> high-revenue customers[1541] varies geographically, how the cost of serving customers varies according to the size of the wire center and the location of the wire center, and variations in the capabilities of wire centers to provide adequate collocation space and handle large numbers of hot cuts. We recognize that many states have implemented varied administrative tools to distinguish among certain markets within a state on a geographic basis for other purposes including retail ratemaking, the establishment of UNE loop rate zones, and the development of intrastate universal service mechanisms. If a state determines, after considering the factors just described, that these already-defined markets would be appropriate to use in this context as well, it may choose to use these market definitions.

The FCC's repeated use of the word "granular" cannot be ignored. It is clear from reading the TRO that the FCC favors a granular geographic market, and the only lower limit is that it should 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." In other words, the market should be the smallest area in which economies of scope and scale are obtainable. There are three fully-developed geographic market proposals[2] on the record in this case, and only two of them can plausibly be considered granular: the wire center and the exchange. The third proposal, the MSA, simply does not meet the FCC's definition. It is not at all granular, and it does not take into account the factors the FCC discussed at paragraph 496:

> how the number of high-revenue customers [footnote omitted] varies geographically, how the cost of serving customers varies according to the size of the wire center and the location of the wire center, and variations in the capabilities of wire centers to provide adequate collocation space and handle large numbers of hot cuts.

Of the two proposals that do advance a granular market definition, the wire center proposal is arguably too granular: there is no credible evidence that a competitor serving a single wire center could take advantage of economies of scale and scope. The exchange proposal does not suffer from this flaw, and in fact is the one proposal on the record that best meets the FCC's directives on defining a market area. For example:

- A competitor could take advantages of economies of scale and scope when serving a single exchange.

- Defining the market as an exchange will allow the Commission to take into consideration the locations of customers actually being served (if any) by competitors.
- Defining the market as an exchange will allow the Commission to take into consideration the variation in factors affecting competitors' ability to serve each group of customers.
- Defining the market as an exchange will allow the Commission to take into consideration how competitors' ability to use self-provisioned switches or switches provided by a third-party wholesaler to serve various groups of customers varies geographically.
- Defining the market as an exchange will allow the Commission to take into consideration how retail rates vary geographically.
- The FCC recognizes that states have implemented varied administrative tools to distinguish among certain markets within a state on a geographic basis for other purposes including retail ratemaking. This Commission has used the exchange as the geographic area for retail ratemaking, for the determination of the existence of competition, for the determination of whether community of interest exists for expanded calling scopes, and for other purposes. The TRO provides that: "If a state determines ... that these already-defined markets would be appropriate to use in this context as well, it may choose to use these market definitions."

The Commission therefore concludes that using exchanges as the geographic markets best meets the FCC's directives, and will order the parties to present their Phase II testimony on that basis.

Enterprise Market Cutoff:

The FCC's directives on this issue are found primarily at paragraph 497:

> 497. For purposes of the examination described here, mass market customers are analog voice customers that purchase only a limited number of POTS lines, and can only be economically served via DS0 loops. Some mass market customers (i.e., very small businesses) purchase multiple DS0s at a single location. The previous Commission determined that incumbent LECs that make the EEL combination available are not obligated to provide unbundled local circuit switching to requesting carriers for serving customers with four or more DS0 loops in density zone one of the top fifty MSAs.[1542] The previous Commission found that under such circumstances, lack of access to unbundled local circuit switching would not impair requesting carriers in these specific areas.[1543] At some point, customers taking a sufficient number of multiple DS0

> loops could be served in a manner similar to that described above for enterprise customers – that is, voice services provided over one or several DS1s,[1544] including the same variety and quality of services and customer care that enterprise customers receive. Therefore, as part of the economic and operational analysis discussed below, a state must determine the appropriate cut-off for multi-line DS0 customers as part of its more granular review. This cross over point may be the point where it makes economic sense for a multi-line customer to be served via a DS1 loop. We expect that in those areas where the switching carve-out was applicable (i.e., density zone 1 of the top 50 MSAs), the appropriate cutoff will be four lines absent significant evidence to the contrary. We are not persuaded, based on this record, that we should alter the Commission's previous determination on this point.[1545] Accordingly, we authorize the states, within nine months of the effective date of this Order, to determine the appropriate cross over point.[1546]

The FCC essentially lays out two options for determining the cutoff: 1) the point where it makes economic sense for a multi-line customer to be served via a DS1 loop; or 2) the "carve-out" exception of four lines, where that carve out was in effect. In Missouri, there is no evidence that the carve out was ever put in effect, and plenty of evidence that it was not.[3] Based on the evidence of record, the Commission finds that the carve out was not in effect.

Having made this finding, the carve-out number of four lines becomes irrelevant, and the Commission's only choice is the economic analysis. The purpose of this analysis is to determine the point at which it makes economic sense for a multi-line customer to be served with a DS1 loop. The only witness that presented a credible analysis to this effect was Sprint witness Maples. Mr. Maples' analysis demonstrates that it is economical to serve a customer with ten or fewer DS0 lines; at eleven DS0s or more, it is more economical to serve that customer with a DS1 line. As Sprint points out in its brief, this analysis is clear, straightforward, and objective.

Based on this analysis, the Commission concludes that customers served with ten or fewer DS0 loops at a particular location are mass-market customers.

IT IS THEREFORE ORDERED:

1. That, for the purposes of conducting the impairment analysis in Phase II of this proceeding, the appropriate geographic market is the exchange.

2. That, for the purposes of conducting the impairment analysis in Phase II of this proceeding, a mass market customer is defined as a customer with ten or fewer DS0 lines at a particular location.

3. That this order shall become effective on February 24, 2004.

BY THE COMMISSION

Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge

(S E A L)

Gaw, Ch., and Clayton, CC., concur
Murray, C., dissents, dissenting opinion attached

Mills, Deputy Chief Regulatory Law Judge

The Pace Coalition, *et al.*
October 4, 2004
Exhibit 25

BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF MISSOURI

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

Dissenting Opinion of Commissioner Murray

I respectfully dissent from the result reached by the majority. I believe that the Metropolitan Statistical Areas are the appropriate geographic area, and that the DS0 cutoff should be four DS0 lines.

MSAs, by definition, have a high degree of integration with a recognized population nucleus and recognized economic linkages between urban cores and outlying, integrated areas. In short, they **are** markets. The majority's decision to use exchanges as the geographic market areas does not comply with the FCC's rules. An exchange, which in most instances is equivalent to a wire center, is simply too small for a competitor serving that area alone to be able to take advantage of scale and scope economies.

MSAs best meet the FCC's criteria for a geographic market because CLECs are actually serving Missouri mass market customers throughout the MSA; there is little variation across the MSAs in factors that might substantively affect a competitor's ability to serve mass market customers; and where CLECs have entered an MSA using their own switches, they have the ability to use them to serve mass market customers in most, if not all, of the MSA if they choose.

I also disagree with the majority on the appropriate DS0 cutoff. The FCC established a four-DS0 default cutoff in areas where the switching carve out was applicable (i.e., density Zone 1 of the top 50 MSAs). SBC Missouri's witness Gary Fleming analysis showed that it would be economic and efficient for a CLEC to use a DS1 to serve small business customers that have as few as four DS0 lines.

Furthermore, the analyses proposed by Sprint and AT&T (and accepted by the majority) are

flawed because they fail to take into account the increased revenue opportunities, particularly those from providing data services, that come from serving a customer over a DS1 loop rather than multiple DS0s.

For the foregoing reasons, I dissent from the majority opinion.

Respectfully submitted,

Connie Murray
Commissioner

Dated at Jefferson City, Missouri,
on this 24th day of February, 2004.

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[1] REPORT AND ORDER AND ORDER ON REMAND AND FURTHER NOTICE OF PROPOSED RULEMAKING adopted February 20, 2003, released August 21, 2003 and corrected September 17, 2003 entered in CC Docket Nos. 01-338, 96-98 and 98-147 (the "TRO").

1536 Chairman Powell's criticism of the discretion we give states to define the relevant geographic market for purposes of the switching analysis is misplaced. *See Chairman Powell Statement* at 6-7. It is fundamental to our general impairment analysis to consider whether alternative facilities deployment shows a lack of impairment in serving a particular market. Indeed, we adopt triggers for the states to apply to measure impairment by considering this alternative facilities deployment in our analysis of loops, transport, and switching. Although the incumbent LECs argue that we should apply a zone approach to transport and loops, we define the relevant geographic market for transport as route-by-route, and the relevant geographic market for enterprise loops as customer-by-customer, because of the economic and operational issues associated with alternative transport and loops deployment. As Chairman Powell recognizes, a switch can theoretically serve wide areas (provided that the costs of transporting traffic back to the switch are not cost prohibitive), so one would expect a broader market definition for switching than for loops or transport. *Chairman Powell Statement* at 7. Indeed, because we measure alternative "switching" in a given market, not switches located in that market, the physical location of the switch is not necessarily relevant to defining the geographic market. For example, a switch located in Rhode Island could satisfy the switching trigger in Massachusetts if it is serving customers in the relevant market in Massachusetts. *Chairman Powell Statement* at 7. To the extent the states define a geographic market broadly, it is more likely that such geographic market will capture sufficient switching alternatives to satisfy the trigger, thus resulting in removal of the particular UNE in that geographic market (a result the dissents would seem to endorse). The exact parameters of these geographic markets, however, cannot be defined nationally for switching because, as both incumbent LECs and competitive LECs agree, there are extreme variations in population density, and thus wire center line densities, across the country. *See generally* AT&T Jan. 17, 2003 *Ex Parte* Letter;

SBC Jan. 14, 2003 UNE P *Ex Parte* Letter; WorldCom Jan. 8, 2003 Switching *Ex Parte* Letter. States are, therefore, better positioned to draw these lines. Because states are more familiar with how these variations have affected competitive entry, and because there was no credible record evidence to show how we could establish these boundaries based on a national rule, we ask the states to create these boundaries. We do, however, provide the states significant guidance. We require state commissions to define each geographic market on a granular level and direct them to take into consideration the locations of customers actually being served by competitors, the variation in factors affecting competitors' ability to serve each group of customers, and competitors' ability to target and serve specific markets economically and efficiently using currently available technologies. We make clear that state commissions cannot define a market as encompassing an entire state and that they should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market.

1537 For example, if competitors with their own switches are only serving certain geographic areas, the state commission should consider establishing those areas to constitute separate markets.

1538 For example, if UNE loop rates vary substantially across a state, and this variation is likely to lead to a different finding concerning the existence of impairment in different parts of the state, the state commission should consider separating zones with high and low UNE loop rates for purposes of assessing impairment.

1539 For example, competitors often are able to target particular sets of customers, or customers in particular wire centers or rate zones.

1540 Therefore the market definitions used for the analysis of the triggers must also be used for the second step of the analysis, if the triggers are not satisfied.

1541 These include, for example, business customers, as well as those residential customers likely to take vertical features and ancillary services such as data and voice mail service.

2 The three fully-developed proposals are the Metropolitan Statistical Areas (MSAs), wire centers, and exchanges. The Commission-created Metropolitan Calling Areas in the St. Louis, Kansas City, and Springfield regions were discussed as a possibility during the course of the Phase I evidentiary hearing, but there was no prefiled testimony detailing the use of MCAs, and no party affirmatively supported them. There was also some testimony about the use of Local Access and Transport Areas (LATAs), but the affirmative evidence in support of LATAs was high-level and superficial, and much of the evidence concerning LATAs simply serves to point out the shortcomings of other proposals. The Commission will not discuss MCAs and LATAs in any great detail; the flaws found in the MSA proposal are found in the MCA and LATA proposals as well.

1542 *UNE Remand Order*, 15 FCC Rcd at 3822-31, paras. 276-98.

1543 *Id.*

1544 The evidence in the record indicates that it may be viable to aggregate loops at a customer location and provide service at a DS1 capacity or higher. Specifically, if a customer has enough lines to justify the expense of purchasing multiplexing equipment and a high-capacity line, it makes sense to aggregate the customer's loops at the customer's premises, which avoids the need for hot cuts at the incumbent LEC's central office.

1545 Because the previous carve out only applied where "new" EELs were made available and because this Commission allowed state commissions to require switching to be unbundled even in areas where the carve-out test was met, it appears that the four-line carve-out was adhered to in very few areas in the country. SBC Reply at 30; BellSouth NERA Reply Decl. at 51-52. As part of their analysis, we expect states to make a finding of whether or not the carve out was in effect.

1546 Commissioner Abernathy claims that our decision not to preserve the previous Commission's four-line carve-out represents a "potentially massive expansion" of unbundled switching. *Commissioner Abernathy Statement* at 8 n.27. This claim makes no sense. If a state finds that the appropriate cut-off for distinguishing enterprise from mass market customers in density zone 1 of the top 50 MSAs is four lines, there will be no more unbundled switching available than there was under the previous carve-out. Indeed, since the previous carve-out was conditioned on the availability of EELs and appears to have actually been in effect in very few areas of the country, *see supra* note 1545, setting the cut-off at an unconditional four lines would result in more customers being treated as enterprise customers subject to our finding of no impairment. If, on the other hand, a state finds based on record evidence that a cut-off of more than four lines is appropriate, more multi-line customers will be treated as mass market customers. But in no way will this result in an "expansion" of unbundled switching. To the contrary, as Commissioner Abernathy points out, "dozens of CLECs serve business customers of such size using their own switches." *Commissioner Abernathy Statement* at 8 n.27. Such widespread deployment of competitive switches would be considered under our mass market triggers. In such markets, then, it is more likely that there will be a finding of no impairment for the entire market, leading to significantly less unbundled switching than was available under the previous four-line carve-out.

3 Witness Fleming testified that the carve-out was "applicable" because it could have been put in effect, even though it was not. This is sophistry; if the FCC had meant for state commissions to use the four line carve-out everywhere it could have been put into effect whether or not it was actually in effect, it would not have been concerned with whether the carve-out was adhered to, and it would not have directed state commissions to make a finding as to whether it was in effect.

EXHIBIT 26

The Pace Coalition, *et al.*
October 4, 2004
Exhibit 26

THE INTERNET TELEPHONY

VoIP for Large Enterprises | INTERNET TELEPHONY CONFERENCE & EXPO | October 4-7 Los Angeles CA | Megaco

THE INTERNET TELEPHONY special *focus*
May 2004

Cable Telephony Today

BY ELAINE SMILES

There is no doubt that cable telephony is here; news releases and deployment progress attest to that. But the playing field is not as wide open as it appeared to be several years ago when it was assumed that cable operators — or multiple system operators (MSOs) as they prefer to be known — were the only threat telcos were seeing on the horizon. MSOs are now aggressively touting cable VoIP plans, and telcos have sat up to take serious notice. In addition, the marketplace is also full of competition from Internet voice providers such as Vonage and Net2Phone.

Cable MSOs are entering the phone market for two main reasons: to retain premium television subscribers in the face of erosion to Direct Broadcast Satellite and to increase the average revenue per user. Cable MSOs with telephony plans can be roughly grouped into two camps depending on which opportunity best solves their current pain: the Internet VoIP type service or primary line telephone service with VoIP delivery. Most of the recent MSO cable VoIP momentum announcements have been in the primary line telephony camp, using PacketCable VoIP architecture, specifically, Charter, Cox, Time Warner, and Cablevision to name a few (see sidebar entitled Notable Cable VoIP Deployments). However, some MSOs are deploying a different variety of residential primary line in which the MSO opts not to provide battery back-up and other regulatory requirements.
Fortunately for the cable operators, they have the opportunity to compete equally well in both the crowded broadband voice arena with their dominance of residential broadband, as well as primary line telephony with their extensive coax network. In addition to a residential customer base which the MSOs have, this market share battle is one that will not be won at the micro level of voice-only communication, but instead at the macro level of whole-home communication — phone, video, and data. Evidence of how the telcos are gearing up to defend their space with bundling and new service offers demonstrates their recognition of this direction. Success in this whole-home communication market will be decided by several key attributes: convergence, bundling, and new services. To date, cable operators have had the early advantage in most of these key criteria for success.
Bundling of commercial offerings to consumers has proven to attract premium subscribers as well as reduce customer churn. Cox Communications included churn reduction statistics in their VoIP whitepaper in 2003 that pointed to a 50 percent reduction in subscriber churn when residential customers subscribed to all three services (TV, broadband and residential telephony). Ted Rogers of Canada's Rogers Communications

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Tehrani's IP Telephony Dictionary

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reported at The Western Show in December 2003, that eight percent of the company's subscribers take all three available services (television, broadband, and cellular phone) yet they contribute to 28 percent of the company's EBITDA (earnings before income tax, depreciation and amortization).

Service providers of choice will be those who can bundle today's television, video-on-demand, full-featured broadband (tiered services, parental controls, and the like), and high-quality telephony. While broadband services are arguably commoditized, and telephony service is not always differentiable, Cable MSOs have the bundling advantage today with their wealth of television and video capabilities, broadcast infrastructure and in many cases, the vault of content they own themselves.

Convergence of the network, where all services are integrated and provided over one medium, delivers an advantage to the service provider in terms of cost efficiencies and by enabling new services — a fundamental advantage over the service provider who offers a commercial bundle of services while needing to maintain multiple, disparate networks to deliver them because of regulatory or infrastructure limitations.

A converged video/voice/data network is a service-centric network:

- utilizing a single, standards-based packet network;
- enabling any service, any device, any where;
- servicing multiple markets for diverged revenue streams: residential and business telephony, primary line, long-distance, broadband and multimedia;
- capable of allowing services to cross network domains with a rich set of services information, like application priority, end-point device awareness, and media type appropriate delivery;
- enabled by a single OSS system that integrates and simplifies services provisioning, network element management, and single point provisioning for network elements and services activation.

Few North American MSOs have deployed large-scale telephony networks using circuit switched technology and none have invested in facilities-based long-distance or tandem TDM networks. While MSOs have impatiently waited until cable VoIP solutions were ready to deploy, they have aggressively been completing their physical plant upgrades to enable high-bandwidth bi-directional services. Cable operators are now leveraging their broadband network investments and advancing their VoIP deployment plans to bring the attractive economics of a converged triple play to customers today.

New Services integrating televisions and broadband with voice and multimedia communications are the key to differentiate one 'whole home communications' service provider from another and to provide the high dividend of customer retention.

Rich end-user services experience:

- completely integrated, multimedia applications that can be accessed

anywhere from any type of device and retain the users' profile;
- services on-demand, period based, or usage based.

Service benefits:

- improves customer loyalty (lower churn, drives brand awareness) with differentiated and programmable multimedia services;
- drives top line revenue growth with new service bundles that deliver higher margins than today's existing services;
- enables cost-effective new customer attraction and growth.

With a converged network and the full triple play, cable operators have the best opportunity to offer a multimedia communication experience for consumers, which blurs the lines between service silos. Phone and broadband, for example, can be integrated with video calling, click-to-call, and high-value collaboration features. Consumers are looking to have more control over their communications — like being able to view their television program without interruption from non-essential telephony calls, and having a single number where people can reach them at multiple locations.

Alternate Telephony

But what about that other category of competitors — the broadband VoIP-only service providers offering inexpensive-to-free Internet calling? Aren't they able to knock one leg off the cable triple play stool? Most likely not.

Internet voice, broadband VoIP, soft second-line voice — whatever you call it, there is a growing buzz about increased choice which consumers have for alternative telephony. Some of these non-facilities based providers have an independent voice offer and some are pairing up with broadband carriers offering a share of revenue stream, which, while not overwhelmingly generous to the carrier, at least allows them to be in the game. Some of these also use an adapter to allow consumers to make regular phone calls over their broadband service. Other offers, such as Skype's only offer PC-to-PC internet calling for free (for now).

Micro Versus Macro at the Finish Line

Although the new broadband telephony alternatives are looking attractive, they deliver a micro service to a relatively small and limited market of cost sensitive and high-technology subscribers. While commoditization of basic voice and lowering price points may prove attractive to this niche market in the short term, long term success in this market and others will require the delivery of innovative, value-added services.

Here is where the macro whole-home communications offer comes together, and the subscriber attraction moves from low cost to a value added proposition.

With their early lead in all three of the major criteria for success in the whole home communications market — bundling, convergence, and services — cable operators currently have the advantage over traditional telephony companies who are racing to upgrade their networks to deliver the voice, video, and data triple play. With their breadth of portfolio and richness of service set, MSOs also have the advantage over Internet voice companies who are rushing to market with a service based on a low-cost value proposition.

EXHIBIT 27

The UNE-P Fact Report: May 2004[1] -- Lessons from the State TRO Proceedings

One of the key reasons the Federal Communications Commission (FCC) asked the States to analyze impairment in its Triennial Review Order (TRO) is that State Commission procedures, including discovery and cross examination, provide a unique opportunity to develop detailed factual records of competitive conditions in local markets. Although many State proceedings were prematurely terminated in the wake of the DC Circuit decision in *USTA II*, the records developed in these proceedings made clear that the FCC's reliance on the State regulatory process (and State Commissions) was well founded.

The purpose of this UNE-P Fact Report is to summarize the core lessons learned in State TRO proceedings. Although an identical set of data was not collected in every State, an unmistakable pattern of competitive activity emerged that we believe is representative of conditions nationwide (although isolated exceptions may apply). These common conclusions should inform further debate concerning the need for unbundled local switching to bring the benefits of competition to the mass (i.e., analog) market.

Lesson 1: There is No Meaningful UNE-L Based Competition in the Mass Market

The law of unintended consequences is sometimes an important regulatory tool. One consequence of the "mass market switch triggers" provided for in the TRO[2] was that the RBOCs were provided an incentive to publicly disclose their best measures of mass market competition over CLEC-provided switching facilities (i.e., UNE-L). Significantly, the level of mass market local competition relying on UNE-L cited by the RBOCs in State proceedings provides some of the strongest evidence to date *supporting* the FCC's national finding of impairment for unbundled local switching.

The Growth of UNE-P (in lines)

0.5 million
December 1999

1.6 million
June 2000

2.8 million
December 2000

4.8 million
June 2001

5.8 million
December 2001

7.5 million
June 2002

10.2 million
December 2002

13.0 million
June 2003

15.1 million
December 2003

16.1 million
March 2004

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1 The UNE-P Fact Report is published twice annually by the PACE (Promoting Active Competition Everywhere) Coalition. Previous versions of the UNE-P Fact Report may be downloaded at www.pacecoalition.org. The PACE Coalition consists of smaller entrants that use UNE-P to provide some or all of their local services. The members of the PACE Coalition are: Access Integrated Networks, Birch Telecom, BiznessOnline.com, BridgeCom, DSCI Corporation, Ernest Communications, IDS Telcom, InfoHighway Communications, ITC^DeltaCom, MCG Capital Corp., MetTel, Momentum Telecom, Inc., nii communications, TruComm, and Z-Tel Communications.

2 The TRO's "mass market switch triggers" required a State Commission to remove an RBOC's obligation to offer unbundled local switching under section 251 of the Act if it determined that three qualifying entrants are competing in a market using their own switching.

During the FCC's TRO proceeding, little data was available concerning actual levels of mass market competition using UNE-L.[3] As shown in the table at right, however, the data voluntarily provided by the RBOCs before State Commissions conclusively demonstrates that there is no meaningful mass market competition using UNE-L, even in those "most competitive" markets where the RBOC claims that the mass market switch triggers were satisfied. After more than eight years of competition (many States had authorized loop-based entry prior to passage of the federal Act), mass market competition using UNE-L has simply failed to materialize.

UNE-L Mass Market Share

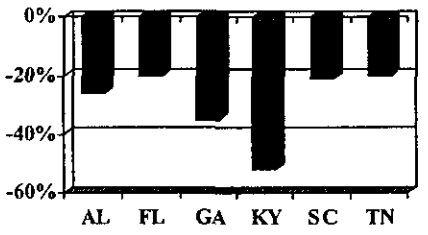
State	Share
Alabama	0.4%
Florida	1.4%
Georgia	0.9%
Illinois	1.3%
Indiana	0.8%
Kentucky	0.3%
Michigan	1.2%
Missouri	1.2%
South Carolina	0.5%
Tennessee	0.5%
Texas	0.3%

The fundamental purpose of the "switch trigger" approach adopted by the FCC was to rely (to the extent possible) on actual market conditions to judge impairment. The levels of competitive activity disclosed by the RBOCs validate the significant entry barriers (i.e., impairments) that prevent the emergence of UNE-L based mass market competition. In any conventional industry survey, competitive shares such as those in the table would be dismissed as irrelevant, nothing more than statistical noise from fringe activity. Yet here, the RBOCs are claiming that trivial (and, as we discuss below, declining) levels of UNE-L activity should override the competitive choices of 16 million customer lines made possible by the availability of unbundled local switching to serve the mass market as a part of UNE-P.

Lesson 2: Not Only is UNE-L Based Mass Market Competition Trivial, it is Declining

Importantly, the trivial levels of mass market competition using UNE-L is not a result of the strategy having just been introduced. To the contrary, over the past decade, a number of carriers have attempted to provide analog-level services using their own switches, with the result being the rash of bankruptcies that characterized this market before UNE-P was made operationally available.

Change in Mass Market UNE-L
(April 2003 to September 2004)



Where the RBOC provided time-series information, the evidence from the State proceedings is quite clear: analog-based UNE-L competition is declining rapidly, with most analog activity a remnant of an abandoned

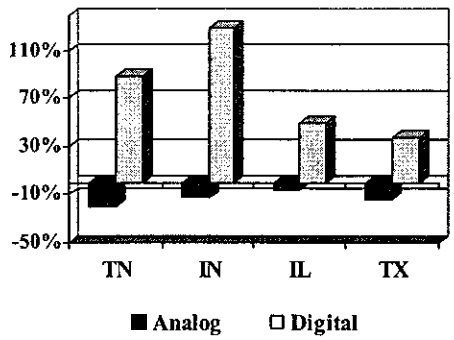
[3] The "mass market" generally is comprised of those residential and business customers that desire traditional, analog-loop based phone services (in contrast to those customers that desire services requiring digital-connectivity, i.e. the "enterprise market."). The mass market/enterprise distinction generally matches the "digital divide" between analog and digital services, with one exception: The FCC permitted the States to impose a regulatory "upper limit" to the mass market defined at the point where the number of analog voice lines serving a customer was sufficiently large to (at least theoretically) justify converting a customer to a DS-1 access connection. Studies in a wide range of State proceedings generally showed that multi-line analog voice customers with 10-14 lines could be served by a DS-1 connection, although Verizon (to its credit) supported the adoption of a pure analog/digital demarcation point where the customer decided the service arrangement best suited to its needs (not a regulatory rule).

business plan. Mass market local competition relying on UNE-L is insignificant and declining – and there is simply no reason to expect that it will expand in the future without significant changes in technology and network architecture. The switch-based experiment has already failed in this market, and what legacy activity remains is decaying rapidly. Moreover, as we show in the following, switched-based carriers have responded by shifting their focus to the enterprise market, where the degree of impairment (at least in some metropolitan areas) may be potentially surmountable.[4]

Lesson 3: Switch-Based Carriers are Focused on the Enterprise Market

There is a clear and unmistakable trend among switch-based carriers that further validates one of the key findings of the TRO: The enterprise market – i.e., those customers with DS-1 and above connections – is a distinct market, and competitive conditions in that market are different than those in the analog mass market. In evaluating competitive conditions, it is just as important to look at *trends* in UNE-L activity as it is to measure the absolute level of UNE-L based competition at any point in time. In particular, to understand competition by switch-based entrants, it is important to look at the type of loops leased by such carriers – i.e., whether the loops are analog or digital – and to focus most intently on recent loop activity, which is the best measure of current competitive conditions.

Recent UNE-L Activity of Claimed Switch Triggers



In those States where it was possible to look closely at the competitive activity of the companies claimed by the RBOC as "mass market switch triggers," two key facts became apparent. First, the vast majority of companies cited by the RBOCs as mass market switch triggers actually served analog lines as a tangential part of their enterprise operations. For instance, in Georgia, four of the seven named mass market switch trigger candidates reported that between 90% and 100% of the lines served were high speed lines to enterprise customers, with analog lines needed for incidental use or a customer's smaller locations.[5] Second, as illustrated

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[4] By this observation we do not mean to imply that switch-based competition in the enterprise market is inherently profitable or guaranteed to lessen the incumbent's dominance. Indeed, most switch-based entrants have reorganized through bankruptcy, and many continue to struggle in a very difficult market. One cause of their difficulties are the aggressive "winback" strategies employed by RBOCs made possible by the stable revenues/profits the incumbent enjoys from customer segments facing less competition. If UNE-P is eliminated and the RBOC's monopoly over the mass market is restored, competitive conditions in the enterprise market would suffer collateral harm from the RBOC's ability to leverage its mass market monopoly in the enterprise market.

[5] It is important to appreciate that many customers desire a mix of analog and digital services, particularly during this transitional phase. Even large, telecommunications-intensive businesses will have fax lines, need a few ancillary lines for incremental growth, or have remote locations that continue to use analog services. As a result, enterprise-oriented CLECs will lease some analog loops to fully meet the needs of their customers, without diminishing the fact that they are enterprise, and not mass market, carriers.

by the chart above, switch-based carriers are becoming increasingly enterprise oriented over time, with their growth entirely attributable to digital-based services.[6] Even more detailed information is available from the State proceedings in the Midwest. A detailed analysis of the 2003 activity of the carriers named by SBC as mass market switch triggers in Michigan underscores the fact that these entrants are fundamentally focused on serving the enterprise market, particularly when the most recent activity from such carriers is considered.[7]

As the table at right clearly shows, the trigger carriers named by SBC are primarily focused on serving the enterprise market. The analog loops cited by SBC are a rapidly declining part of their businesses, while digital services represent their future. This is an important finding, as the TRO made clear that "switches serving the enterprise market do not qualify for the [mass market] triggers."[8]

Claimed Trigger Candidate	Michigan TRO Proceeding		
	2003 Activity		% Enterprise (2003)
	Analog	DS-1	
Trigger A	-14%	2,100%	100%
Trigger B	-19%	182%	100%
Trigger C	-2%	32%	100%
Trigger D	-30%	-15%	N/A
Trigger E	-9%	73%	100%
Trigger F	-6%	74%	100%
Trigger G	-12%	315%	100%
Trigger H	19%	291%	84%
Trigger I	-27%	-3%	N/A
Trigger J	-3%	136%	100%

Even more important than this "regulatory conclusion" is the market reality that it documents. The facts are that analog-based services still form the core of the mass market of residential and small business customers,[9] and that competition in the analog market is dependent upon UNE-P (while switch-based carriers are focused on serving high-speed digital customers). These conclusions are supported by individual CLEC business plans and are clearly reflected in the UNE-L growth pattern of analog and digital loops. The FCC's impairment findings track the marketplace evidence.

Lesson 4: There are No Wholesale Providers of Switching for Analog Lines

In addition to the "mass market" switch triggers described in the TRO, the FCC also permitted the RBOCs to remove local switching as a UNE in a market where two wholesale providers operated. Significantly, we are unaware of the RBOCs naming a *single* wholesale provider of analog switching in any market.[10] This confirms our own analysis of the marketplace,

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6 Chart illustrates the UNE-purchasing pattern during 2003 of the carriers claimed as mass market switch triggers.

7 Similar data was disclosed in Illinois and Indiana, demonstrating that the pattern is not unique to Michigan.

8 TRO, ¶ 508.

9 According to a recent study released by the Small Business Administration, most of the small business market remains on the analog side of the DS-1 divide with only 4% of small businesses relying on a DS-1 connection for access to the Internet. *A Survey of Small Business' Telecommunications Use and Spending*, SBA Office of Advocacy, Released March 2004, page 44.

10 To our knowledge, the only "inter-carrier" contract for analog-level switching is an agreement between Comcast and AT&T in certain markets. Public testimony indicates that one condition of Comcast's acquisition of AT&T Broadband's cable properties (and, as a result, its cable telephony

in which the impairments that have prevented carriers from using their own switches to serve analog customers have also prevented a wholesale market from developing.

The absence of any wholesale market is an important observation. There is little question that excess local switching capacity exists in many markets. The RBOCs have been reporting a general decline in switched access lines as customers migrate to digital services and eliminate second lines in favor of DSL and other Internet options. It would be reasonable to expect that switch owners would have strong incentives to offer wholesale options to boost revenues and network utilization, but for two limiting facts. With respect to CLEC switches, as we noted above, the same operational and economic barriers that prevent the switch owner from offering mass market services itself also prevent it from providing a commercially viable option for others to use its switch in this way. With respect to the incumbent, so long as it can reasonably expect that most mass market subscribers would return to it as retail customers, it has no incentive to open its network as a wholesaler.[11] Consequently, the absence of a wholesale market is strong evidence of impairment, for if impairment did not exist, both the entrant *and* the incumbent would have strong incentives of offer wholesale options.

Lesson 5: The Competitive Profiles of UNE-P and UNE-L are Fundamentally Different

The final common lesson from the State TRO proceedings concerns the fundamentally different competitive profiles achieved by UNE-P and UNE-L. A predicate to success for any mass market entry strategy is its ability to serve the widely dispersed market of residential and analog business customers. In state after state, only UNE-P has shown the ability to achieve such a profile. To illustrate this point, we present the competitive profiles of UNE-P and UNE-L in two states: Texas and North Carolina.[12]

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subscribers) was that AT&T would retain ownership of the local circuit switches and continue to provide the underlying network service to the transferred subscribers. This unique arrangement is not evidence of a wholesale market, as the service is available solely to Comcast as a historical byproduct of AT&T's effort to offer phone service over cable facilities. The fact that Comcast did not agree to absorb AT&T's investment in circuit switching is consistent with the cable industry's general distaste for older technology.

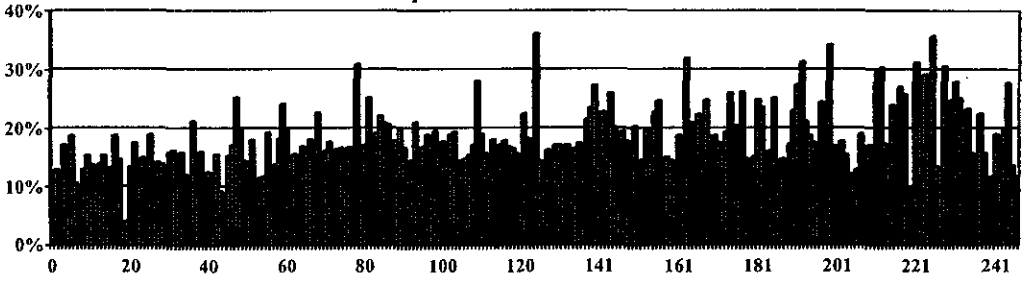
[11] There is no question that TELRIC-based rates fully compensate an RBOC for local switching. First, the FCC's TELRIC rules require that switching rates reflect the existing location and number of RBOC switches (i.e., the "fixed wire center" assumption), so RBOC criticisms of TELRIC's "hypothetical network" assumptions do not apply to switching. Second, as noted above, the declining demand for analog switched access lines suggests that each RBOC already has excess port capacity on its switches. If the RBOC actually believed that UNE-P lines would migrate to UNE-L, the financial impact of such a migration would be (1) a reduction in UNE revenues associated with switching and transport, (2) the continuing provision of the loop at what the RBOC characterizes as below-cost rates, and (3) a dramatic increase in idle switch ports that generate no revenue for the RBOC. In a world where CLECs enjoyed alternatives, the incumbent would move aggressively to prevent CLECs from migrating UNE-P lines to UNE-L to avoid these consequences; the fact that the incumbent is insisting on such a migration (at least as justification for its regulatory positions) demonstrates its confidence that the actual impairments (that it disavows) assure it that most lines would return as RBOC retail customers if it can succeed in eliminating UNE-P today.

[12] The "competitive profile" illustrated in the charts below compare the relative market share of UNE-P and UNE-L by exchange, with the exchanges ranked by size. The largest exchange in the analysis is on the far left, with the smallest on the far right, and the remaining exchanges arranged in-between (with the exchanges getting progressively smaller moving left-to-right). Although these two states are used to illustrate the point, the pattern exhibited by each is commonplace around the nation.

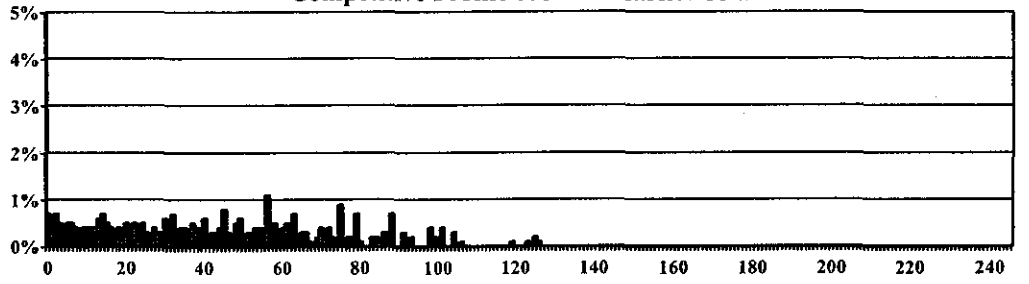
First, based on the data provided by SBC in Texas, we compare the competitive profile achieved by UNE-P and mass market UNE-L in only those markets (the Austin, Corpus Christi, Dallas, Houston, and San Antonio MSAs) where SBC claimed that the mass market switch triggers were satisfied. As the following comparison shows, even in these, the "most competitive" markets in Texas, the competitive profile of UNE-P is far different than that achieved by UNE-L.

Comparing Competitive Profile of UNE-P and Mass Market UNE-L in Texas

Competitive Profile of UNE-P



Competitive Profile of Mass Market UNE-L



As the above profiles clearly show, UNE-P achieves a competitive profile far more extensive and broadly dispersed than that achievable by UNE-L, even if the analysis is limited to only those markets where the RBOC claims that the mass market triggers demonstrate the absence of impairment.[13]

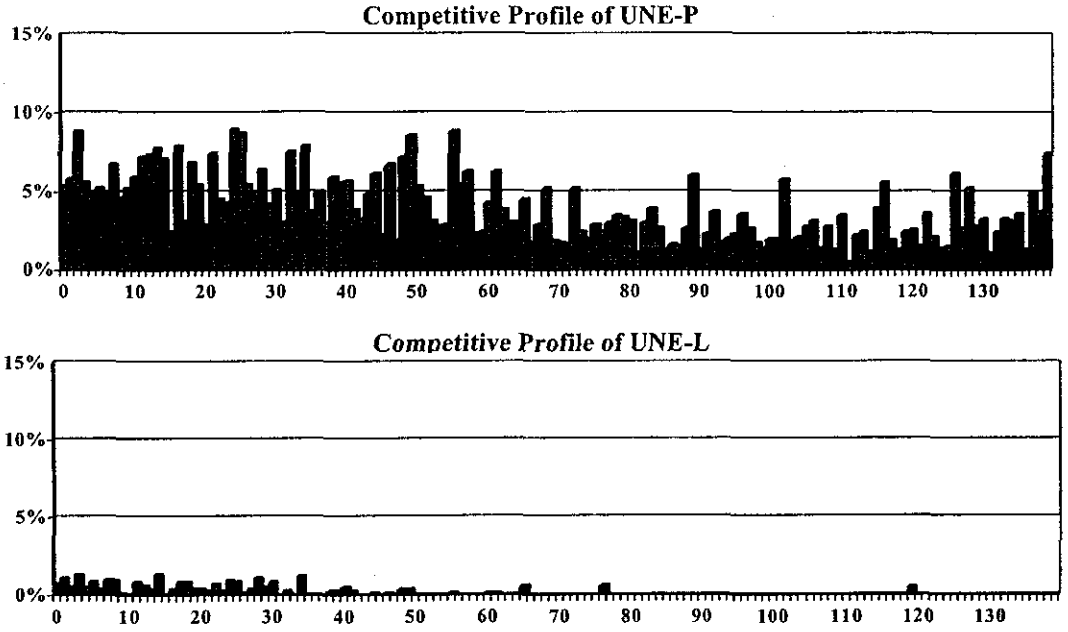
A similar pattern is apparent from slightly different data in North Carolina. The data in Texas is limited to those UNE-L lines that SBC considers mass market,[14] and the comparison involved only those Texas exchanges located in the MSAs where SBC claimed the mass market trigger was satisfied. The following comparison in North Carolina, however, is based on statewide data and includes all analog lines as part of the mass market. Moreover, the

[13] Note the vertical scale difference in the chart illustrating the UNE-P profile from the chart illustrating mass market UNE-L. Had the same scale been employed in both charts, the level of mass market UNE-L activity would not have been visually discernable from zero.

[14] SBC inappropriately limited the "mass market" to customer locations with 3 or fewer lines. Had the data been expanded to include all analog lines, however, other evidence indicates that the comparison would not be materially different.

comparison focuses on the most recent competitive activity (lines added between May and September 2003), to better measure the *current* competitive activity using UNE-P and UNE-L.

Comparing UNE-P and UNE-L – BellSouth North Carolina
(Lines Added May 2003 to September 2003)



As with the analysis for Texas, the competitive profiles of UNE-P and UNE-L sharply illustrate the dramatic difference in competitive activity achieved by these entry strategies. As noted, the charts above focus on the most recent activity and encompass all BellSouth exchanges in North Carolina (and not just those exchanges in markets where BellSouth claims the mass market switch triggers are satisfied).[15] Despite this slightly different perspective than the data available in Texas, the conclusion remains the same: the widespread competition demanded by the mass market is achievable only through access to unbundled local switching.

Final Comment

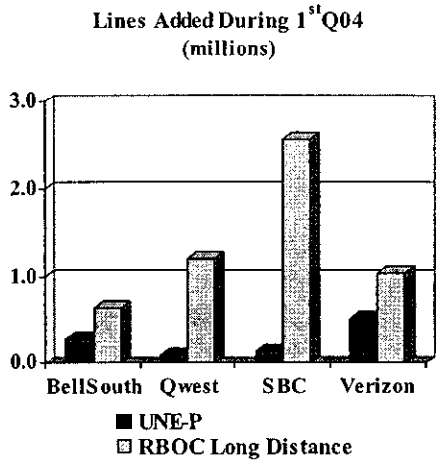
As explained above, the State TRO proceedings provided useful insight into competitive conditions in the nation's local markets. These statistics, while revealing, provide insight into only half of the real transformation underway in the mass market -- i.e., the growing dominance of "bundled" (i.e., local and long distance) services.[16] With the ability to offer long distance services in accordance with section 271 in every state, the RBOCs are transforming the marketplace through the reintegration of local and long distance services into bundled offerings. Whether the RBOCs will dominate a reintegrated local/long distance market in the same way they

[15] BellSouth has proposed that the North Carolina Commission reach a finding of non-impairment in markets containing approximately 80% of its switched access lines in the State.

[16] For a fuller discussion of the "bundled services" marketplace, see "*Measuring RBOC Dominance of Bundled Services: The Progress of Competition Under the New Social Contract*," PACE Coalition, November, 2003.

have dominated the local market depends entirely on whether competitors can compete with bundled mass market offerings of their own.

As shown in the chart at right, the RBOCs are dominating the battle for the mass market bundle, even as they seek to eliminate the foundation underlying competitors' bundled offerings, i.e., UNE-P. At the end of the first quarter of 2004, the RBOCs had gained nearly 43 million long distance lines, while only losing 16 million lines to competitors using UNE-P. In the first quarter alone, the four RBOCs added 5.3 long distance lines for each UNE-P line gained by the entire CLEC industry.



The emergence of bundled service offerings is neither unexpected nor harmful. Indeed, a central objective of the federal Telecommunications Act of 1996 was to enable competition to erase traditional boundaries between local and long distance services, with the expectation that a *competitive* full services marketplace would result. This vision, however, absolutely requires that mass market local competition thrives – not just for a few isolated customers, but for customers throughout the nation. As the State TRO proceedings made clear, there is (at least today) but one entry strategy capable of preventing the RBOCs from monopolizing the full services marketplace, and that entry strategy is UNE-P.

For questions concerning the PACE Coalition or the UNE-P Fact Report, please contact:

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-or-

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EXHIBIT 28

1 ***Witness background and qualifications***

2 **Q. MR. KIRCHBERGER, PLEASE STATE YOUR FULL NAME, ADDRESS**
3 **AND CURRENT RESPONSIBILITIES.**

4 A. My name is Robert J. Kirchberger. I am employed by AT&T, Inc. ("AT&T") at 1
5 AT&T Way, Bedminster, New Jersey. I am currently Director of Government
6 Affairs in the Law and State Government Affairs Division. I am responsible for
7 presenting AT&T's regulatory advocacy on a broad range of issues in
8 jurisdictions across AT&T's eastern region, including Pennsylvania. I have also
9 directed AT&T's participation in various industry collaborative work groups
10 addressing Verizon's unbundled network elements ("UNEs"), operational support
11 systems ("OSS") and performance measures and remedies.

12 **Q. MR. KIRCHBERGER, WHAT IS YOUR EXPERIENCE IN THE**
13 **TELECOMMUNICATIONS INDUSTRY?**

14 A. I have 34 years experience in the telecommunications industry – ten years with
15 New Jersey Bell and 24 years with AT&T. Over that span I have held positions
16 of increasing responsibility in a number of areas, including management of local
17 repair service centers and local switching offices, development of technical and
18 tariff support for pricing and marketing of both New Jersey Bell's and AT&T's
19 services, management of customized offerings and management of local service
20 initiatives. I have actively participated in state commission-sponsored oversight
21 of the testing of Verizon's OSS in Pennsylvania, Virginia, and New Jersey. I
22 have also participated on AT&T's behalf in the negotiation and arbitration of the
23 interconnection agreements with Verizon's predecessor, Bell Atlantic, in 1996
24 and 1997.

Q. MR. KIRCHBERGER, HAVE YOU APPEARED AS A WITNESS IN OTHER REGULATORY PROCEEDINGS?

A. Yes. I have testified and/or participated in developing written comments and testimony for AT&T on numerous regulatory issues in proceedings in Pennsylvania and other Verizon states. Relevant to the issues in this case I recently testified in proceedings in Maryland concerning access charge issues and their implications for Verizon Maryland Inc.'s incentive regulation plan.

Q. MR. NURSE, PLEASE STATE YOUR FULL NAME, ADDRESS AND CURRENT RESPONSIBILITIES.

A. My name is E. Christopher Nurse. I am employed by AT&T at 3033 Chain Bridge Road, Oakton, VA 22185 as a District Manager in Law and Government Affairs. I received a B.A. in Economics from the University of Massachusetts at Amherst. In 1996, I received a Masters in Business Administration from Southern New Hampshire University, in Manchester New Hampshire.

I am currently responsible for presenting AT&T's regulatory advocacy on a broad range of issues, particularly focusing on issues supporting AT&T entry into the local exchange market. I cover the state jurisdictions in the AT&T's Eastern Region including Pennsylvania. My primary focus for the last several years has been in the areas of § 271 Checklist compliance, Operating & Support Systems (OSS) testing, Performance Metrics and Incentives, and Collocation.

Q. MR. NURSE, WHAT IS YOUR EXPERIENCE IN THE TELECOMMUNICATIONS INDUSTRY?

A. I have 22 years experience in the telecommunications industry, including seven years with AT&T through its acquisition of Teleport Communications Group, Inc. (TCG). Prior to TCG, I was a Telecommunications Analyst with the New

Hampshire Public Utilities Commission from 1991 until February 1997, entrusted with a broad range of responsibilities. Assigned to the Engineering Department, I was the lead analyst or a contributing analyst to nearly all telecommunications matters before the New Hampshire Commission.

I regularly appear on behalf of AT&T in an array of industry workshops including the Pennsylvania Carrier Working Group. Also, I was AT&T's principal negotiator in developing performance metrics and the Performance Assurance Plan (PAP) in the Verizon East footprint.

Q. MR. NURSE, HAVE YOU APPEARED AS A WITNESS IN OTHER REGULATORY PROCEEDINGS?

A. Yes. I have testified before this Commission in several matters as well as in proceedings before state commissions in Delaware, Connecticut, the District of Columbia, Massachusetts, Maryland, New Hampshire, New Jersey, New York, Virginia and West Virginia. I have testified in numerous dockets, including dockets addressing rates and terms for Unbundled Network Elements, Verizon's and other carrier's Chapter 30 Plans of Alternative Regulation, Section 271 Checklist compliance, collocation and reciprocal compensation.

Purpose, organization and summary

Q. MR. KIRCHBERGER AND MR. NURSE, WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The FCC's Triennial Review Order requires this Commission to determine, among other things, whether Competitive Local Exchange Carriers are impaired without access to Verizon unbundled network elements in relevant geographic markets. In the sections that follow, we will address how those markets should be defined, the standards set forth in the TRO for determining whether CLECs are