. Edwards, Esq.
ITC^DeltaCom
4092 South Memorial Parkway
Huntsville, AL 35802

Guy Hicks, Esq.
BellSouth Telecommunications, Inc.
333 Commerce St., Suite 2101
Nashville, TN 37201

Kennard B. Woods, Esq.
WorldCom, Inc.
Six Concourse Parkway, Suite 600
Atlanta, Georgia 30328

Henry Walker

Education

B.A. Economics, University of Wyoming, 1978.
M.A. Economics, University of Wyoming, 1979.

Professional History

Gillan Associates, Economic Consulting (1987-Present)

In 1987, Mr. Gillan established a private consulting practice specializing in the economic evaluation of regulatory policies and business opportunities in the telecommunications industry. Since forming his consulting practice in 1987, Mr. Gillan has advised business clients as diverse as AT&T and TDS Telecom (a small entrant seeking the authority to compete in a rural area).

Vice President, US Switch, Inc. (1985-1987)

Responsible for crafting the US Switch business plan to gain political acceptance and government approval. US Switch pioneered the concept of "centralized equal access," which positioned independent local telephone companies for a competitive long distance market. While with US Switch, Mr. Gillan was responsible for contract negotiation/marketing with independent telephone companies and project management for the company's pilot project in Indiana.

Policy Director/Market Structure - Illinois Commerce Commission (1980-1985)

Primary staff responsibility for the policy analysis of issues created by the emergence of competition in regulated markets, in particular the telecommunications industry. Mr. Gillan served on the staff subcommittee for the NARUC Communications Committee and was appointed to the Research Advisory Council overseeing NARUC's research arm, the National Regulatory Research Institute.

Mountain States Telephone Company - Demand Analyst (1979)

Performed statistical analysis of the demand for access by residential subscribers.

Professional Appointments

Guest Lecturer	School of Laws, University of London, 2002
Advisory Council	New Mexico State University, Center for Regulation, 1985 – Present
Faculty	Summer Program, Public Utility Research and Training Institute, University of Wyoming, 1989-1992
Contributing Editor	Telematics: The National Journal of Communications Business and Regulation, 1985 - 1989

Professional Appointments (Continued)

Chairman	Policy Subcommittee, NARUC Staff Subcommittee on Communications, 1984-1985
Advisory Committee	National Regulatory Research Institute, 1985
Distinguished Alumni	University of Wyoming, 1984

Selected Publications

"The Local Exchange: Regulatory Responses to Advance Diversity", with Peter Rohrbach, Public Utilities Fortnightly, July 15, 1994.

"Reconcentration: A Consequence of Local Exchange Competition?", with Peter Rohrbach, Public Utilities Fortnightly, July 1, 1994.

"Diversity or Reconcentration?: Competition's Latent Effect", with Peter Rohrbach, Public Utilities Fortnightly, June 15, 1994.

"Consumer Sovereignty: An Proposed Approach to IntraLATA Competition", Public Utilities Fortnightly, August 16, 1990.

"Reforming State Regulation of Exchange Carriers: An Economic Framework", Third Place, University of Georgia Annual Awards Competition, 1988, Telematics: The National Journal of Communications, Business and Regulation, May, 1989.

"Regulating the Small Telephone Business: Lessons from a Paradox", Telematics: The National Journal of Communications, Business and Regulation, October, 1987.

"Market Structure Consequences of IntraLATA Compensation Plans", Telematics: The National Journal of Communications, Business and Regulation, June, 1986.

"Universal Telephone Service and Competition on the Rural Scene", Public Utilities Fortnightly, May 15, 1986.

"Strategies for Deregulation: Federal and State Policies", with Sanford Levin, Proceedings, Rutgers University Advanced Workshop in Public Utility Economics, May 1985.

"Charting the Course to Competition: A Blueprint for State Telecommunications Policy", Telematics: The National Journal of Communications Business, and Regulation, with David Rudd, March, 1985.

"Detariffing and Competition: Options for State Commissions", Proceedings of the Sixteenth Annual Conference of Institute of Public Utilities, Michigan State University, held in Williamsburg, Virginia, December 1984.

Listing of Expert Testimony – Court Proceedings

Dwayne P. Smith, Trustee v. Lucent Technologies (Civil Action No. 02-0481 Eastern District of Louisiana)(Entry and CLEC Performance)

BellSouth Intellectual Property v. eXpeTel Communications (Civil Action No. 3:02CV134WS Southern District of Miss.)(Service definition, industry structure and Telecom Act of 1996)

CSX Transportation Inc. v. Qwest International, Inc. (Case No. 99-412-Civ-J-21C Middle District of Florida) (industry structure and wholesale contract arrangements).

Winn v. Simon (No. 95-18101 Hennepin Cty. Dist. Ct.)(risk factors affecting small long distance companies)

American Sharecom, Inc. v. LDB Int'l Corp. (No. 92-17922, Hennepin County District Court) (risk factors affecting small long distance companies)

World Com, Inc. et al. v. Automated Communications, Inc. et al. (No. 3:93-CV-463WS, S.D. Miss.) (damages)

International Assignments

Recovering Contribution: Lessons from the United States' Experience, Report submitted to the Canadian Radio-television and Telecommunications Commission on behalf of CallNet.

Forcing a Square Peg into a Round Hole: Applying the Universal Service Cost Model in the Cayman Islands, Analysis Presented to the Government of the Cayman Islands on behalf of Cable and Wireless.

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Indiana	Cause No. 42500	Switching Impairment	AT&T
Pennsylvania	Case I-00030099	Switching Impairment	CLEC Coalition
Tennessee	Docket No. 03-00491	Switching Impairment	CLEC Coalition
North Carolina	P-100, Sub 133Q	Switching Impairment	CLEC Coalition
Georgia	Docket No. 17749-U	Switching Impairment	CLEC Coalition
Missouri	Case TW-2004-0149	Switching Impairment	CLEC Coalition
Michigan	Case No. U-13796	Switching Impairment	CLEC Coalition
Florida	Docket No. 030851-TP	Switching Impairment	FCCA
Ohio	Case 03-2040-TP-COI	Switching Impairment	AT&T/ATX
Wisconsin	05-TI-908	Switching Impairment	AT&T
Washington	UT–023003	Local Switching Rate Structure	AT&T/MCI
Arizona	T-00000A-00-0194	UNE Cost Proceeding	AT&T/WCOM
Illinois	Docket 02-0864	UNE Cost Proceeding	AT&T
North Carolina	P-55, Sub 1013 P-7, Sub 825 P-19, Sub 277	Price Cap Proceedings	CLEC Coalition
Kansas	02-GIMT-555-GIT	Price Deregulation	Birch/AT&T
Texas	Docket No. 24542	Cost Case	AT&T
North Carolina	Docket P-100, Sub 133d	UNE Cost Proceeding	CLEC Coalition
Georgia	Docket No. 11901-U	DSL Tying Arrangement	WorldCom
Tennessee	Docket No. 02-00207	UNE Availability/Unbundling	CLEC Coalition
Utah	Docket No. 01-049-85	Local Switching Costs/Price	AT&T
Tennessee	Docket No. 97-00309	Section 271 Compliance	CLEC Coalition
Illinois	Docket No. 01-0662	Section 271 Compliance	AT&T
Georgia	Docket No. 14361-U	UNE Availability/Unbundling	CLEC Coalition
Florida	Docket 020507-TL	Unlawful DSL Bundling	CLEC Coalition
Tennessee	Docket No. 02-00207	UNE Availability/Unbundling	CLEC Coalition
Georgia	Docket No. 14361-U	UNE Costs and Economics	AT&T/WorldCom
Florida	Docket 990649-TP	UNE Cost and Price Squeeze	AT&T/WorldCom

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Minnesota	P-421/CI-01-1375	Local Switching Costs/Price	AT&T
Florida	Docket 000075-TP	Intercarrier Compensation	WorldCom
Texas	Docket No. 24542	Unbundling and Competition	CLEC Coalition
Illinois	Docket 00-0732	Certification	Talk America
Indiana	Cause No. 41998	Structural Separation	CLEC Coalition
Illinois	Docket 01-0614	State Law Implementation	CLEC Coalition
Florida	Docket 96-0768	Section 271 Application	SECCA
Kentucky	Docket 2001-105	Section 271 Application	SECCA
FCC	CC Docket 01-277	Section 271 for GA and LA	AT&T
Illinois	Docket 00-0700	Shared Transport/UNE-P	CLEC Coalition
North Carolina	Docket P-55 Sub 1022	Section 271 Application	SECCA
Georgia	Docket 6863-U	Section 271 Application	SECCA
Alabama	Docket 25835	Section 271 Application	SECCA
Michigan	Case No. U-12622	Shared Transport/UNEs	AT&T
Ohio	Case 00-942-TP-COI	Section 271 Application	AT&T
Alabama	Docket No. 25835	Structural Separation	SECCA
Alabama	Docket No. 27821	UNE Cost Proceeding	ITC^Deltacom
Louisiana	Docket U-22252	Section 271 Application	SECCA
Mississippi	Docket 97-AD-321	Section 271 Application	SECCA
South Carolina	Docket 2001-209-C	Section 271 Application	SECCA
Colorado	Docket 99A-577T	UNE Cost Proceeding	AT&T
Arizona	Case T-00000A-00-0194	UNE Cost Proceeding	AT&T
Washington	Docket UT-003013	Line Splitting and Combinations	AT&T
Ohio	Case 00-1368-TP-ATA Case 96-922-TP-UNE	Shared Transport	AT&T/PACE
North Carolina	P-100 Sub 133j	Standard Collocation Offering	CLEC Coalition
Florida	Docket 990649-TP	UNE Cost Proceeding	CLEC Coalition
Michigan	Case No. U-12320	UNE Combinations/Section 271	AT&T
Florida	Docket 00-00731	Section 251 Arbitration	AT&T
Georgia	Docket 5825-U	Universal Service Fund	CLEC Coalition

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
South Carolina	97-239-C	Universal Service Fund	CLEC Coalition
Texas	PUC Docket 22289/95	ETC Designation	Western Wireless
Washington	Docket UT-003013	UNE Costs and Local Competition	AT&T
New York	Docket 98-C-1357	UNE Cost Proceeding	Z-Tel
Colorado	Docket 00K-255T	ETC Designation	Western Wireless
Kansas	99-GCCZ-156-ETC	ETC Designation	Western Wireless
New Mexico	98-484-TC	ETC Designation	Western Wireless
Illinois	Docket 99-0535	Cost of Service Rules	AT&T/MCI
Colorado	Docket 00-B-103T	U S WEST Arbitration	ICG Comm.
North Dakota	PU-1564-98-428	ETC Designation	Western Wireless
Illinois	Docket 98-0396	Shared Transport Pricing	AT&T/Z-Tel
Florida	Docket 981834-TP	Collocation Reform	CLEC Coalition
Pennsylvania	M-00001353	Structural Separation of Verizon	CompTel/ATX
Illinois	Docket 98-0860	Competitive Classification of Ameritech's Business Services	CompTel/ AT&T
Georgia	Docket 6865-U	Complaint re: Combinations	MCIWorldcom
Virginia	Case No. PUC 990100	GTE/Bell Atlantic Merger	AT&T
Florida	Docket 990649-TP	UNE Cost and Pricing	CLEC Coalition
Nebraska	Application C-1960/PI-25	IP Telephony and Access Charges	ICG Communications
Georgia	Docket 10692-U	Pricing of UNE Combinations	CLEC Coalition
Colorado	Docket 99F-141T	IP Telephony and Access	Qwest
California	Case A. 98-12-005	GTE/Bell Atlantic Merger	AT&T/MCI
Indiana	Case No. 41255	SBC/Ameritech Merger	AT&T
Illinois	Docket 98-0866	GTE/Bell Atlantic Merger	AT&T
Ohio	Case 98-1398-TP-AMT	GTE/Bell Atlantic Merger	AT&T
Tennessee	Docket 98-00879	BellSouth BSE	SECCA
Missouri	Case TO-99-227	§ 271 Review: SBC	AT&T
Colorado	Docket 97A-540T	Stipulated Price Cap Plan/USF	CLEC Coalition

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Illinois	ICC Docket 98-0555	SBC/Ameritech Merger	AT&T
Ohio	Case 98-1082-TP-AMT	SBC/Ameritech Merger	AT&T
Florida	Docket 98-1121-TP	UNE Combinations	MCI WorldCom
Georgia	6801-U	§ 251 Arbitration: BellSouth	AT&T
Florida	92-0260-TL	Rate Stabilization Plan	FIXCA
South Carolina	Docket 96-375	§ 251 Arbitration: BellSouth	AT&T
Kentucky	Docket 96-482	§ 251 Arbitration: BellSouth	AT&T
Wisconsin	05-TI-172/5845-NC-101	Rural Exemption	TDS Metro
Louisiana	U-22145	§ 251 Arbitration: BellSouth	AT&T
Mississippi	96-AD-0559	§ 251 Arbitration: BellSouth	AT&T
North Carolina	P-140-S-050	§ 251 Arbitration: BellSouth	AT&T
Tennessee	96-01152	§ 251 Arbitration: BellSouth	AT&T
Arizona		§ 251 Arbitration: US West	AT&T Wireless
Florida	96-0883-TP	§ 251 Arbitration: BellSouth	AT&T
Montana	D96.11.200	§ 251 Arbitration: US West	AT&T
North Dakota	PU-453-96-497	§ 251 Arbitration: US West	AT&T
Texas	Docket 16226	§ 251 Arbitration: SBC	AT&T/MCI
Alabama	Docket 25703	§ 251 Arbitration: BellSouth	AT&T
Alabama	Docket 25704	§ 251 Arbitration: GTE	AT&T
Florida	96-0847-TP	§ 251 Arbitration: GTE	AT&T
Kentucky	Docket 96-478	§ 251 Arbitration: GTE	AT&T
North Carolina	P-140-S-51	§ 251 Arbitration: GTE	AT&T
Texas	Docket 16630	§ 251 Arbitration: SBC	LoneStar Net
South Carolina	Docket 96-358	§ 251 Arbitration: GTE	AT&T
Texas	Docket 16251	§ 271 Review: SBC	AT&T
Oklahoma	97-0000560	§ 271 Review: SBC	AT&T
Kansas	97-SWBT-411-GIT	§ 271 Review: SBC	AT&T
Alabama	Docket 25835	§ 271 Review: BellSouth	AT&T
Florida	96-0786-TL	§ 271 Review: BellSouth	FCCA

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Georgia	Docket 6863-U	§ 271 Review: BellSouth	AT&T
Kentucky	Docket 96-608	§ 271 Review: BellSouth	AT&T
Louisiana	Docket 22252	§ 271 Review: BellSouth	AT&T
Texas	Docket 16226	UNE Cost	AT&T/MCI
Colorado	97K-237T	Access Charges	AT&T
Mississippi	97-AD-321	§ 271 Review: BellSouth	AT&T
North Carolina	P-55 Sub 1022	§ 271 Review: BellSouth	AT&T
South Carolina	97-101-C	§ 271 Review: BellSouth	AT&T
Tennessee	97-00309	§ 271 Review: BellSouth	AT&T
Tennessee	96-00067	Wholesale Discount	AT&T
Tennessee	97-00888	Universal Service	AT&T
Texas	Docket 15711	GTE Certification as CLEC	AT&T
Kentucky	97-147	BellSouth BSE Certification	SECCA
Florida	97-1056-TX	BellSouth BSE Certification	FCCA
North Carolina	P691 Sub O	BellSouth BSE Certification	SECCA
Florida	98-0696-TP	Universal Service	FCCA
New York	97-C-271	§ 271 Review: Bell Atlantic	CompTel
Montana	D97.5.87	§ 271 Review: US West	AT&T
New Mexico	97-106-TC	§ 271 Review: US West	AT&T/CompTel
Nebraska	C-1830	§ 271 Review: US West	AT&T
Alabama	Docket 25980	Universal Service	AT&T
Kentucky	Admin 360	Universal Service	AT&T
North Carolina	P100-S133B	Universal Service	AT&T
North Carolina	P100-S133G	Universal Service	AT&T
Illinois	95-0458/0531	Combined Network Elements	WorldCom
Illinois	96-0486/0569	Network Element Cost/Tariff	WorldCom
Illinois	96-0404	§ 271 Review: Ameritech	CompTel
Florida	97-1140-TP	Combining Network Elements	AT&T/MCI
Pennsylvania	A-310203-F0002	Local Competition	CompTel

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Georgia	6415-U/6527-U	Local Competition	CompTel
Illinois	98-NOI-1	Structural Separation	CompTel/Qwest
New York	98-C-690	Combining Network Elements	CompTel
Texas	Docket 17579	§ 251 Arbitration: SBC (2nd)	AT&T/MCI
Texas	Docket 16300	§ 251 Arbitration: GTE	AT&T
Florida	Docket 920260-TL	Price Cap Plan	IXC Coalition
Louisiana	Docket U22020	Resale Cost Study	AT&T/LDDS
California	Docket R.93-04-003	Rulemaking on Open Network Architecture	LDDS/WorldCom
Tennessee	Docket 96-00067	Avoidable Cost/Resale Discount	AT&T
Georgia	Docket 6537-U	Unbundled Loop Pricing	CompTel
Georgia	Docket 6352	Rules for Network Unbundling	AT&T
Pennsylvania	Docket A-310203F0002	Introducing Local Competition	CompTel
Florida	Docket 95-0984-TP	Interconnection Terms and Prices	AT&T
Kentucky	Case No. 365	Local Competition/Universal Service	WorldCom
Mississippi	Docket 95-UA-358	Introducing Local Competition	AT&T/WorldCom
Florida	Docket 95-0984-TP	Interconnection Terms and Prices	AT&T
Illinois	Docket 95-0458	Wholesale Local Services	WorldCom
California	Dockets R.95-04-043/044	Local Competition	WorldCom
Florida	Docket 95-0696-TP	Universal Service and Carrier of Last Resort Obligations	IXC Coalition
Georgia	Docket 5755-U	Removing Subsidies from Access	AT&T
South Carolina	Docket 95-720-C	Price Regulation	ACSI
Michigan	Case No. U-10860	Interconnection Agreement	WorldCom
Mississippi	Docket 95-US-313	Price Regulation Plan	WorldCom/AT&T
Missouri	Case TR-95-241	Expanded Local Calling	MCI
Washington	Docket UT-941464	Interconnection Complaint	IXC Coalition

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Maryland	Case No. 8584 – Phase II	Introducing Local Competition	WorldCom
Massachusetts	DPU 94-185	Introducing IntraLATA and Local Competition	WorldCom
Wisconsin	Docket 6720-TI-111	IntraLATA Equal Access	Schneider Com.
North Carolina	Docket P-100, Sub 126	Expanded Local Calling	LDDS
Georgia	Docket 5319-U	IntraLATA Equal Access	MCI/LDDS
Mississippi	Docket 94-UA-536	Price/Incentive Regulation	LDDS
Georgia	Docket 5258-U	Price Regulation Plan	LDDS
Florida	Docket 93-0330-TP	IntraLATA Equal Access	IXC Coalition
Alabama	Docket 23260	Access Transport Rate Structure	LDDS
New Mexico	Docket 94-204-TC	Access Transport Rate Structure	LDDS
Kentucky	Docket 91-121	Alternative Regulation Proposal	Sprint, AT&T and LDDS
Texas	Docket 12784	Access Transport Rate Structure	IXC Coalition
Illinois	Docket 94-0096	Customer's First Proposal	LDDS
Louisiana	Docket U-17949-D	Alternative Regulation	AT&T, Sprint and LDDS
New York	Case No. 93-C-0103	Rochester Plan-Wholesale/Retail	LDDS
Illinois	Dockets 94-0043/46	Access Transport Rate Structure	IXC Coalition
Florida	Docket 92-1074-TP	Expanded Interconnection	Intermedia
Louisiana	Docket U-20800	Access Transport Rate Structure	LDDS
Tennessee	Docket 93-008865	Access Transport Rate Structure	LDDS
Ohio	Docket 93-487-TP-ALT	Alternative Regulation	Allnet/LCI/LDDS
Mississippi	Docket 93-UN-0843	Access Transport Rate Structure	LDDS
South Carolina	Docket 93-756-C	Access Transport Rate Structure	IXC Coalition
Georgia	Docket 4817-U	Access Transport Rate Structure	IXC Coalition
Louisiana	Docket U-20710	Pricing and Imputation Standards	LDDS
Ohio	Case 93-230-TP-ALT	Alternative Regulation	MCI/Allnet/LCI
New Mexico	Docket 93-218-TC	Expanded Local Calling	LDDS

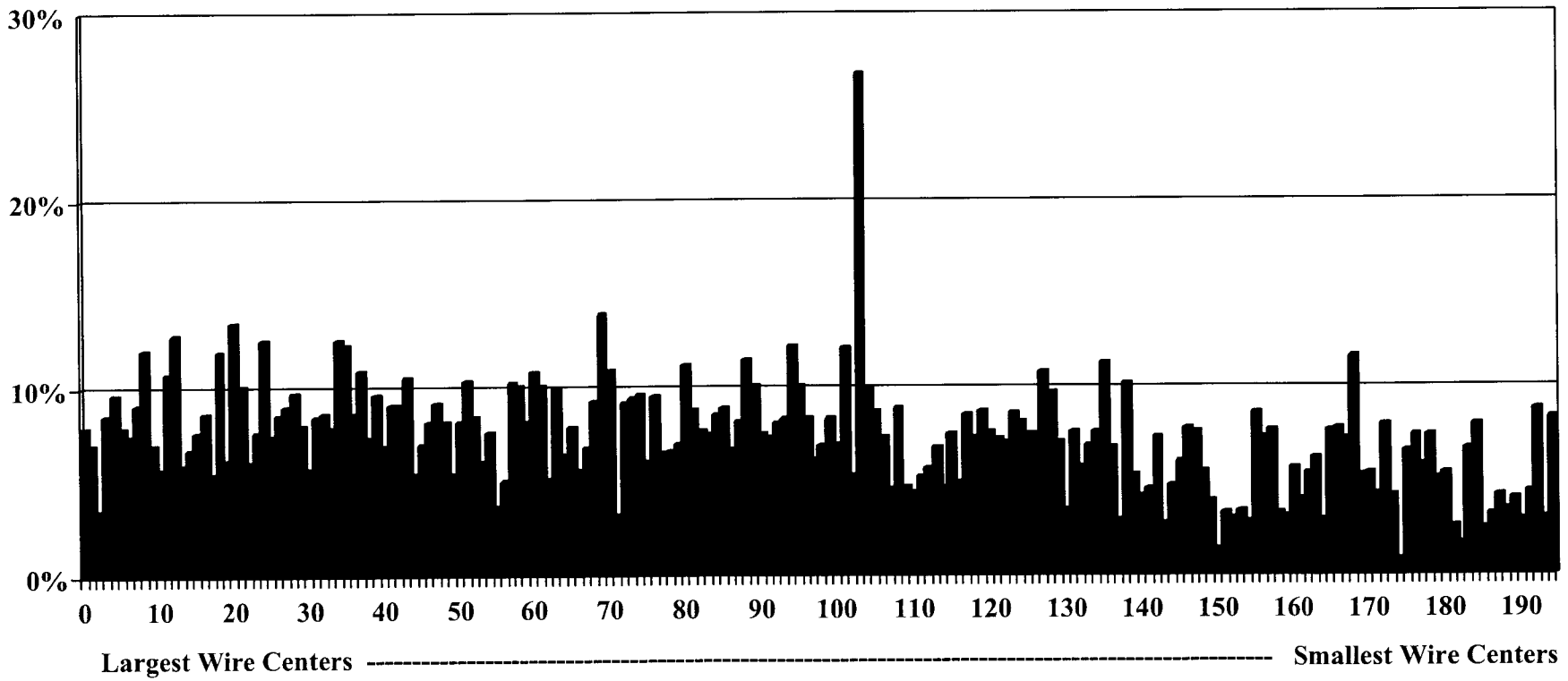
Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Illinois	Docket 92-0048	Alternative Regulation	LDDS
Mississippi	Docket 93-UN-0038	Banded Rates for Toll Service	LDDS
Florida	Docket 92-1074-TP	Expanded Interconnection	Florida Coalition
Louisiana	Docket U-20237	Preferential Toll Pricing	LDDS, MCI and AT&T
South Carolina	Docket 93-176-C	Expanded Local Calling	LDDS & MCI
Mississippi	Case 89-UN-5453	Rate Stabilization Plan	LDDS & ATC
Illinois	Docket 92-0398	Local Interconnection	CLEC Coalition
Louisiana	Docket U-19993	Payphone Compensation	MCI
Maryland	Docket 8525	Payphone Compensation	MCI
South Carolina	Docket 92-572-C	Payphone Compensation	MCI
Georgia	Docket 4206-U	Payphone Compensation	MCI
Delaware	Docket 91-47	Application for Rate Increase	MCI
Florida	Docket 88-0069-TL	Comprehensive Price Review	Florida Coalition
Mississippi	Case 92-UA-100	Expanded Local Calling	LDDS & ATC
Florida	Docket 92-0188-TL	GTE Rate Case	MCI & FIXCA
Wisconsin	Docket 05-TI-119	IntraLATA Competition	MCI & Schneider
Florida	Docket 92-0399-TP	Payphone Compensation	MCI & FIXCA
California	Docket I,87-11-033	Alternative Regulation	Intellical
Florida	Docket 88-0068-TL	Rate Stabilization	Public Counsel and Large Users
New York	Case 28425, Phase III	Access Transport Rate Structure	Empire Altel
Wisconsin	Docket 05-TR-103	Intrastate Access Charges	MCI & CompTel
Mississippi	Docket 90-UA-0280	IntraLATA Competition	Intellicall
Louisiana	Docket U-17949	IntraLATA Competition	Cable & Wireless
Florida	Docket 88-0069-TL	Rate Stabilization	Florida Coalition
Wisconsin	Docket 05-TR-103	Intrastate Access Charges	Wisconsin IXCs
Florida	Docket 89-0813-TP	Alternative Access Providers	Florida Coalition
Alaska	Docket R-90-1	Intrastate Toll Competition	Telephone Utilities of Alaska

Summary of Expert Testimony and Affidavits – Regulatory Proceedings

State	Docket/Case	Topic	Sponsor(s)
Minnesota	Docket P-3007/NA-89-76	Centralized Equal Access	MCI & Telecom*USA
Florida	Docket 88-0812-TP	IntraLATA Toll Competition	Florida Coalition
Wisconsin	Docket 05-TR-102	Intrastate Access Charges	Wisconsin IXCs
Wisconsin	Docket 6655-NC-100	Centralized Equal Access	Wisconsin IXCs
Florida	Docket 88-0069-TL	Rate Stabilization	Florida Coalition
Wisconsin	Docket 05-NC-100	IntraLATA Toll Competition	Wisconsin IXCs
Florida	Docket 87-0347-TI	AT&T Regulatory Relief	Florida Coalition
Illinois	Docket 83-0142	Intrastate Access Charges	Illinois Consolidated
Texas	Docket 8218	WATS Prorate Credit	TEXALTEL
Iowa	Case RPU 88-2	Centralized Equal Access	MCI & Teleconnect
Florida	Docket 87-1254-TL	Regulatory Flexibility for LECs	Microtel
Wisconsin	Docket 05-TR-5, Part B	IntraLATA Competition and Access Charges	Wisconsin State Telephone Assc.
Florida	Docket 86-0984, Phase II	Intrastate Loop Cost Recovery	Florida Coalition

Competitive Profile of UNE-P – BellSouth Territory in Tennessee
(Competitive Share by Wire Center – Ranked from Largest Wire Centers to Smallest)



Competitive Profile of UNE-P in Most Recent 6 Months – BellSouth Territory in Tennessee
(Competitive Share by Wire Center – Ranked from Largest Wire Centers to Smallest)
(Lines Added April to September 2003)