Exhibit JFF-1T

BEFORE THE WASHINGTON STATE
UTILITIES AND TRANSPORTATION COMMISSION

In the Matter of the Petition of	**)**	
	)	**DOCKET NO. UT-033044**
QWEST CORPORATION	**)**	
	)	
To Initiate a Mass-Market Switching	**)**	
And Dedicated Transport Case	**)**	
Pursuant to the Triennial Review	**)**	
Order	**)**	

DIRECT TESTIMONY

OF

JOHN F. FINNEGAN

ON BEHALF OF

AT&T COMMUNICATIONS OF THE PACIFIC NORTHWEST, INC.,
AT&T LOCAL SERVICES ON BEHALF OF TCG SEATTLE, AND TCG OREGON
(COLLECTIVELY "AT&T")

POLICY AND INTRODUCTION

December 22, 2003

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I. INTRODUCTION OF WITNESS

Q. WHAT IS YOUR NAME AND BUSINESS ADDRESS?

A. My name is John F. Finnegan. My business address is 1875 Lawrence Street, Room 1525, Denver, Colorado 80202.

Q. WHAT ARE YOUR PRESENT RESPONSIBILITIES AND BACKGROUND?

A. My education and relevant work experience are as follows. I have a B.S. in Engineering from the Rutgers College of Engineering and an M.B.A. from the University of Denver. I have worked for AT&T for over 20 years. After graduating from Rutgers, I spent the next two years with Combustion Engineering in Valley Forge, PA as a Project Engineer. In 1983, I joined AT&T as a purchased product engineer. Over the next 12 years, I spent time with AT&T in a variety of engineering, quality management, sales and marketing positions. Almost half of that time was spent leading a supplier quality management organization.

In 1995, I joined AT&T's New Markets Development Organization and was one of the first employees in AT&T's Western Region to explore the opportunities associated with providing local exchange services. In 1996, I began in my current position of Senior Policy Witness. As a Senior Policy Witness I am responsible for developing and advocating AT&T's position on a wide range of issues.

During Qwest's attempt to obtain Section 271 relief, I concentrated my work efforts on collaborating with Qwest, CLECs and state regulators on understanding and evaluating Qwest's operational support system ("OSS") and developing performance measurements supporting those OSS. Since the issuance of the Triennial Review Order, I have been concentrating my efforts on the cross over point, market definition and trigger issues that are relevant to this testimony and the batch hot cut process,.

I was AT&T's representative in the Arizona and the Regional Oversight Committee's ("ROC") OSS tests since their inception. I am a frequent panelist on ROC OSS and Triennial Review Order discussions, and have testified in proceedings in Kansas, Iowa, Minnesota, Arizona, Montana, Wyoming, Utah, Idaho, Colorado, Washington, North Dakota, South Dakota, Nebraska, Oregon, and New Mexico.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I am here today to provide the Commission with an introduction to the FCC's *Triennial Review Order* ("TRO"), and to provide the policy framework supporting the need for continued availability of mass market switching at TELRIC prices, as part of the unbundled network element platform ("UNE-P"). My testimony is divided into five (5) sections: first, an introduction to and explanation of the TRO; second, a discussion of the public interest benefits of UNE-P; third, an analysis of geographic markets, or "impairment evaluation

zones," and the process of defining these zones for TRO purposes; fourth, an examination of factors necessary in determining the so-called "cross-over point" used to decide when it makes economic sense for a competitive local exchange carrier ("CLEC") to serve a multi-line plain old telephone service ("POTS") customer using a DS1 based service; and fifth, an explanation of the "triggers" analysis required under the TRO.

II. THE TRIENNIAL REVIEW ORDER

Q. WHAT IS THE BACKGROUND BEHIND THE FCC's TRIENNIAL REVIEW ORDER?

A. The *Triennial Review Order*[1] was issued by the Federal Communications Commission ("FCC") on September 2, 2003. The *TRO* became effective on October 2, 2003, and contemplates several state proceedings that are to be completed within nine months. Specifically, the FCC's Order contemplates that separate analyses for mass market switching, high capacity loops and high capacity transport will be completed by July 2, 2004. Additionally, the state must approve a batch hot cut process within the same timeframe.

[1] *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers, Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, and Deployment of Wireline Services Offering Advanced Telecommunications Capability*, CC Docket Nos. 01-338, 96-98 & 98-147, Report and Order and Order on Remand and Further Notice of Proposed Rulemaking, FCC 03-36 (rel. Aug. 21, 2003) *("Triennial Review Order"* or *"TRO").*

Q. IN THE TRO, WHAT FINDINGS OR CONCLUSIONS DID THE FCC REACH WITH RESPECT TO MASS MARKET SWITCHING?

A. The FCC has made a national finding that CLECs are impaired in their ability to offer service to mass market customers without access to unbundled switching.[2] The FCC's national finding is based on the operational and economic barriers to entry relating to the "hot cut" process, which is necessary to connect mass market customers' loops to CLEC switches.[3] These impediments are unique to CLECs and are not faced by the ILECs themselves. But beyond the disadvantages created by hot cuts *per se*, the FCC also recognized that CLECs face additional costs to extend their customers' loops from collocations in the incumbent LECs' ("ILECs") serving offices to distant CLEC switches.[4] These include the costs of: (1) collocation, (2) digital loop carrier ("DLC") and related transmission equipment needed to prepare CLEC customers' traffic for efficient transport to their switches, and (3) transport facilities needed to carry such traffic. Collectively, these costs (plus the costs associated with hot cuts) are referred to as the CLECs' "backhaul penalty", because they represent costs that only CLECs must bear in order to provide service to mass market customers.[5]

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[2] *TRO*, ¶ 459.
[3] *TRO*, ¶ 476.
[4] *TRO*, ¶ 476.
[5] *TRO*, ¶ 476. These matters are described in detail in the accompanying testimony of Robert Falcone.

Q. HOW DO THESE FCC FINDINGS AFFECT THIS COMMISSION?

A. In light of these FCC findings, this Commission has been charged with the duty of determining whether there is a factual basis to overturn the national finding of impairment in any specific market within the State. In that investigation, the operative question will be whether an efficient CLEC seeking to enter and serve the mass market could overcome the existing operational and economic barriers to entry if it does not have access to unbundled local circuit switching and UNE-P.

Q. WHAT IS THE PROCESS TO BE FOLLOWED IN MAKING THIS DETERMINATION?

A. In order to adjudicate Qwest's challenge to the FCC's national finding of impairment, the Commission must establish the appropriate market definitions in the state. To do so, the Commission must: (1) apply the factors laid out in the TRO to define the relevant geographic markets in the state and (2) establish the appropriate line "crossover" between customers in the mass market, who are economically served by only voice grade (or "DS0") loops, and customers in the enterprise market, who can reasonably be served by DS1 level loops. Once these market parameters are defined, the Commission must determine whether CLECs are impaired in the absence of UNE switching in each market.

Q. HOW IS SUCH IMPAIRMENT TO BE DETERMINED?

A. The FCC has established two methods to determine whether there is impairment, *i.e.*, an actual usage test, called a "trigger analysis," and a potential deployment

test. Both impairment tests, however, are intended to answer the exact same question: whether mass market customers in the defined markets will be able to obtain competitive services from multiple suppliers. Thus, the determination under either type of test should be identical for any defined market.

Procedurally, the Commission must first review any evidence of actual CLEC usage of switching from providers other than the ILEC to serve mass market customers. This is known as the "trigger" analysis. If the evidence shows there is little or no CLEC usage of switching used to serve mass market customers from other than the ILEC (i.e. the FCC-defined "triggers" are not met for a market), the Commission must then (if requested) review the evidence regarding potential usage of switching from other than the ILEC to serve mass market customers, including evidence regarding CLEC switch usage and operational and economic impairment. If the Commission finds, based on its review of all such evidence, that the ILEC has failed to demonstrate that CLECs would not be impaired without access to unbundled mass market switching, the Commission must then determine whether "rolling access" to unbundled switching would cure any and all impairment. If it does not, then unbundled local switching remains available as an unbundled element at TELRIC rates. In addition, because the FCC found that the hot cut process is a significant source of both operational and economic

impairment, it has asked state commissions to establish a batch hot cut process[6] and set a TELRIC rate for loops provisioned using that new process. These issues are all intertwined, and must be addressed based on the entire record that is developed through the course of the Commission's proceeding.

Q. WHAT ARE SOME OF THE ISSUES SURROUNDING A "GEOGRAPHIC" MARKET DEFINITION?

A. Recognizing that state commissions are in a superior position to gather and assess the data and information necessary to define geographic markets at a granular level, the FCC delegated the task of defining geographic markets to the state commissions.[7]

Defining the geographic market applicable to the impairment analysis is necessarily a dynamic and fact-intensive inquiry. There is no uniform methodology for defining geographic markets, but the FCC did direct state commissions to consider many different factors, including:[8]

- "variation in … competitors' ability to target and serve specific markets economically and efficiently using currently available technologies;"
- whether a CLEC with a switch serving some existing customers is "capable of serving" other areas;[9]
- variation in costs and revenue opportunities in different areas;

[6] Alternatively, a state commission may make detailed findings that a batch hot cut process is not necessary to support competition in a specific market.
[7] *TRO* ¶ 495.
[8] *See TRO* ¶¶ 495-496.
[9] *TRO*, fn 1552. See also TRO ¶508.

- variations in line densities and other factors that may affect the scale and scope economies associated with switch deployment;
- "the capabilities of wire centers to provide adequate collocation space and handle large numbers of hot cuts"; and
- any other "variation in factors affecting competitors' ability to serve each group of customers."

In applying these factors, state commissions must adopt a framework that it will apply to all of its impairment analysis.

Q. HOW SHOULD THE COMMISSION DEFINE THE BOUNDARY OR "CROSSOVER" POINT BETWEEN MASS MARKET CUSTOMERS AND ENTERPRISE CUSTOMERS?

A. The Commission must also decide the "crossover" point at which multi-line DS0 customers are to be treated as part of the enterprise market.[10] The FCC suggests, and AT&T agrees, that the appropriate way to establish this threshold is "the point where it makes economic sense for a multi-line customer to be served via a DS1 loop."[11] Because the costs for DS0 and DS1 loops vary within states and these costs have a significant impact on the crossover analysis, the Commission may choose to make a "crossover" determination for each geographic market it defines.

In an earlier decision, the FCC assumed, on the basis of extremely limited information, that such a cutoff would be four DS0 lines for customer locations in

[10] *TRO* ¶ 497 & n.1376.
[11] *TRO* ¶ 497.

density zone 1 of the top 50 MSAs.[12] In the TRO, the FCC left that presumptive rule in place while state commissions make these determinations. However, the order provides that state commissions may establish a higher cutoff based upon evidence presented in the state impairment proceedings.[13] Based on my analysis, found below in section V, I conclude the threshold here in Washington should be approximately twelve (12) lines.

Q. WHAT IS THE SO-CALLED "TRIGGER" ANALYSIS, AND HOW DOES IT RELATE TO ACTUAL DEPLOYMENT OF FACILITIES?

A. The FCC has established two triggers -- a self-provisioning trigger and a competitive wholesale facilities trigger -- for states to apply in evaluating impairment in specific markets. The purpose of the mass market switching triggers is to allow a state commission to determine whether *actual experience* in a specifically defined geographic market establishes that CLECs in that market have been able to overcome the operational and economic barriers the FCC found in making its national finding of impairment.[14] In general terms, the *self-provisioning trigger* is met if three or more unaffiliated competing carriers are actively serving mass-market customers with their own local switches in the subject market.[15] The *wholesale facilities trigger* is satisfied if two or more competing providers, unaffiliated with each other or the ILEC, are using their own

[12] *TRO* ¶ 430 (citing UNE Remand Order). In Washington, this affects the Seattle-Bellevue-Everett MSA
[13] *TRO* ¶ 497.
[14] *TRO*, ¶¶ 498, 501, 504.
[15] *TRO* ¶ 501.

switches to actively provide wholesale local switching service to CLECs, and those CLECs are providing service to mass market customers in the specified market.[16] The wholesale providers must also be operationally ready and willing to provide wholesale switching to all CLECs in the designated market.[17]

Although the FCC found that there was little evidence that wholesale alternatives are generally available at this time, it established this trigger "in the expectation such alternatives may well develop in the future."[18]

Some of the key aspects of a trigger review will be to determine whether the "shorthand" evidence reviewed in connection with the test demonstrates that the carriers identified as trigger candidates "are currently offering and able to provide service, and are likely to continue to do so"[19] and whether carriers other than the ILECs are currently capable of "provid[ing] competitive pressures on pricing and terms."[20] A detailed discussion of the application of the triggers is provided in section VI *infra*.

If the Commission tentatively concludes that the self-provisioning trigger is satisfied in a geographic market, it should also examine whether there is still any "significant barrier to entry … such that service to mass market customers is foreclosed even to carriers that self-provision switches."[21] If the evidence shows

[16] *TRO*, ¶ 499.
[17] *TRO*, ¶ 499.
[18] *TRO* ¶ 504.
[19] *TRO*, ¶ 500.
[20] *TRO*, ¶ 505.
[21] *TRO*, ¶ 503.

that further competitive entry is not feasible, and that the presence of a few self-provisioning carriers does not in fact support a finding that the absence of unbundled switching would not impair competitive entry, then the State may identify such an "exceptional barrier to entry."[22] In such instances, the State should petition the FCC for a waiver to maintain the availability of local switching until the impairment is eliminated.

Q. PLEASE EXPLAIN THE "POTENTIAL DEPLOYMENT" TEST.

A. If the evidence of actual deployment does not establish a lack of impairment in a market, the Commission must then determine whether CLECs could potentially deploy non-ILEC switching to serve the mass market. There are three aspects of this review: assessment of actual switch use, operational impairment, and economic impairment, all of which must be viewed together in concert.[23]

Q. HOW SHOULD THE ACTUAL SWITCH USE ANALYSIS BE CONDUCTED?

A. In determining whether the market in question is suitable for "multiple, competitive supply" to serve mass market customers, the state commission should examine whether competitors are using their own switches to serve voice customers, either enterprise or mass market, in the market at issue.[24] If there are two wholesale providers or three self-provisioners of switching serving the voice *enterprise* market, *and* the state commission determines that these providers are

[22] *Id.*
[23] Id. ¶ 507.
[24] *Id.* ¶ 508.

operationally and economically capable of serving the *mass* market, this evidence should be given substantial weight.[25] As with the triggers, any competitive switch provider relied upon here must be unaffiliated with Qwest, and must be relying on its own switch.[26]

Q. PLEASE DESCRIBE "OPERATIONAL IMPAIRMENT."

A. The FCC found that "the operational and economic barriers arising from the hot cut process create an *insurmountable disadvantage* to carriers seeking to serve the mass market, demonstrating that competitive carriers are impaired without local circuit switching as a UNE."[27] Thus, the FCC recognized that competitors must have assured access to a "seamless, low cost" migration process before UNE-P can be eliminated as a means of serving mass market customers.[28] Accordingly, the Commission must examine whether Qwest has eliminated all operational barriers that limit CLECs' ability to serve mass market customers using CLEC or wholesale provided switching.[29] Operational barriers include, at a minimum, impediments that may affect CLECs' access to unbundled loops (including loops on integrated digital loop carrier ("IDLC"), collocation, and CLEC-to-CLEC cross connects, including cross connects necessary to support line split DSL services.[30] Critically, the Commission's decision may not be based merely on

[25] *Id*.
[26] TRO ¶ 509.
[27] *TRO*, ¶ 475 (emphasis added).
[28] *TRO*, ¶ 423.
[29] *Id*. ¶ 511
[30] *See TRO*, ¶¶ 512-514.

Qwest's assertions that it can or will perform adequately. To the contrary, mass-market migration processes must be proved to be both reliable and sustainable -- at commercially reasonable volumes and at commercially required levels of performance -- before CLECs can be forced to rely on them.[31] Therefore, Qwest must provide proof that demonstrates the extent to which it can scale its operations to meet mass market demand.

Q. PLEASE DESCRIBE "ECONOMIC IMPAIRMENT."

A. The Commission must also consider whether CLECs could economically provide service to mass market customers without access to unbundled local switching.[32] The economic impairment analysis is to be based "not on the experience of any actual entrant, but 'on the most efficient business model for entry.'"[33] To conduct its analysis, the Commission must look at all of the revenues the efficient CLEC would earn and all of the costs the CLEC would have to incur in determining whether it would be economical to enter the mass market in the absence of unbundled switching.[34] The CLEC's cost must be evaluated comprehensively, beginning with the "backhaul penalty" that a CLEC must incur to extend voice grade loops to its own switches, which is a direct outgrowth of Qwest's natural

[31] *TRO*, ¶469, fn.1437 ("We find, however, incumbent LECs' promises of future hot cut performance insufficient to support a Commission finding that the hot cut process does not impair the ability of a requesting carrier to provide the service it seeks to offer with at least some sort of unbundled circuit switching.").
[32] *TRO* ¶ 517.
[33] See *United States Telecom. Ass'n v. FCC*, D.C. Circuit Case Nos. 00-1012 and 00-1015, Petition for a Writ of Mandamus, filed by Verizon on August 28, 2003, at 9 (quoting *TRO*, ¶ 519) (emphasis in original).
[34] *TRO*, ¶ 520.

monopoly advantages.[35] Notably, as demonstrated in the accompanying direct testimony of Douglas Denney and Arleen Starr,[36] the cost disadvantage arising from this "penalty" is substantial, and alone demonstrates that CLECs are economically impaired without access to unbundled mass market switching.

Thus, it is not surprising that even if the analysis is broadened to include a "broad business case analysis that examines all likely potential costs and revenues,"[37] the result is the same – CLECs would be impaired without access to unbundled local switching for serving mass market customers.

Such a review must not only include all of the CLEC's other network costs (*i.e.*, network costs in addition to those required to extend customer loops to a CLEC switch), it must also include all of the CLEC's costs for customer care, marketing and customer acquisition,[38] which are generally higher than Qwest's costs for similar functions. Further, issues of scale, scope, anticipated "sunk costs" of a new entrant, ILEC first mover advantages, and absolute cost advantages must all be taken into consideration.[39] In addition, if the profitability of other services is to be considered,[40] the costs of providing those other services must also be included in the analysis. And critically, the FCC made it clear that the revenue to be considered in such an analysis is the average revenue of a typical mass market

[35] *See* Direct Testimony of Robert Falcone and Direct Testimony of Douglas Denney and Arleen Starr.
[36] *See* Direct Testimony of Douglas Denney and Arleen Starr.
[37] *TRO* n.1581.
[38] *TRO*, ¶ 520.
[39] *TRO*, ¶¶ 85-90.
[40] *TRO* ¶ 517.

customer.[41] As shown in the accompanying declaration of Michael R. Baranowski, applying all of these criteria to the markets served by Qwest in Washington, it is clear that CLECs remain impaired in Washington.

Q. PLEASE DESCRIBE WHAT IS MEANT BY "ROLLING ACQUISITION."

A. If the Commission finds that CLECs are impaired without access to mass market switching in a given geographic market, it must also determine whether the manual batch hot-cut process, as implemented, combined with the rolling availability of unbundled switching as an acquisition tool, would cure any and all of the impairment in that market if UNE-P were no longer available.[42] If so, the Commission should require the use of the rolling acquisition process. If such rolling access would not cure all of the remaining impairment, then unbundled switching must remain available as an unbundled network element.

Finally, if the Commission determines that CLECs are no longer impaired without access to mass market switching in a given geographic market, or if rolling access would resolve all existing impairment, the state must supervise a phased transition plan under which CLECs would convert the entire embedded base of UNE-P

[41] *Id*.
[42] As indicated by the FCC, when making determinations regarding a transition plan, the Commission should consider a CLEC's need for a reasonable period of time to deploy its facilities, hire, train and equip technicians, customer service and maintenance personnel, develop call related data base capabilities, and in general provide for an orderly transition subsequent to a finding that impairment no longer exists. *TRO* ¶529

customers to UNE-L within 27 months after a finding of no impairment in a particular market.[43]

Q. WHAT ARE SOME OF THE ISSUES SURROUNDING THE BATCH HOT-CUT PROCESS?

A. Because the FCC found that the current hot cut process is a principal source of operational and economic impairment for CLECs,[44] it also directed state commissions to approve and implement a "batch hot-cut process" that will make hot-cuts more efficient and reduce per line hot-cut costs.[45] Concurrently, the Commission must analyze and propose recommendations to address the operational limitations inherent in the hot-cut process.[46] The Commission must, therefore, take steps to overcome the economic and operational barriers associated with manual hot-cuts in an effort to remove such impairment, or at a minimum, attempt to alleviate the impairment ("we ask state commissions to take certain actions designed to alleviate impairment in the markets over which they exercise jurisdiction" TRO ¶ 486). In the unlikely case that Qwest proves CLECs are not impaired without access to unbundled switching in a specific geographic market, it must demonstrate that the manual batch hot-cut process in place has a

[43] *TRO* ¶ 531.
[44] *Id.*, ¶ 473 (finding national impairment based on the "combined effect of all aspects of the hot-cut process," which result in increased costs to competitors, lower quality of service and delays in service provisioning).
[45] *TRO* ¶ 460.
[46] *TRO* ¶ 489.

demonstrated ability to work at an acceptable scale and scope of transactions before unbundled switching is eliminated.[47]

Q. DOES THE TRO ALSO REQUIRE CONTINUING, OR ONGOING, REVIEW OF IMPAIRMENT ISSUES?

A. Yes. After the state commission completes the initial nine-month impairment review, the TRO contemplates further granular reviews to reevaluate whether CLECs remain impaired without access to unbundled local switching. Thus, it will be necessary for the Commission to adopt procedures that will govern such future reviews. In adopting such procedures, the Commission should establish a "quiet period" between the conclusion of the nine-month review and the commencement of any future review. Keeping in mind the nature of the detailed review a state commission will have just completed during the nine-month period, and the fact that neither the competitive market nor the operational and economic factors governing the impairment analysis will change overnight, the Commission is not compelled to engage in a continuous and never-ending series of impairment analyses. Thus, the Commission should establish a quiet period of at least 12 months, except upon an extraordinary showing of changed circumstances by Qwest. And in all events, the Commission's procedures should not make such reviews mandatory merely because Qwest seeks to overturn a prior ruling. Rather, the Commission should require Qwest (or other party challenging the

[47] *E.g., TRO* ¶ 527.

finding of impairment in any future review) to make a detailed, prima facie showing that establishes changed circumstances prior to initiating any future review. If the ILEC does not meet this burden, its request to reexamine impairment should be dismissed. If the ILEC does satisfy this burden, and the Commission commences a proceeding, future reviews must be completed within six months of the filing of a pleading submitted in accordance with the procedures Commission has established.[48]

III. THE PUBLIC INTEREST BENEFITS OF THE UNBUNDLED NETWORK ELEMENT PLATFORM ("UNE-P")

A. UNE-P PROVIDES TANGIBLE ECONOMIC BENEFITS TO CONSUMERS.

Q. WHAT WAS THE PURPOSE BEHIND THE PASSAGE OF THE FEDERAL TELECOMMUNICATIONS ACT OF 1996?

A. Congress enacted the federal Telecommunications Act to "promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid development of new telecommunications technologies."[49] Its centerpiece is a set of provisions designed to open local telecommunications markets to competition. The Act envisions three modes of competitive entry: (1) building competing networks in those limited instances where they are economically and technically feasible and obtaining interconnection from the incumbents, (2) leasing network

[48] *Id*. ¶ 526.
[49] Federal Telecommunications Act of 1996, Preamble.

facilities from the incumbent monopolies to provide a platform for competing services, or (3) reselling the incumbents' retail services.

The Act specifically recognizes that granting CLECs access to ILEC networks is essential to the development of competition in local telecommunications, because without such access, CLECs would have to replicate existing networks in order to compete, even in those markets where such duplication was clearly inefficient. Indeed, uneconomic duplication of facilities would result in higher costs for both the CLEC and the ILEC – costs that would necessarily be passed on to consumers through higher rates.

The FCC has also recognized that requiring replication of the ILECs' multi-billion dollar networks, built over many decades under low-risk, guaranteed rate-of-return regulations, as the only means of competitive entry into the local market "would likely delay market entry and postpone the benefits of local telephone competition for consumers."[50] In those instances where a CLEC happened to find it economically worthwhile to engage in replication, its

[50] First Report and Order, In re Implementation of the Local Competition Provisions in the Telecommunications Act of 1996; Interconnection Between Local Exchange Carriers and Commercial Radio Service Providers, FCC 96-325, 11 F.C.C.R. 15499 (rel. August 8, 1996) ("Local Competition Order"), at ¶ 378.

expenditures may waste social resources.[51]

Q. WHAT IS THE ROLE OF UNE-P IN FOSTERING AND DEVELOPING LOCAL EXCHANGE COMPETITION?

A. The continued availability of UNE-P, which allows CLECs to compete without replicating the entirety of the incumbent monopolist's network, is crucial to achieving the Telecom Act's goals for the majority of local telephone users that comprise the "mass market." As the FCC found in the TRO, the ability to obtain unbundled switching in combination with the ILECs' monopoly unbundled loops enable CLECs serving mass market customers to obtain ready access to such loops and avoid the substantial entry barriers associated with hot cuts.[52] And, as shown in the accompanying testimony**,** without UNE-P, CLECs also face a large "backhaul penalty" because, unlike the ILECs, CLECs must deploy a substantial infrastructure in order to extend ILEC mass market loops to CLEC switches.[53] Thus, if CLECs cannot lease switches and mass market loops in combination but are instead forced to deploy and use competitive switches to serve mass market customers, the result would be substantial operational and economic barriers to entry. Forcing CLECs to self-provision all their switching would place them at a

[51] *See, e.g.*, Douglas Lichtman & Randall C. Picker, *Entry Policy in Local Telecommunications:* Iowa Utilities *and* Verizon, 2002 SUP. CT. REV. 41, 52, 54 (2002) (discussing the view that unbundled access to network elements is justified "in instances where new entrants would otherwise provide their own elements but those duplicative elements would represent social waste"); *First Local Competition Order*, at ¶ 378 (observing that in areas where "the most efficient means of providing competing service [is] through the use of unbundled loops[,] preventing access to unbundled loops would either discourage a potential competitor from entering the market in that area … or cause the competitor to construct unnecessarily duplicative facilities, thereby misallocating societal resources").

[52] See TRO at ¶459.

[53] See Direct Testimony of Robert Falcone; see also TRO at ¶¶ 480-482.

severe competitive disadvantage relative to ILECs in the mass market.[54] Maintaining access to unbundled switching and UNE-P represents the only way to assure there will be effective competition to serve mass market customers.

Not surprisingly, whenever an incumbent confronts the same impairments that frustrate CLECs – that is, how to offer local service on a competitive basis as a new entrant – it reaches the same answer: UNE-P. For instance, SBC revealed during the review of its merger with Ameritech that its out-of-region entry strategy was premised on the use of network element combinations to serve the residential and small business market.[55] Similarly, in Pennsylvania, Bell Atlantic was ordered to file a plan to separate its operation into wholesale and retail affiliates. In that plan, Bell Atlantic (now Verizon) proposed to use UNE-P as its principal entry strategy.[56]

There can be no question that UNE-P is the key to developing and maintaining broad-scale local competition for mass market customers. Perhaps most significantly, UNE-P has shown a remarkable ability to bring local competition to underserved markets (such as residential and business customers with conventional phone requirements) while at the same time promoting innovation, accelerating the deployment of advanced data services, and providing a solid foundation for capital investment.

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[54] *See TRO* at ¶422.

[55] *See* CC Docket No. 98-141, SBC/Ameritech Merger Application, Kahan Aff. At para. 42 (July 24, 1999

[56] *See* Re Structural Separation of Verizon Pennsylvania Inc. Retail and Wholesale Operations, Pennsylvania Public Utility Commission, Docket No. M-00001353.

Q. DOES UNE-P PROVIDE TANGIBLE ECONOMIC BENEFITS TO CONSUMERS?

A. Most definitely. Because of UNE-P, the Federal Telecommunications Act, at long last, is beginning to generate significant benefits for mass market customers in the places where it is being widely implemented. As one Wall Street report recently noted, "… the U.S. consumer is getting a great deal … increased choice of providers, increased choice of offers and crucially falling prices … for the vast majority of Americans, in their capacity as telecom customers, the telecom market seems to be working pretty well."[57] Similarly, Banc of America Securities has noted that "[r]ising competition in the consumer wireline market has led to an explosion in the number of available plans from which consumers can choose … On the horizon, revitalized UNE-P deployments will bring more players into more states …."[58]

These benefits can be expected to grow substantially in the future – but only if UNE-P is permitted to continue. Restricting the availability of unbundled mass market switching now would eliminate those benefits and further entrench – and expand – the ILECs' monopolies.

UNE-P enables multiple competitors to obtain access to essential monopoly functionality at cost-based rates, and to compete in the retail functions of pricing,

[57] The Telecommunicator, Merrill Lynch Flash Note, September 26, 2003.
[58] Wireline Service Pricing: Assessing the Industry's Competitive Footing, Banc of America Securities, September 22, 2003.

packaging, and delivering telecommunications services to their customers. CLECs can – and do – design and offer packages that drive end user prices closer to cost and put downward pressure on the ILECs' prices. At the same time, CLECs' retail customer service operations can place substantial non-price competitive pressure on the ILECs as well, forcing the ILECs to improve their own retail operations and customer responsiveness. UNE-P thus produces enormous consumer benefits that would not otherwise be available.

A recent study in California has quantified the benefits to consumers from the availability of UNE-P in that state alone.[59] According to the study,

> Although economically feasible UNE-based competition for local telephone service has only been available for less than a year in California, the savings so far have been considerable. This is despite the continued dominance of SBC and Verizon in their territories. Some of the benefits have come from the new entrants lowering prices on high-margin services, others from the effective expansion of the local calling areas, and still others from the competitive responses of the incumbents.[60]

Using publicly available data, the study estimates that the savings to residential telephone subscribers in California for local service alone is already at least $189 million, on an annual basis**.**

The Michigan Alliance for Competitive Telecommunications (MiACT) has calculated similar benefits for consumers in Michigan. Specifically, MiACT estimated that lower wholesale rates, which resulted in increased competition,

[59] *See* Braunstein, *The Role of UNE-P in Vertically Integrated Telephone Networks: Ensuring Healthy and Competitive Local, Long-Distance and DSL Markets* at 7 (May 2003).
[60] *Id*. at 8.

saved Michigan consumers $72 million on phone bills in 2002, and could save consumers an additional $135 million this year.[61]

Perhaps most impressive is a recent report by the Consumer Federation of America (CFA), entitled "Competition at the Crossroads: Can Public Utility Commissions Save Local Phone Competition?" The CFA there estimates that as many as 30 million households have benefited from competition that has brought about discounted bundles of local and long distance phone service, while millions more have been able to choose alternative local service. Consumer savings from local telephone competition have mounted sharply in recent months to as much as $5 billion per year.[62] The study concludes, however, that

> The tremendous gains that competition and consumers have made recently will be short-lived if the incumbent carriers succeed in undermining UNE-based competition, and forcing weakened competitive carriers to build redundant telecommunications networks. If this happens, it will spell the end of local phone competition, and the real savings being enjoyed by consumers across the country will disappear.[63]

The fact that UNE-P is a *necessary* prerequisite to local competition is aptly demonstrated in Washington. Since June of 2001, UNE-P is the fastest growing CLEC market entry strategy among the strategies of resale, Centrex resale, UNE-P, and UNE-Loops. The growth of UNE-P lines in service in Washington since

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[61] TR State Newswire, "MiACT says consumers saved $72M on phone bills last year" (May 16, 2003).

[62] Consumer Federation of America, "Competition at the Crossroads: Can Public Utility Commissions Save Local Phone Competition?" at p. 7 (Oct. 7, 2003). This calculation does not include savings for consumers who have not taken bundles, but have switched providers.

[63] *Id*.

June of 2001 is over 113 percent.[64] By contrast, the number of resale lines in service in Washington in that same period has dropped by 56.5 percent, and the number of UNE-L lines has only grown 63.7 percent.[65] At the end of 2002, Washington consumers had 56,252 of their lines served via UNE-P.[66] During the four-month period from July through October, 2003, Qwest installed an additional 41,527 new UNE-P lines in Washington (an average of over 10,000 UNE-P lines per month).[67]

In fact, Qwest relies heavily upon the existence and proliferation of UNE-P to support its own case for the competitive classification of business service here in Washington.[68]

Thus, contrary to Qwest's rhetoric here, UNE-P provides "real" competition with "real" consumer benefits. For example, as UNE-P competition increased in its territory, Qwest was forced to offer lower rates and better service packages in response. The common elements of its competitive responses included lower rates, greater packaging of features, and reduced distance and/or usage rates. Qwest recently introduced a "best value" program in an attempt to offer its customers a better deal before a competitor does. In explaining the "best value" program, Qwest's senior vice president of consumer markets, Mark Pitchford,

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[64] Selected FCC Form 477 data as of June 30, 2001 and December 31, 2002.
[65] *Id*.
[66] Selected FCC Form 477 data, December 31, 2002.
[67] Qwest Performance Results, Washington, Checklist Format, November 2002-October 2003, November 20, 2003, PIDs OP-3B and OP-3C, pp. 84-86.
[68] *In the Matter of the petition of Qwest Corp. for competitive classification of basic business exchange telecommunications services,* Docket No. UT-030614.

stated, "in the competitive environment we're in, it's important for us to be proactive and let customers know when they can get a better deal."[69] In further explaining the "best value" program, it was reported:

> So what's the catch? Is Qwest hoping to persuade customers to buy more services that, in total, actually result in larger bills? No, Pitchford said. Rather, Qwest realizes its 25 million customers can and do receive offers from numerous competitors.[70]

Qwest was candid in reporting that it reacted to the presence of UNE-P with better packages and bundles when it stated:

> On the access lines, you know, there are the three factors that we got hit with. The first is UNE-P. If you look at the UNE-P for the quarter it increased substantially from prior quarters and about 100,000 (sic). Over what we experienced in – you know, that is quite a kickup and and (sic) *our reaction to that, I think, was a little slow on our packages. We did not get our unlimited package out until late May or sometime during May* we didn't really get the advertising to kick in until towards the end of the quarter in June, so the reality is that *our response to the UNE-P efforts on the part of MCI and AT&T I think was slow on the draw and we got hit pretty good in selected markets like Seattle and shame on us, but we have the unlimited packages out now the all you can eat and we have seen a substantial reduction in their ability to continue the trajectory that they were on*.[71]

Qwest has recognized that it needs to offer better and more innovative services and marketing practices to compete with CLECs offering UNE-P. In response to

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[69] *Denver-Based Qwest Launches Program Aimed at Helping Consumers Cut Costs*, Denver Post, November 3, 2003.
[70] *Id*.
[71] Richard Notebaert, Qwest Communications Inc., CEO 2Q03 Earnings Conference Call, September 3, 2003. (emphasis added)

an analyst's question on UNE-P trending in Qwest's region, Richard Notebaert responded:

> I tried to indicate in my opening remarks that you will see additional announcements from us over the next few weeks as we go into the selling season. If you think about us like would a retail outlet. We have some things that Pat Ingalls and the folks in our product will be putting out over the next few weeks to change some of the pricing and packages and I think that has potential, we will see how it does. The other thing is, one of the biggest comments we get from customers on our win back programs is, gosh, if we had known you had that package, all you could use, local and long distance, whatever, if we had know, we wouldn't have left. So, that indicates to us that our problem is we think with some more changes, we have got the right set-up, packages and bundles but we really haven't done as good a job as we should, my fault, in communicating it to customers and so, you'll see a change in summer of our advertising, you will also see us going the door hanger rout, *learning from competition. Doing a lot of things in a past a company like us would be nontraditional* and so, I think the communications as well as the changes in the packages are a big help.[72]

SBC also recognized that its decision to offer consumers and businesses better services was *directly linked* to the developing competition:

> "*It's absolutely in response to competition*," Ameritech spokesman Greg Connel said of the company's repackaged deals. "I wouldn't peg it to any one competitor. *It's in response to increasing competition in the market. We have to be responsive* to that and provide the best value we can."[73]

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[72] Richard Notebaert, Qwest Communications Inc., CEO, 3Q03 Earnings Conference Call, November 19, 2003. (emphasis added)

[73] *Ameritech Sets New Prices – Phone Company Unveils Service Packages in Bid to Hold Off Competitors Entering Local Markets*, Akron Beacon Journal, August 13, 2002 (emphasis added).

Similarly, other RBOCs have explained to their investors that they are being forced to innovate in *response* to UNE-P based competition:

> What happens is you lower the price [of UNE-P], there's a rush to get into those markets, the carriers take some share, it stabilizes, we fight back, and the customers realize it's a losing proposition for them, so they come back to us … some customers will go to the UNE carriers and we know that, but you won't have this constant drain of loss. So, I think that what you're seeing here is, depending on the state, state lowers the rate, we see a little bit of extra loss, then we stabilize it, we compete with it, you know, we have better service, we have better packages, so on and so forth. … [74]

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> The key strategy in the consumer market is to compensate for the loss of retail lines and customers to new technologies by increasing the revenue per line for our existing customer base, through new and bundled product offerings, single billing and excellent customer service.[75]

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> To compensate for the loss of revenues in our traditional business, we have focused on introducing new products and bundles to capture market share and retain customers with solid margins and good ROIC [Return on Invested Capital].[76]

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> Our new unlimited answers consumer plan has been a great success. Since launch, over one-third of our new long distance customers have chosen the unlimited plan.[77]

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> There wasn't much change in the cable competition or movement to wireless. And I think the reduction [in retail losses] is because of our aggressiveness in packages and our ability to deal with UNE-P

[74] Ivan Seidenberg, Verizon Chairman, 2Q03 Analysts Call, July 29, 2003
[75] Doreen Toben, Verizon CFO, 3Q03 Analyst Call, October 28. 2003.
[76] Randall Stephenson, SBC CFO, 2Q03 Analysts Call, July 29, 2003.
[77] Ronald Dykes, BellSouth CFO, 3Q03 Analysts Call, October 22, 2003.

> … I think we're having a huge impact on UNE-P with our bundles, our LD and our aggressive all distance pricing. [78]

Thus, it is clear that the ILECs would *never* have lowered prices or innovated in these ways unless they were facing UNE-P based competition, and they will have substantially fewer incentives to maintain those innovations if UNE-P competition is eliminated.

Q. HAVE COMMISSIONS IN OTHER STATES SUPPORTED THE CONTINUED AVAILABILITY OF UNE-P AT COST-BASED RATES?

A. Yes, most definitely. State commissions also recognize the critical importance of UNE-P. The Texas PUC has found "compelling the evidence that UNE-P is the *only viable market entry mechanism* that readily scales to varying sized exchanges to serve the mass market, while minimizing capital outlays and permitting a CLEC to gain a foothold. In particular, *UNE-P is the only viable option for providing competitive analog [voice-grade] local service to small business customers*."[79] The Texas commission found that, unlike resale, "UNE-P provides CLECs with a meaningful opportunity to differentiate their products and services to consumers," and "will also facilitate CLEC creation of innovative product offerings," which "continues the benefit of customer choice in service providers and service packaging to a large geographic segment of the population."[80] The

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[78] *Id*.
[79] TPUC Docket No. 24542, Revised Arbitration Award at pp. 87-88 (October 3, 2002) (emphasis added).
[80] *Id*. at 88.

FCC has similarly characterized the importance of UNE-P, telling the Supreme Court that "the UNE Platform has been *the most important vehicle for competitive entry* into local markets for residential and small business customers."[81]

B. UNE-P ALLOWS CLECs TO OFFER BUNDLED SERVICES, WHICH IN TURN IS NECESSARY TO PREVENT THE REMONOPOLIZATION OF LONG-DISTANCE BY THE ILECs.

Q. HOW DOES THE CONTINUED AVAILABILITY OF UNE-P RELATE TO A CLEC's ABILITY TO PROVIDE BUNDLED SERVICE OFFERINGS?

A. It is crucial. A fundamental market force in telecommunications is the emergence of one-stop shopping — consumers' desire to purchase "bundles" of telecommunications services from a single supplier. Recent press accounts put the number of consumers who have switched to one-stop-shopping bundles at close to 30 million – 12+ million for the competitors and 18+ million for the incumbents.[82] Qwest recognizes the competitive importance of bundles. Its CEO Richard Notebaert stated:

> In addition to service initiatives, we are focusing on leveraging a now complete bundled offering that includes DSL, wireless, video local and long-distance services. We continue to drive customer loyalty through these bundled offerings and competitive pricing. They are showing success. Package penetration increased again in

[81] Brief for Petitioners FCC and the United States, at 44, *Verizon Comm. Inc.* v. *FCC*, 122 S. Ct. 1646 (2002) (filed April 2001) (emphasis added).

[82] Consumers Federation of America, "Competition at the Crossroads: Can Public Utility Commissions Save Local Phone Competition?" at p. 7 (Oct. 7, 2003)

> the third quarter and we expect this to continue to grow as we launch exciting new offers over the next several weeks.[83]

Other ILECs agree, stating that they view bundling "as a driver of customer retention and customer longevity … full service satisfied customers tend to stay, they tend to be more resilient, and they do not – they are not affected by telemarketing calls from competitors …"[84]

If there is not effective competition for each element in the bundle, competition in all related telecommunications markets will suffer. The single most important element of any bundle -- indeed, the *compulsory* element of virtually any bundle -- is local phone service. As one BellSouth Executive recently stated: "It is all about keeping the connection with the customer, and to me, that is job one for us."[85]

Without local phone service, effective competition for many of the other services in the bundled package (including long distance or data service) is not possible. As consumers more and more frequently choose full-service providers to meet their telecommunications needs, CLECs must be able to offer ubiquitous local exchange service as easily as ILECs can offer long distance services, or competition in *both* markets will be jeopardized. This requires that CLECs have access to cost-efficient entry strategies with efficient and inexpensive (*i.e.*, electronic not manual) provisioning systems that can reliably accommodate large

[83] Richard Notebaert, Qwest Communications Inc., CEO, 3Q03 Earnings Conference Call, November 19, 2003.
[84] Ronald Dykes, BellSouth CFO, 2Q03 Analysts Call, July 23, 2003.
[85] Ronald Dykes, BellSouth CFO, 1Q03 Analysts Call, April 23, 2003.

volumes at a relatively small transaction cost, and that enable entrants to offer their services across an entire market footprint. UNE-P is the only mechanism that provides that opportunity.[86]

The necessity for local competition is demonstrated by recent experience in long distance. Now that the RBOCs have received long-distance authority throughout their service areas, they are rapidly acquiring significant market share in the long distance market. Qwest's CEO recently stated:

> In long distance, we continue the strong growth that we have has so far. In the local service area, we added long distance to 572,000 lines in the quarter bringing our total to nearly 1.7 million customers. Consumer market share climbed to 20% in the eight states we launched in January, that's up from 14% in the second quarter so, you can see the trajectory we are on and the great news is in the five states launched subsequently, we are running at a growth rate equal to the first eight states and we expect to get the final regulatory approvals to add the final state in the union, the final state in our service area Arizona in early December.[87]

At the end of September, 2003, Verizon had 15.9 million long distance lines, SBC had 11.5 million, and BellSouth had 3.4 million. As a percentage of their retail lines, this equates to 28.6 percent for Verizon, 24.1 percent for SBC, and 16.2 percent for BellSouth, for an average long distance share of almost 24.7 percent across all three of these Bell companies.[88] It is informative to recognize that

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[86] The TRO itself, in requiring that long distance revenues be included in the economic impairment business case, highlights the need for carriers to be able to compete in both the local and long distance markets.

[87] Richard Notebaert, Qwest Communications Inc., CEO, 3Q03 Earnings Conference Call, November 19, 2003.

[88] Note that market share as a percent of customers rather than lines will be higher, because many customers have more than one local line.

Qwest has achieved a market share of 20 percent in little over a year of offering long distance service and in that short time has surpassed BellSouth's market share and is closing on the long distance market shares of RBOCs that have been offering long distance services for three or four years. Perhaps even more important, all of the Bells continue to maintain or accelerate their very significant growth rates in line increases in long distance. From the second to the third quarters of 2003, Qwest increased the number of its long distance access lines by 50.7 percent.[89] Other RBOCs reported similar significant growth in their access lines. For 3Q03, Verizon reported a 35.9 percent increase in lines over 3Q02, SBC reported a 94.9 percent increase, and BellSouth reported a 726.9 percent increase.[90]

Verizon is now the third largest long distance provider nationally, and reports that it has a market share of about 40 percent in its existing customer base, and as high as 50 percent in some states.[91] In the states in which it operates, Verizon has gained, in just a few years, a market share substantially greater than that which

[89] Qwest Press Release, *Qwest Communications Reports Third Quarter 2003 Earnings Per Diluted Shared of $1.05*, November 19, 2003.

[90] Ronald Dykes, BellSouth CFO, 3Q03 Analysts Call (October 22, 2003); Doreen Toben, Verizon CFO, 3Q03 Analyst Call (October 28, 2003); Randall Stephenson, SBC CFO, 3Q03 Analysts Call (October 21, 2003). Rates vary between the Bells primarily as a result of how recently they received 271 relief in one or more of their states. Verizon has had 271 relief in many of its states for a longer period than either SBC or BellSouth.

[91] Doreen Toben, Verizon CFO, 3Q03 Analyst Call (October 28, 2003). As noted supra, long distance market share as a percentage of Verizon's customers will be higher than LD as a percentage of its lines because many customers have more than one line.

MCI and Sprint *together* took more than *two decades* to achieve.[92] Indeed, in Texas SBC currently has greater than 50 percent of the long distance market, and Verizon, SBC and BellSouth are each predicting that they will soon achieve a long distance market share of 60 percent of customers in the states in which they operate.

In an environment where customers clearly desire packages of services, the ILECs' market power over local service provides them huge advantages in related markets as well. According to a report by the PACE Coalition, the recent experience in bundled service offerings indicates "the incumbent RBOC is emerging as the dominant provider of bundled-services, with most of the competition that it faces – more than 80 percent in fact – coming from competitors using UNE-P … the RBOC is likely to remain dominant, even if the same entry and wholesale options that exist today are retained. The RBOCs' share of the bundled-services market stands near 70 percent when measured against other traditional wireline providers."[93]

The potential harm to emerging competition in long distance was clearly contemplated at the time of the Bell System divestiture, and was part of the rationale behind divesting AT&T and the Bell companies and barring the Bell companies from offering long distance services. Now that the Bells have been

[92] At the end of 1996 (approximately 20 years after MCI first introduced its Execunet Service), MCI and Sprint together had 21.9 percent of the market. Source: *Long Distance Market Shares* (4th Quarter 1998), Federal Communications Commission, March 1999.

[93] Measuring RBOC Dominance in Bundled Services: The Progress of Competition Under the New Social Contract. PACE Coalition, November 2003. (www.pacecoalition.org)

allowed to offer long distance services, they once again have an incentive to harm long distance competition. That it is again becoming a reality is demonstrated by the following ILEC statistics: 44 percent of Verizon's retail customers have two or more services from Verizon, either long distance or DSL or both, in addition to local service.[94] As SBC has said, "Bundling drives retention," with 36 percent of SBC's consumer retail lines having at least one other service in addition to local--long distance, DSL or wireless.[95]

It is thus obvious that with the ILECs' ability to offer competitive services (such as long distance and Internet access) combined with their local services, they are positioned to recapture the position they had prior to divestiture when they operated as fully integrated monopolies.

Q. HOW REAL IS THE THREAT OF REMONOPOLIZATION?

A. Remonopolization is not speculation, it is extrapolation – and the resulting losses in competition, efficiency and innovation are a very real threat to consumers and the American economy. It is a bitter irony that the reason ILECs are able to so quickly penetrate the long distance market is because they have available the long distance equivalent of UNE-P – willing wholesale providers that offer end-to-end transmission and long distance switching at cost-based rates, and a fully automated provisioning system (the "PIC change" process) that rapidly, inexpensively and reliably migrates customers. The only alternative to

[94] Ivan Seiderberg, Verizon CEO, 3Q03 Analyst Call (October 28, 2003).
[95] Randall Stephenson, SBC CFO, 3Q03 Analysts Call (October 21, 2003).

remonopolization is a vibrantly competitive, local mass market. And, as the experience in Washington demonstrates, that goal is only *possible* through widespread and affordable access to UNE-P.

C. THE AVAILABILITY OF THE UNE PLATFORM PROMOTES, RATHER THAN DISCOURAGES, INVESTMENT IN FACILITIES.

Q. DOES THE AVAILABILITY OF THE UNE PLATFORM PROMOTE OR DISCOURAGE CLEC INVESTMENT IN FACILITIES?

A. ILECs have repeatedly claimed that the availability of UNEs impedes the development of competition, because the availability of UNEs at TELRIC rates discourages investment in facilities-based alternatives that would promote more robust forms of competitive entry. Thus, they claim that a rational CLEC (given the choice) will virtually always compete through use of cost-based UNEs rather than build alternative facilities, because it can "free-ride" on the ILEC's investment rather than taking the greater risk of building its own network. The ILECs also claim that the availability of UNEs discourages them from upgrading their own networks, because any benefits derived from those investments would have to be shared with their competitors.

Both claims are legally, theoretically and factually wrong. As a general rule, carriers can (and will) only invest in facilities when they can expect those facilities to carry enough traffic to justify their cost. Unbundling rules enable CLECs to build up their customer base first, then to invest in facilities, because

then those facilities can be efficiently utilized to generate an adequate return. This principle is not only firmly established by economic theory, it is also borne out by recent marketplace experience. Indeed, much of the extraordinary telecom facilities investments of the late 1990s and early 2000s were the result of investors being lured by the hype of the Internet Bubble, abandoning more rational investment strategies in favor of the "build it and they will come" approach. When the extraordinary traffic demand projections used to justify these investments failed to materialize, investment capital evaporated, and a great many carriers were forced into reorganization or liquidation.

Q. WHAT EFFECT DOES THE AVAILABILITY OF THE UNE PLATFORM HAVE ON ILEC INVESTMENT?

A. A well-structured and rigorously enforced UNE-P requirement has little or no adverse impact on a Bell's incentive to invest. Indeed, the Supreme Court found that UNE availability stimulates ILEC investment.[96] Frankly, the Bells' threat to stop investing unless they are granted the self-serving regulatory relief they seek is the corporate equivalent of "cutting off your nose to spite your face." Such behavior would eventually ensure only that the Bells became less and less competitive as they failed to invest to innovate and reduce costs. FCC Commissioner Martin recognized the folly of the Bell's arguments when he commented:

[96] *See Verizon Communications*, 535 U.S. at 516-17 ("[I]t suffices to say that a regulatory scheme that can boast such substantial competitive capital spending over a 4-year period [$55 billion] is not easily described as an unreasonable way to promote competitive investment in facilities.").

> For years incumbents have been saying "Deregulate our provision of broadband, and we will invest." But now that broadband deployment is deregulated, they are saying "Deregulate our provision of our historically monopoly service – basic phone service – and we will invest in broadband." They essentially are saying, "Free us, and we will invest."
>
> We have responded, "Invest, and you will be free."
>
> As the Commission faces regulatory decisions in the coming year, I will try to view them through the following prism. Are the incumbents seeking the opportunity to invest in their network architecture, provide new services, and receive the benefits of that new investment? If so, I think the Commission should be encouraging. Indeed, I again support many of the premises of Tom Tauke's speech this week at the Schwab Investment conference, calling for deregulation of broadband. While I am not sure that there is the same level of confusion about what we meant in recent orders, I agree we should address these issues. But, to the extent incumbents are seeking to get out of regulations that apply to their legacy infrastructure or to diminish competition for legacy voice services that Congress expected, I will be less inclined.[97]

On the other hand, restrictions on unbundling actually diminish ILECs' incentives to build. Studies show there has been more facilities investment by both CLECs and ILECs in states where there is effective UNE-P competition than in those states where there is not. Moreover, the experience of other countries supports the same conclusion: the Organization for Economic Cooperation and Development ("OECD") concluded, after an extensive survey of marketplace evidence in 30 countries, that "opening access networks and network elements to competitive forces increases investment and the pace of development," and that,

[97] Remarks of Commissioner Kevin J. Martin, 21st Annual Institute on Telecommunications Policy & Regulation, December 5, 2003.

by contrast, there is "no evidence . . . to substantiate" the claim that unbundling "discourage[s] investment in new infrastructure."[98]

Q. BUT DOESN'T THE AVAILABILITY OF UNE-P SERVE AS A "CRUTCH" TO CLECs, PREVENTING THEM FROM INVESTING IN INFRASTRUCTURE?

A. Under the ILECs' view, (1) if UNEs (especially unbundled local switching) were not available CLECs could successfully build and compete with alternative facilities today to a greater extent than they are currently doing; (2) CLECs are declining to invest because UNEs offer an easier and more attractive option; and (3) the way to accelerate the development of alternative networks is to remove the UNE "crutch" and force CLECs to "stand on their own feet."

The ILECs are wrong on all counts. Indeed, this theory is premised on patently erroneous assumptions that are contradicted by all available evidence. CLECs will deploy their own facilities whenever and wherever it is economically and technically feasible to do so, whether or not UNEs are available as an alternative. The availability of UNEs helps to make a broader range of facilities investments feasible, and will not discourage such investments when they are feasible.

The great irony of the ILECs' argument is that they have no economic reason to promote more facilities-based competition to their monopolies. With UNE-P, ILECs are able to recover the costs of their network investments plus a reasonable

[98] *The Development of Broadband Access in OECD Countries*, OECD Report, pp. 4, 15 (Oct. 29, 2001).

profit. With substantial CLEC facilities-based investment, ILECs would earn no return off of the network investments that were used to serve their former customers and they would face a substantial amount of stranded plant. Both ILECs and CLECs understand that the greatest promise for competition, and the greatest threat to the ILECs' existing monopolies, will come from facilities-based alternatives in local markets, just as it did in the long-distance market. That is why ILECs oppose, and CLECs support, the broad availability of UNEs – because both sets of carriers recognize that UNE availability is essential to promote facilities deployment. That is the teaching of both basic economics and marketplace experience.

Q. CAN YOU POINT TO ANY ECONOMIC PRINCIPLES TO SUPPORT YOUR VIEW?

A. Basic economic principles show that the ILECs' suggestion that the availability of UNEs might discourage CLECs from investing in their own facilities is nonsense. First, reliance upon UNEs places CLECs at a substantial cost disadvantage even when (as is often not the case) UNE rates have been properly set under TELRIC. While CLECs that use UNEs theoretically pay the same costs that the ILEC incurs in using the element, plus the same *pro rata* contributions to universal service support mechanisms, they face a series of additional costs that the ILEC does not incur.

For example, CLECs that use network elements face higher costs than the incumbent, because the incumbents lack any incentive to cooperate with their competitors, and indeed have extensive opportunities and incentives to discriminate against them. These transaction costs (in legal, regulatory and business settings) are incurred to enforce the nondiscrimination requirements of the federal Act. CLECs also have higher unit marketing costs (and thus tighter margins) because they must pry customers away from the incumbent LEC and often must price below the incumbent in order to do so.[99] CLECs further face the risk that, if they ever show signs of making substantial competitive progress, the incumbents assert their cost advantage and price their exchange and exchange access services at levels that limit, or altogether preclude, effective CLEC mass market entry.[100] CLECs also face the risk that the essential regulatory requirements on which their core business plans depend can be fundamentally modified or eliminated merely because the composition or philosophy of regulatory bodies has changed.[101]

By contrast, when CLECs use their own facilities, they acquire control over their costs, service offerings, and the sensitive information regarding their entry plans. Moreover, they detach themselves from reliance on their competitors. In such

[99] See TRO, fn. 297.
[100] Id., para. 83.
[101] All of these disadvantages exist *on top of* additional disadvantages that impose greater risks and higher capital costs on CLECs than the incumbent.

cases, if the economics are also right, they may have a long-term prospect of competitive success.[102]

The reality is that UNE-P competition generally occurs only in circumstances in which the only alternative for consumers is no competition at all – principally because substitution of alternative CLEC facilities creates substantial economic and technical entry barriers. Thus, if access to critical UNEs such as unbundled switching is denied, CLECs will *not*, as the ILECs publicly argue, quickly shift to serving those customers through the use of their own facilities. Rather, CLECs will – and the ILECs well know – generally be compelled to stop serving those customers altogether. Thus, elimination of UNE-P would not spur facilities investment – it would hinder that investment.

Q. IS YOUR VIEW ALSO SUPPORTED BY EVIDENCE IN THE MARKETPLACE?

A. Yes. All these points are abundantly confirmed by marketplace evidence. As noted supra, requiring the monopoly Bells to provide UNEs to their competitors at nondiscriminatory, cost-based rates is effectively the same process that

[102] *UNE Remand Order*, ¶ 112 ("competitive LECs prefer to use their own facilities or alternatives outside the incumbent's network when they are able to do so, in order to reduce their reliance on a primary competitor," to avoid "disclos[ing] details about their customers to their chief competitor," and to "ensure the quality of their service and to offer products and pricing packages that differentiate their services from the perspective of end users"); *Cf.* TRO n. 1365 ("We found significantly more probative the evidence that in areas where competitors have their own switches for other purposes (e.g., enterprise switches), they are not converting them to serve mass market customers and instead relying on unbundled loops combined with unbundled local circuit switching. Given the fixed costs already invested in these switches, competitors have every incentive to spread the costs over a broader base. Their failure to do so bolsters our finding that significant barriers caused by hot cuts and other factors make such entry uneconomic.").

successfully -- but gradually -- led to facilities-based competition in the long-distance market. Before competitive long-distance service was authorized, the long-distance market had been regarded as a natural monopoly. But that market developed into a competitive one as entrants such as MCI and Sprint first used resale to acquire a customer base over a number of years, then gradually built out their networks, and eventually – after decades of effort – became facilities-based competitors. Those resale opportunities produced enormous consumer benefits, both in the short run (while the new entrants still acted principally as resellers) and in the long run, once they completed their own networks. If, however, that process had been cut short after only a few years – because, for example, the Bell System had persuaded policymakers that competitive resale offerings were not "real" competition, and that disallowing resale was the way to encourage MCI and Sprint to build the facilities necessary for "real" competition – then the long-distance market would likely still be a monopoly today.[103]

Two other elements were critical to the development of long-distance competition, and are likewise instructive for the Commission's efforts to foster comparable levels of competition in local markets. First, "equal access" permitted customers to change long-distance carriers using efficient electronic processes that did not create any of the delays, costs, and outages associated with the manual hot cut process. Establishing an electronic means of loop access

[103] Moreover, even today, long-distance competitors are not full "facilities-based carriers," for they remain dependent on the ILECs' bottleneck local facilities to connect to customers.

would generate the same type of benefit in today's local market. Second, the local Bell operating companies were excluded from providing long-distance service, so they had no incentive to impede competition among long-distance carriers -- and, indeed, every incentive to encourage long-distance competition and thus increase access revenues. That situation is obviously not applicable today. Indeed, now that the RBOCs are ubiquitously allowed to provide long distance service, they are actively using their ability to sell bundles to slow CLECs' ability to win (or retain) their local customers. And, of course, the ILECs are offering long distance services via a complete use of the network facilities of the underlying wholesale provider, the very method they seek to prevent new entrants from using to provide competitive local service.

The more recent history of CLEC investment likewise refutes any notion that reduced UNE availability correlates with increased CLEC facilities investment. For example, AT&T has invested heavily in facilities in states such as New York and California, where AT&T has made extensive use of UNE-P to provide service to customers. Most probatively, the marketplace evidence of the last six years establishes that CLECs today – like the long-distance entrants of prior years – will build wherever and whenever there is a basis for them to believe it will be economic to do so.

CLECs have made massive investments in facilities. Indeed, these investments are substantial enough that even the Supreme Court has dismissed the argument

that the availability of TELRIC-priced UNEs impedes facilities-based competition:

> The entrants have presented figures showing that they have invested in new facilities to the tune of $55 billion since the passage of the Act (through 2000)…. The incumbents do not contradict these figures, but merely speculate that the investment has not been as much as it could have been under other ratemaking approaches, and they note that investment has more recently shifted to nonfacilities entry options. We, of course, have no idea whether a different forward-looking pricing scheme would have generated even greater competitive investment than the $55 billion that the entrants claim, but it suffices to say that a regulatory scheme that can boast such substantial competitive capital spending over a 4-year period is not easily described as an unreasonable way to promote competitive investment in facilities.[104]

In fact, the problem in the CLEC sector has not been *reluctance* to invest in facilities, but excessive *enthusiasm* in doing so. The "build it and they will come" approach was a sweeping failure. A large percentage of the CLEC sector has petitioned for bankruptcy protection or been liquidated in bankruptcy. Many of them are CLECs that self-provisioned switches and found themselves unable to fill their switch capacity – such as e.spire, ICG Communications, Global Crossing, McLeod USA, Mpower, Adelphia Business Solutions, Allegiance Telecom, Focal Communications, ITC, Network Plus, WorldCom and XO Communications. Of the three major data LECs, two (Rhythms and NorthPoint) are out of business, and the third (Covad) restructured after a Chapter 11 filing.

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[104] *Verizon Communications*, 535 U.S. at 516-17.

Given the sheer numbers involved, the wave of CLEC bankruptcies and liquidations cannot be explained away as a function of individually "bad" business plans, or of "poor management" in particular companies. To the contrary, many CLECs that were identified as having sound plans and strong management suffered the same fate. Allegiance Telecom, McLeodUSA and XO Communications, for example, were frequently identified by analysts as recently as 2001 as survivors with experienced leadership or strong management. The problem has been plainly systemic. The industry-wide collapse after 2000 reflects the fact that many CLECs made the *mistake* of investing in facilities *before* they had acquired enough customers to fill those facilities with enough traffic to generate the revenues needed to make them profitable.

In Washington, the data also show that large-scale use of UNE-P did not reduce the amount of CLEC investment in facilities. **Exhibit JFF-2** is a chart showing the number of resale, UNE-L and UNE-P lines in service in Washington from December of 1999 until the end of 2002.[105] Qwest did not report any UNE-P lines in service until June 2001. As can be seen in Exhibit JFF-2, the number of CLEC lines served via UNE-P has steadily increased since June of 2001. If one believed that the advent of UNE-P would result in CLECs abandoning UNE-L (facilities-based entry) for UNE-P then one would expect the UNE-L lines in service to start decreasing as of June of 2001. An examination of Exhibit JFF-2

[105] Selected FCC Form 477 Data as of December 31, 1999, June 30, 2000, December 31, 2000, June 30, 2001, December 31, 2001, June 30, 2002 & December 31, 2002.

shows that instead of decreasing, the use of UNE-L lines has steadily increased. Exhibit JFF-2 shows that as of June of 2001, it is the number of resale lines that have steadily decreased. The empirical evidence in Washington shows that CLEC use of UNE-P decreases not UNE-L usage, but resale usage.

Q. WHAT DOES ALL THIS MARKET EVIDENCE SHOW?

A. The market evidence teaches at least four centrally important lessons here. *First*, CLECs do not need additional incentives to invest in facilities. Rather, they will strain to do so – and err on the side of doing so – rather than use UNEs whenever they believe the economics of investing are even close.

Second, the sound business model that successfully brought competition in the long-distance market has not changed: carriers still need an opportunity to grow into markets before they will be able to successfully build and use alternative facilities.

Third, if facilities investment occurs prematurely, either because the market or the regulatory context precludes them from filling their facilities with sufficient traffic, the result will not be more facilities-based competition, but more business failures by facilities-based competitors and less competitive choices for consumers.

Fourth, the capital markets, fresh from recent experience, will not fund further CLEC investment unless the economic case for doing so is especially compelling.

Thus, any suggestion that CLECs or their potential investors would be encouraged to commit more funds to building facilities if access to UNEs is withheld is either naïve or disingenuous, for it completely fails to appreciate that investment decisions are necessarily driven by entirely different considerations. Those considerations – in particular, the overriding superiority of providing competitive service through alternative facilities rather than UNEs – means that the availability of UNEs will not deter CLEC investments that are otherwise economic.

A recent study by the Phoenix Center confirms these conclusions.[106] PHOENIX CENTER POLICY BULLETIN NO. 4 examined the FTA's general effect on investment by telecommunications firms. Using publicly available government data on investment by telecommunications firms, Phoenix Bulletin No. 4 quantifies the substantial and sustained increases in investment by telecommunications firms immediately following the 1996 Act and continuing through 2001. Those statistics indicate that the 1996 Act led to an additional *$267 billion* in telecommunications investment from 1996 through 2001. This evidence is completely consistent with the conclusion that the 1996 Act increased capital spending in the telecom sector. Taken together, history demonstrates that the ILECs' theory of incentives is exactly backwards. UNEs do not *discourage* investments in facilities; they *enable* such investments, making effective

[106] PHOENIX CENTER POLICY BULLETIN NO. 4: *The Truth About Telecommunications Investment* (June 24, 2003) (available at http://www.phoenix-center.org/PolicyBulletin/PolicyBulletin4Final.pdf).

competition possible. Similarly, a study on telecommunications investment since the FTA concluded, "unbundling of ILEC networks promotes competition, and thereby stimulates investment in telecommunications infrastructure by incumbents and entrants alike."[107] In this study, the authors examined the theories that: 1) UNE-P discourages CLEC and ILEC investment in facilities and 2) UNE-P encourages CLEC and ILEC investment in facilities. After examining both theories, it was concluded, "both the theoretical, and especially the empirical analysis provide a strong refutation of the ILEC argument that mandatory unbundling provisions deter ILEC and CLEC investment."[108]

Q. HOW WILL GRANTING NEW ENTRANTS ACCESS TO UNEs INCREASE THE ILECs' INCENTIVES TO UPGRADE THEIR NETWORKS?

A. The second half of the ILECs' incentives theory – that existing unbundling obligations impair their own incentives to invest in network facilities – is equally baseless. As a preliminary matter, it is not reasonable to expect that Qwest or any other ILEC would base investment decisions on unbundling demand, when wholesale lines for Qwest constitute only 8.7 percent of Qwest's total access

[107] *Stimulating Investment and the Telecommunications Act of 1996,* Robert D. Willig (Professor of Economics and Public Affairs, Princeton University), William H. Lehr (Research Associate, Center for Technology, Policy and Industrial Development and Associate Director, MIT Research Program on Internet & Telecoms Convergence; Massachusetts Institute of Technology), John P. Bigelow (Economist, Princeton Economics Group), Stephen B. Levinson (Economist, formerly with AT&T), October 11, 2002, p. 1.
[108] *Id*.

lines,[109] and the "Big Three" Bells only constitute 11 percent of total business and consumer lines.[110]

While the Bells have sought to pin the cause of their shrinking capital expenditures in recent quarters on unfavorable regulatory conditions, in reality these reductions have largely been driven by considerations typical of any capital budgeting process. As a general rule, capital budgets are determined as a percentage of anticipated revenues and other demands for cash flow, such as dividends and debt management. A number of forces have converged to put pressure on the Bells' cash position, including generally weak economic conditions, pressure on prices from increased competition, migration of traffic to competing technologies, and a shift in the service mix from high margin local services to lower margin long distance and broadband services.

Indeed, of the 1.8 million retail lines lost (on a base of 126.6 million retail lines) by the "Big Three" Bells between the second and third quarter of this year, less than half (840,000) were due to UNE-P (or resale) competition. Notably, a significant share of these non-UNE losses were actually lines migrating to other services offered by the Bells. As SBC recently noted,

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[109] Qwest Press Release, Qwest Communications Reports Third Quarter 2003 Earnings Per Diluted Share of $1.05, November 19, 2003, Attachment D, (available at http://www.quest.com/about/media/pressroom/attachments/3Q03AttachmentD.pdf.

[110] As of September 30, 2003, BellSouth, SBC, and Verizon had 14.8 million wholesale lines (resale and UNE) out of a total of 139.6 million local business and consumer lines (including ISDN lines, but excluding digital data services such as DS0, ADSL, DS1, and DS3 and higher.

> …[O]ne point that we don't want to overlook and has not been said is *we are driving some of this access line reduction ourselves with an increase on the DSL side*. And that's a good thing for us. And that's important to remember *the disconnect rate is not as bad as it appears* because we are moving some of that into DSL. We are also moving some of it to our wireless company, which is a good thing. And so you must be careful when you look at total voice disconnect, something that is going into other lines.[111]

The upshot is that the Bell's "losses" are unlike competitive losses in most other industries. For example, whereas a customer lost in the airline, automobile or trucking industry is likely to flow directly to the bottom line, the Bells' losses are in large measure nothing more than a change in service mix. The Bell's continue to derive revenues and contribution to costs from a vast majority of these "lost" customers, and as competition continues to drive monopoly margins out of the local business, the Bell's will become even more agnostic as to which services they migrate to – as long as they stay on the Bell network in one fashion or another.

A study by Morgan Stanley found that historically the Bells have reinvested "roughly 19% of revenues" in capital projects. Significantly, the report doubted "whether the Bells could spend greater capital in their businesses even if they wanted to," arguing: (1) long distance is not a capital intensive *business since the Bells lease wholesale capacity from interexchange carriers* rather than build their own networks, (2) most of the Bell's DSL infrastructure investment has already been made, and (3) there is little need for additional Bell switching capacity due

[111] Randall Stephenson, SBC CFO, 2Q03 Analyst Call, July 24, 2003.

to access line declines. It predicted that fiber spending would be limited to current budgets, but could possibly be accelerated based on current tax incentives that will expire in 2005.[112]

Notably, some ILECs, as well as prominent analysts in the investment community, disagree with the claim that UNE-P lessens investment incentives by the ILEC. For instance, Ivan Seidenberg, the Chairman of Verizon, has explained that phasing out UNE-P would *not* increase his company's capital expenditures.[113] Similarly, JP Morgan has advised its clients that even if UNE-P were eliminated, such a ruling "…should have little to no impact on carrier spending at the large integrated equipment vendors" such as Lucent and Nortel.[114]

In fact, the evidence is to the contrary: the availability of UNEs provides ILECs with powerful incentives to upgrade their local networks. That is because UNEs enable CLECs to deploy their own facilities, which in turn creates the greatest possible incentive for ILEC investment and deployment. If anything, the availability of UNE-P *increases* ILEC incentives to build because UNE-P is a precursor to facilities entry by CLECs.

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[112] Telecom Services: To Spend or Not To Spend, That is the Taxing Question. Morgan Stanley, October 16, 2003

[113] *Seidenberg: UNE-P Phaseout Won't Spur Immediate Boost In Verizon's Spending*; Telecommunications Reports, February 4, 2003.

[114] JP Morgan, Communications Equipment Advisory, January 16, 2003.

This trend is also confirmed by a recent study by the Phoenix Center.[115] Its Policy Bulletin No. 5 concludes that the RBOCs invest significantly *more* in states where UNE-P competition is further developed. Using publicly available FCC data, the study found a *positive* relationship between UNE-P competition and BOC average net investment. According to the study, each UNE-P access line increased BOC average net investment by $759 per year, or about 6.4 percent per year in the aggregate. While BOC net investment fell in general by about 7 percent in 2002, investment dollars *were more heavily allocated to states with greater levels of UNE-P competition*, and this additional investment offsets the total decline in investment by about 50 percent. Notably, other forms of competitive entry, such as UNE-L and Total Service Resale, had no statistically significant effect on BOC investment.

In short, an examination of the data shows that, if anything, the possibility of UNE-based entry in a state *increases* the ILECs' incentives to invest in additional telecommunications plant in the state.

[115] *See* Phoenix Center Policy Bulletin No. 5, Competition and Bell Company Investment in Telecommunications Plant: The Effects of UNE-P (July 9, 2003).

IV. DEFINING THE GEOGRAPHIC MARKET FOR MASS MARKET UNBUNDLED LOCAL SWITCHING

Q. WHAT IS THE PURPOSE OF THE "GEOGRAPHIC MARKETS" THAT ARE THE SUBJECT OF THIS PHASE OF THE PROCEEDING?

A. In the TRO, the FCC asked that state commissions determine whether the conditions in their state would warrant a reversal of the FCC's finding of national impairment.[116] As part of the State's review of whether there are any "exceptions" to the national finding of impairment, the TRO describes an "actual deployment" test (i.e., a trigger analysis, which is best thought of in terms of an "actual *competition*" test) and, if requested by the ILEC, a "potential deployment/competition" analysis. In order to conduct either analysis, the state must determine the geographic area in which it will conduct its examination. The "geographic markets" that the Commission seeks to establish here are best viewed as "impairment evaluation zones," for that is the singular purpose to which they will be put.[117] This is not the same exercise as defining a market as an economic abstraction; its sole purpose is to facilitate a state commission's evaluation of the extent of competition made possible with access to a network element, and to *contrast* that competition to the competition that would result if

[116] TRO ¶ 516.

[117] See, for instance, ¶ 495: "State commissions must first define the markets in which they will evaluate impairment by determining the relevant geographic area to include in each market." Defining the geographic area from the perspective of impairment is exactly how the FCC drew the relevant geographic markets for loops and transport (footnote 1536, emphasis added).

access to that element were denied.[118] By comparing the competitive profiles of alternative entry strategies (for instance, by contrasting the competitive profiles of UNE-P to UNE-L), the Commission can evaluate whether *measures* of actual competition (i.e., triggers) -- or *models* of potential competition (i.e., the potential deployment)[119] – demonstrate that the national finding of impairment is not appropriate for the state of Washington.

Q. HOW DOES THE CONCEPT OF "GEOGRAPHIC MARKET" FACTOR INTO THE IMPAIRMENT ANALYSIS FOR UNBUNDLED MASS MARKET LOCAL SWITCHING?

A. The focus of all the unbundling analyses, whether under a trigger or potential deployment test, is on competitive entry in a particular geographic area—what I have characterized as an "impairment evaluation zone"—in the absence of unbundled switching. As discussed above, the FCC made a national finding of impairment with respect to mass market local switching. Any challenge to that national finding must be made with reference to specific geographic areas. Recognizing that state commissions are in a superior position to gather and assess the data and information necessary to define the geographic areas to be used for

[118] Of course, if competitive activity would significantly decline as a result, then a significant impairment must be present that is being corrected through the entrant's access to the network element in question.

[119] Under the TRO, the same geographic area used by the Commission for its trigger analysis must also be used in the potential deployment phase of the proceeding (if any). Thus, the area should reflect how CLECs *actually* serve customers and be consistent with how CLECs would *potentially* serve customers as well. This "dual purpose" presents something of a dilemma, in that the information needed to fully evaluate a potential deployment scenario is different from the information needed to evaluate actual, existing competition.

making impairment findings, the FCC delegated the assignment of defining those areas to the states.[120]

Q. WHAT FACTORS SHOULD THE COMMISSION CONSIDER IN SELECTING THESE "IMPAIRMENT EVALUATION ZONES?"

A. The *Triennial Review Order* identifies many factors to be taken into consideration in the Commission's selection of such geographic areas. Those factors include:

- the locations of customers actually being served (if any) by competitors;
- the variation in factors affecting competitors' ability to serve each group of customers;
- competitors' ability to target and serve specific markets economically and efficiently using currently available technologies;
- how competitors' ability to use self-provisioned switches or switches provided by a third-party wholesaler to serve various groups of customers varies geographically;
- how the number of high-revenue customers varies geographically;
- whether a competitor's switch serves every part of the market; and
- suitability of a state's existing conventions defining geographic

[120] *TRO*, ¶¶ 493 & 495 and n. 1537.

- areas for other purposes.[121]

Q. WHAT OTHER GUIDANCE DOES THE *TRIENNIAL REVIEW ORDER* PROVIDE AS TO HOW THESE GEOGRAPHIC AREAS SHOULD BE DEFINED?

A. The only bounds that the FCC has placed on the state's discretion in determining the geographic contours of an impairment evaluation zone (or "market") is that the area must be less than the entire state. At the same time, it must not be so small that a competitor serving that market alone could not take advantage of available economies of scale and scope that might follow with selection of a larger area.[122] Additionally, of course, a state commission must use the same definition for all of its analyses.[123]

Q. IS THE INFORMATION NECESSARY TO CORRECTLY ESTABLISH IMPAIRMENT ZONES READILY AVAILABLE?

A. Some information is readily available (at least to Qwest), while other information is not. The baseline information most critical to determining appropriate impairment evaluation zones -- at least as a starting point -- is "the locations of customers actually being served (if any) by competitors." The pattern of customers being served by unbundled local switching – in particular, the pattern

[121] *TRO*, ¶¶ 495-497.
[122] "While a more granular analysis is generally preferable, states should not define the market so narrowly that a competitor serving that market alone would not be able to take advantage of available scale and scope economies from serving a wider market." *Id*.
[123] *Id*.

of the most recent competitive activity – is perhaps the most useful indicator of the geographic area in which to conduct an impairment analysis.

Other information may be more difficult to acquire. For instance, determining 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" require (at least potentially) more detailed information, including (perhaps) economic modeling. Consequently, it may be appropriate that the Commission identify a tentative area for analysis, while leaving open the parties' ability to propose alternatives during the course of these proceedings, as additional information becomes available.

The key, however, is having sufficient information to develop a competitive profile of UNE-P that documents the pattern of entry made possible by this entry strategy. UNE-P exhibits a very distinct geographic profile – that is, it and it alone is able to extend competition quickly throughout a region. Thus, it is appropriate that the Commission define applicable "geographic areas" that allow it to recognize the unique competitive signature of UNE-P and test it against other entry strategies. If it appears that only UNE-P can sustain the competition levels throughout the defined area, then it is clear that competitors would be impaired if mass market switching were not available as an unbundled element in that area.

Q. SHOULD THE COMMISSION DEFINE THE GEOGRAPHIC AREAS IT WILL USE BEFORE IT COMPLETES THE DATA GATHERING AND ASSESSMENT NECESSARY TO THE IMPAIRMENT ANALYSIS?

A. No. The factors the FCC instructs state commissions to review in settling on geographic areas within which to conduct an impairment analysis substantially overlap with the data that must be reviewed in applying the triggers and in conducting a full scale "potential deployment" analysis. For example, the Commission will need to look at where switch-based carriers are providing services and where competitors are using their own switches on a wholesale basis,[124] as part of the process of defining the appropriate geographic areas, applying the triggers, and conducting a full scale impairment analysis. As a result, a "bifurcated" approach that attempts to define the review areas upfront and defer a judgment on impairment until later is premature and illogical. Similarly, collapsing a geographic definition and trigger analysis into one proceeding, with a separate "full impairment" case scheduled later, raises the same risks, particularly in light of the FCC's admonition that the states must use the same areas in each analysis.

Q. IS IT POSSIBLE TO DEFINE THE APPROPRIATE GEOGRAPHIC AREAS FOR ANALYSIS WITHOUT FACT GATHERING AND ANALYSIS?

A. No. A properly designed process for defining the relevant geographic areas is necessarily dynamic and fact intensive. If a one-size-fits-all approach had been

[124] *Id*. n. 1536.

appropriate, the FCC would presumably have drawn those boundaries itself. Instead, it chose not to deal in high-level abstractions, recognizing that defining geographic boundaries for purposes of studying impairment is a function that requires a study of a variety of factors. These factors have to come together in a way that makes sense in individual states and even in distinct areas within a single state.

Q. BUT IS YOUR PROPOSED "NON-BIFURCATED" APPROACH HERE CONSISTENT WITH THE FCC'S DIRECTION THAT "[S]TATE COMMISSIONS MUST FIRST DEFINE THE MARKETS IN WHICH THEY WILL EVALUATE IMPAIRMENT BY DETERMINING THE RELEVANT GEOGRAPHIC AREA TO INCLUDE IN EACH MARKET."[125]

A. Yes. The FCC's statement that state commissions "must first define the markets" recognizes the logical sequencing of the decision-making process. Commission decisions regarding the continued availability of unbundled switching for service of mass market customers will need to be made on the basis of an impairment analysis in specifically defined areas. The FCC's direction does not literally mean, however, that the analytical process of defining those geographic areas should be separated in *time* from its impairment decisions.

This sort of logical sequencing is evident in other FCC decision-making contexts. For example, even though the FCC commonly refers to defining the applicable

[125] *Id*.

geographic markets as the "first step" in analyzing proposed mergers,[126] it does not bifurcate such proceedings. Instead it makes all of its decisions in a single order that "first" determines the applicable geographic markets it will use and then analyzes the proposed merger in light of its impact in those defined areas.

Q. HOW DOES THE *TRIENNIAL REVIEW ORDER'S* APPROACH TO DEFINING A MARKET COMPARE WITH THE MARKET ANALYSIS USED IN AN ANTITRUST LAW CONTEXT?

A. As I mentioned previously, the geographic areas to be defined here have a single, specific purpose, namely to evaluate whether and to what extent new competitors are impaired in their efforts to enter the market. That is why I initially characterized these areas as "impairment evaluation zones."[127] While I am not an attorney, my understanding of antitrust law is that in an antitrust case, the concern is to evaluate whether a firm has market power, and in that context, antitrust policy provides guidance for how a market should be defined. While it is related to the questions at issue here, the traditional antitrust approach is not fully applicable to the specialized regulatory analysis mandated by the TRO. So for example, the Department of Justice's Horizontal Merger Guidelines ("HMGs") are not applicable here. Although they are useful in defining a market for

[126] *In the matter of the Merger of MCI Communications Corporation and British Telecommunications PLC*, GN Docket No. 96-245, FCC 97-302, Adopted: August 21, 1997, Released: September 24, 1997, ¶ 35) ("[T]he first step in analyzing a merger is to define the relevant product and geographic markets.")

[127] For a further discussion of the interplay and distinctions between market definitions based on pure economic theory and the definition of study areas relevant to the impairment analysis, *see* the testimony of Lee Selwyn and William Lehr.

antitrust purposes, their focus is not on impairment *per se*, but rather on the extent to which the prices for two goods are responsive to each other and the ability of the target firm to raise its price without attracting substantial entry into the market from competitors. The concern in the HMG case is to identify the smallest market area over which the target firm may possess an ability to set prices substantially above costs. That is not the focus here. While ILEC market power is an important policy concern, the goal of this proceeding is to determine whether CLECs are impaired in their efforts to serve mass market customers if they are denied access to switching as an unbundled network element.[128]

However, both here and in the antitrust context, the process of choosing a geographic market must make sound economic sense. Antitrust law follows "a pragmatic, factual approach to the definition of the relevant market and not a formal, legalistic one. The geographic market selected must, therefore, both 'correspond to the commercial realities' of the industry and be economically significant."[129] Similarly, every aspect of the impairment analysis, including the definition of the relevant "geographic markets," must be economically rational. In the impairment context, as in antitrust law, such areas cannot be defined in a vacuum.

Q. DO ANY CURRENTLY RECOGNIZED GEOGRAPHIC ZONES FIT THE ANALYSIS CALLED FOR IN THE *TRIENNIAL REVIEW ORDER*?

[128] For this reason, the FCC rejected use of the HMG in conducting its impairment analysis (TRO ¶ 109).
[129] *Brown Shoe Co. v. United States*, 370 U.S. 294, 336-37, 82 S.Ct. 1502, 1530 (1962).

A. There are several possibilities here, and I will discuss two specifically, namely the use of a LATA as a defined zone, and the use of the existing ILEC service territory. However, let me begin by saying that it is certainly true that none of the recognized geographic zone definitions in use today was adopted to reflect all of the factors that the FCC instructs state commissions to consider in defining the geographic areas for which they will make their mass market switching analyses. In particular, those pre-existing concepts were not conceived with a view as to where switch-based competitive carriers are actually serving, or could serve, mass market customers. Nonetheless, as the FCC recognized, there may turn out to be overlap in the boundaries used to apply conventional or historical concepts, and those that may be properly drawn pursuant to the factors identified in the FCC's Order. The Order clearly does not suggest, however, that there is a single concept that can be used automatically across the board and across all states for the purposes of making impairment decisions.

It should be noted that, while the FCC has said that a geographic market should be less than the entire state in size, it is clear that one of the goals of the 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 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.[130]

Despite Congress' selection of the state as the "baseline" analytical unit in section 271 of the Act to determine whether local markets are open, the FCC affirmatively prohibits states from using the entire state to evaluate impairment.[131]

Q. HOW SHOULD THE GEOGRAPHIC AREAS BE SIZED FOR PURPOSES OF CONDUCTING A MASS MARKET UNBUNDLED SWITCHING IMPAIRMENT ANALYSIS?

A. The FCC states that the same geographic market definition should be used both when applying the trigger analysis and when conducting the full review of operational and economic impairment.[132] In the full-scale "potential deployment" analysis, state commissions are asked to conduct "a business case analysis for an efficient entrant."[133] In that context, the boundaries of the impairment study area may then reasonably correspond to the assumed entry area of the hypothetical, efficient CLEC that will serve mass market customers using its own switch. This approach is consistent with FCC guidance that the geographic area should be

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[130] *Ameritech Michigan Order*, Federal Communications Commission, CC Docket 97-298, Footnote 169, citing House Report, emphasis added.
[131] The FCC never explains why Congress asked it to judge whether barriers to competition have been removed on a state-by-state basis, but that state commissions should be precluded from using a state-by-state approach to judging impairment.
[132] TRO, ¶ 495.
[133] *Id*. n. 1579.

sized to allow the CLEC "to take advantage of available scale and scope economies from serving a wider market."[134]

Under this standard, it is unlikely that the "efficient CLEC" would enter a state intending to serve only a single wire center. Rather, the model CLEC, would likely map out a footprint that is large enough to permit it to realize necessary economies of scale and permit it to market to a broad range of potential customers. In most cases, this will be as large as a LATA, or perhaps an ILEC's entire service territory within a state, while in other cases it may be only a portion of such an area, depending on the local demographics. It is clear, however, when reviewing CLEC entry strategies, that an entrant logically will initially seek to serve customers in more urban parts of a market where more customers reside in order to "get its feet wet" in the market and develop a customer base that will allow it to generate funds that will allow it to enter other areas in the state. Therefore, it makes economically rational sense to view the market more broadly, and as a larger area, rather than a more confined area. Notably, if UNE-P were eliminated in an urban wire center, the trickle down effect may likely be not only removal of a competitor from that wire center, but from a much broader area of the state. Hence, both the way CLECs enter and the way they are likely to exit if UNE-P is eliminated, make it economically rational to define the market area as larger rather than smaller. However, in light of the above discussion of triggers, it

[134] *Id*. ¶ 495.

is *only* reasonable to use a market definition of this size if the Commission both develops appropriate criteria for its trigger analysis and also applies them throughout the entire area that the efficient CLEC is assumed to enter. If it does not do so, then the Commission runs a substantial risk that it will misapply the triggers and reach conclusions that are irrational and that fail to protect consumers.

Q. ONCE THE "IMPAIRMENT EVALUATION ZONE" HAS BEEN DEFINED, IS IT NECESSARY THAT ALL QUALIFYING SELF-PROVIDERS AND/OR WHOLESALERS SERVE CUSTOMERS THROUGHOUT THE DEFINED ZONE IN ORDER FOR THE TRIGGERS TO BE MET?

A. Yes. As explained below in the discussion of triggers, if the defined review area includes locations where the requisite number of qualifying competitors are not actively serving mass market customers (residential and small business) over their own switches, then the self- provisioning trigger is not met. Similarly, if the defined geographic area includes locations where qualifying wholesalers are not currently providing switching capacity, or where those wholesalers are unable or unwilling to serve all competing providers in their delivery of voice grade service to the mass market, then the wholesaler triggers likewise have not been met. In either instance, actual experience shows that carriers have been unable to overcome the nationally-identified operational and economic impairments and provide competitive alternatives that do not require access to unbundled switching and UNE-P.

If the Commission uses any less exacting standard in applying the FCC triggers, the results will not be "economically rational"[135] and consumers will be left unprotected from the risks of ILEC pricing discrimination and other predatory conduct.

The requirement that the existing footprint of each self-provider (or wholesaler) should substantially overlap is consistent with the rules which the FCC adopted governing the trigger analysis. Specifically, Rule 51.319 (d)(iii)(A)(1) requires that, in order to conclude that the self-provisioning trigger has been met, a state commission must first find that three or more competing providers "each are serving mass market customers in the particular market with the use of their own local switches." Similarly, in order to conclude that the third-party wholesaler trigger is met, the state commission must find two or more unaffiliated wholesalers offering local switching to competing providers "in that market" using their own switches. 47 C.F.R. § 51.319 (d)(iii)(A)(2) (emphasis added). Neither rule sanctions a finding of nonimpairment under the trigger analysis when a self-provider or wholesaler is serving only a portion of the defined market.

Q. DID THE FCC'S ERRATA, WHICH AMENDED PARAGRAPH 499 AND RELATED PROVISIONS, ALTER THE REQUIREMENT THAT SELF-PROVIDERS SERVE MASS MARKET CONSUMERS THROUGHOUT THE DESIGNATED GEOGRAPHIC AREA?

[135] *TRO*, ¶ 78.

A. No. As discussed below in connection with application of the trigger analysis, the FCC's Errata clarified language that the incumbents had tried to stretch to the absurd proposition that any qualifying self provider must be so large that it is effectively a "second carrier of last resort", *i.e.,* large enough to serve each and every customer within the geographic market.[136] In rectifying this perceived ambiguity in the original language, the FCC did not at all modify the requirement that each qualifying self-provider must actively serve mass market customers in the designated geographic area.[137] Nor did the Errata change the requirement that third-party wholesalers must be operationally ready and capable of meeting the needs of all competing providers serving mass market customers within the geographic market. Indeed, the ILECs themselves have argued elsewhere that "errata" are used to correct ministerial errors, not to make substantive changes to an order,[138] emphasizing that the unexplained deletions made by the FCC's Errata did not radically change the standards a state commission should use when applying a trigger.

[136] The ILEC argument that the original language of the *Triennial Review Order* required each self provider to have sufficient capacity to serve each and every customer in the designated area was raised in mandamus proceedings before the District of Columbia Court of Appeals. *See, e.g.,* Verizon Mandamus Pet. at 8, 23-24 (filed Aug. 28, 2003); Joint BOC Mandamus Pet. at 13, 20-21 (filed Aug. 28, 2003).

[137] Under the full review of impairment, when evidence exists that a competitor is serving mass market customers with its own switch, the FCC instructs the states to consider whether the "entire market" could be served by this switch. *Id.* ¶ 510.

[138] *See, e.g.,* Ex Parte Letter from Joseph Mulieri, Verizon, to Marlene Dortch, FCC (filed CC Docket 94-157, July 21, 2003), found at http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514286634.

Q. IS A REQUIREMENT THAT ALL THREE SELF-PROVIDERS BE ACTIVELY PROVIDING SERVICE THROUGHOUT THE GEOGRAPHIC MARKET USING THEIR OWN SWITCHES CONSISTENT WITH THE TRIGGER ANALYSIS ITSELF?

A. Yes. As explained below, the mere existence of competitors that provide their own switching in only limited portions of a defined geographic area – or only to limited numbers or types of customers in that area -- does not demonstrate that customers throughout the whole defined area will have access to multiple switch-based competitors. Thus, it would be unreasonable – indeed irrational – to find a trigger is met if the carriers being evaluated do not provide service generally to all types of customers, of all revenue levels, throughout the entire defined geographic study area.

Q. SHOULD THE COMMISSION USE METROPOLITAN STATISTICAL AREAS (MSAS) TO EVALUATE IMPAIRMENT?

A. No, I do not believe that MSA boundaries are the best approach. First, the purpose of this exercise is to judge whether CLECs would be impaired without access to unbundled local switching to provide voice service (more conventionally known as POTS) to "mass market" customers.[139] This is a telecommunications-specific issue that should be structured to consider telecommunications-specific information.

[139] It is useful to point out that the impairment analysis for Qwest's territory does not determine *whether* local switching will be available. As a Regional Bell Operating Company (RBOC), Qwest has accepted an independent obligation outlined by the "social contract" of section 271's competitive checklist to offer

MSA boundaries do not consider any of the following important criteria relating to impairment:

* Qwest's network configuration;
* LATA boundaries;
* NXX code assignment;
* Retail pricing;
* Qwest's costs;
* CLEC costs;
* Switch locations;
* Ported number volumes; or
* UNE costs.

That fact alone suggests that the area ultimately chosen by the Commission should be easily defined by its telecommunications components, rather than census or political boundaries. Moreover, as noted below, not all wire centers map to MSA boundaries.

Q. ARE LATAs REASONABLE PROXIES FOR MSAs IN ANY EVENT?

A. Yes. LATAs were first drawn to identify distinct local markets, with one of the guidelines being that no LATA should include more than one MSA.[140] LATA boundaries conform to wire center boundaries, so it is not necessary to address

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unbundled local switching (at least as so long as it desires to offer long distance services in its territory) at rates that are "just and reasonable and nondiscriminatory" and which provide entrants "meaningful access" (TRO ¶ 603). Thus, the pricing issue raised by this obligation is key to the notion of impairment. It is useful, however, for the Commission to understand that its impairment analysis will not change Qwest's continuing obligation to offer unbundled local switching under section 271.

[140] *U.S. v. American Tel. & Tel. Co., et al.*, 552 F.Supp. 131 (D.D.C. 1982), at p. 229 ("'Exchange area,' or 'exchange' [the two terms initially used to describe Local Access and Transport Areas] means a geographic area established by a BOC in accordance with the following criteria: ...3. no such area which includes part or all of one standard metropolitan statistical area...shall include a substantial part of any other standard metropolitan statistical area..., unless the Court shall otherwise allow....") See also generally *U.S. v. Western Electric Co., and AT&T*, 569 F.Supp. 990 (D.D.C. 1983), at 993-1002.

wire centers that straddle MSA boundaries. Moreover, LATAs have the advantage of including all of Qwest's wire centers, while MSA boundaries may not. In this regard, an MSA-approach automatically creates a "residual market" comprised of all those exchanges that are not part of a MSA. This "forgotten market" must comply with the FCC's requirement that no area 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."[141] Because MSAs were established without any consideration of wire center boundaries, attempting to map wire centers into the MSA framework produces overlaps and gaps with LATA boundaries. As a result, LATA boundaries may well provide a *simpler* approach, by eliminating the need to assign or exclude peripheral wire centers, as well as including more rural wire centers as part of the broader mass market.

Q. CAN YOU SUMMARIZE THIS PORTION OF YOUR TESTIMONY?

A. The central purpose here is to identify "impairment evaluation zones" within which to conduct a further analysis of the impairments to mass market competition solved by unbundled local switching. As explained above, the hallmark of UNE-P is its geographically broad reach, which makes it the only entry strategy with a pattern of activity that matches the mass market. But whatever geographic area the Commission ultimately settles on for its impairment

[141] TRO ¶ 495.

analysis, it should not lose sight of the most important fact: only UNE-P works at a scale and scope that is necessary to support mass market competition throughout Washington.

V. ESTABLISHING THE CROSSOVER POINT BETWEEN THE MASS MARKET AND THE ENTERPRISE MARKET.

A. SUMMARY

Q. WHAT IS THE CROSSOVER POINT THAT YOU RECOMMEND THIS COMMISSION ADOPT?

A. I recommend that the commission adopt a cross over point of 12 lines.

Q. HOW DID YOU ARRIVE AT THIS CONCLUSION?

A. I arrived at this conclusion by determining where it made economic sense for a CLEC to serve a multi-line plain old POTS customer using a DS1 based service rather than using UNE-P. In performing the analysis to arrive at that conclusion, I identified all of the costs that are incurred when serving a multi-line POTS customer with a DS1 based service and divided that total cost by the cost of a single UNE-P line. The result of that calculation rounded up to the next whole number is the cross over point.

B. INTRODUCTION

Q. PLEASE IDENTIFY THE FUNDAMENTAL CROSS OVER POINT ISSUE THE FCC ASKED STATE COMMISSIONS TO ADDRESS.

A. The fundamental issue the FCC tasked the state commissions with addressing was how should the "mass market" be distinguished from the "enterprise market?"[142] The FCC identified the cross over issue in the section of the TRO that is concerned with defining the market.[143]

Q. DID THE FCC SUGGEST UNITS THAT COULD BE USED IN DISTINGUISHING THE MASS AND ENTERPRISE MARKETS?

A. Yes, it did. The FCC suggested that the number of DS0 lines a customer uses at a particular location would be an appropriate unit for the cross over analysis. Specifically, the FCC stated, "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."[144] The FCC asked the state commissions to identify the number of DS0 lines needed at a particular customer location before the customer crosses over from the mass market to the enterprise market.

Q. WHAT ARE THE CHARACTERISTICS OF MASS MARKET CUSTOMERS?

A. The mass market customer base is: (a) primarily interested in basic voice POTS service[145]; (b) widely geographically dispersed[146]; and (c) unaccustomed to

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[142] TRO ¶ 497.
[143] *Id*., ¶¶ 495 – 497.
[144] *Id*. ¶ 497.
[145] *Id*.
[146] *Id*. ¶ 205.

complex or disruptive provisioning schemes.[147] The TRO recognizes each of these characteristics when it distinguishes mass market from enterprise customers. For purposes of the switching impairment analysis, the FCC stated "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."[148] Mass market customers are not located exclusively in concentrated geographic locations such as central business districts; rather residential and small business customers are located across all urban, suburban, and rural locations. These customers expect that using their telephone services, as well as changing service providers, should not be a complicated transaction. As the FCC described it, "mass market customers demand reliable, easy-to-operate service and trouble-free installation."[149]

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 – quite different than for the mass market customer. As the FCC put it, "DS1 enterprise customers are characterized by relatively intense, often data centric, demand for telecommunications services sufficient to justify service via

[147] *Id*, n. 716.
[148] TRO ¶ 497. *See also* ¶ 127 ("Mass market customers consist of residential customers and very small business customers. Mass market customers typically purchase ordinary switched voice service (Plain Old Telephone Service or POTS) and a few vertical features."
[149] TRO ¶ 467.

high-capacity loops at the DS1 capacity and above."[150] Enterprise customers also require more sophisticated sales, marketing and technical support than mass market customers. Local exchange carriers can generally acquire POTS customers through inbound or outbound telemarketing calls, direct mail or similar simplified marketing techniques. In contrast, convincing a customer served by analog mass market loops to upgrade to "enterprise" status using digital DS1-based service in order to change service providers generally requires sales personnel to visit the customer on one or more occasions. As explained below, such an upgrade requires that changes be made to the customer's CPE at its premises. As a result, CLECs may also need to have Systems Consultants visit with the customer. Consequently, it requires considerably more sales and marketing expense to acquire an enterprise customer then it does a mass market customer. In addition, after the CLEC sales personnel visits with the customer, not every customer will decide to take service with that CLEC. In that event, the sales and marketing costs are expended by the CLEC without any accompanying revenue.

Q. HOW MUCH MORE COSTLY IS IT TO MARKET TO AN ENTERPRISE CUSTOMER THAN TO A MASS MARKET CUSTOMER?

[150] TRO ¶ 451.

A. Industry analysts have estimated that the cost to acquire a mass market customer is $125.[151] I estimate that, because of the additional activities and expertise required, the costs to acquire an enterprise customer are six times higher than the costs to acquire a mass market customer. For the purposes of this analysis, I used a marketing cost differential of $625.[152]

Q. DOES THE ORDER RECOGNIZE THE DISTINCTION BETWEEN THE MASS AND ENTERPRISE MARKETS IN THE DS0/DS1 CROSS OVER ANALYSIS TO BE PERFORMED BY STATE COMMISSIONS?

A. Yes. The Order provides that a customer served by mass market loops is to be considered part of the 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 described in paragraph 497."[153] In describing the cross over point, the FCC stated that it "may be the point where it makes economic sense for a multi-line customer to be served via a DS1 loop."[154]

Q. WHAT IS THE "CUT-OFF FOR MULTI-LINE DS0 CUSTOMERS?"[155]

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[151] *See* Banc of America Securities, Research Brief Wireline Telecommunications, *AT&T Corporation A Case for Consumer Services*, April 30, 2003, p. 20.

[152] Cost to market to an enterprise customer ($750) – Costs to market to a mass market customer ($125) = $625.

[153] TRO ¶ 421, n.1296.

[154] TRO ¶ 497.

[155] *Id*.

A. This is the point at which ILECs are relieved of their obligation to provide unbundled local switching to an individual customer location.[156] The purpose of the cross over is to establish a governmentally drawn upper boundary to the mass market – in effect, substituting the Commission'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 POTS lines). In that respect, the concept of a governmentally determined crossover point is out of touch with reality. The reality is that there should be no governmentally determined crossover point and it should be up to the customer to decide when he/she will be served with multiple POTS lines or through a DS1 based service.

Q. WHAT IS THE PRACTICAL IMPLICATION OF THE CROSS OVER?

A. In all but the most limited situations, an ILEC's unbundled local switching network element is only used as part of a platform with all of the other unbundled network elements known as UNE-P. The issue will decide line level at which a CLEC can and cannot serve customers using UNE-P.

Q. DID THE FCC COME TO ANY PREVIOUS CONCLUSIONS ON DISTINGUISHING THE MASS FROM THE ENTERPRISE MARKET?

A. Yes, it did. The FCC previously found that if a customer had four or more lines at a single customer location in density zone 1 in one of the top 50 Metropolitan

[156] It should be noted that if the Commission finds no impairment with respect to unbundled local switching, a Bell Operating Company would still have to provide access to that element (TRO ¶ 653); however, it would not have to provide switching at the rates, terms and conditions mandated by section 252 of the Act (TRO ¶ 656).

Statistical Area ("MSAs") and the ILEC had provided non-discriminatory, cost-based access to the enhanced extended link ("EEL"), then the ILEC had no obligation to provide unbundled local switching.[157] However, that conclusion did not apply in other than the top 50 MSAs or in density zones other than zone 1 in the top 50 MSAs. This finding has become known as the "three line limit" or the "switching carve-out."

Q. WHAT FACTS DID THE FCC RELY ON IN SETTING THE "THREE LINE LIMIT"?

A. Frankly, the evidence the FCC relied upon in reaching its three line limit was minimal. It appears that the FCC based much of its finding on the presence of CLEC local switches in density zone 1 in the top 50 MSAs. Specifically, the FCC concluded, "exempting incumbent LECs from unbundling local circuit switching in certain circumstances in the top 50 MSAs is reasonable because nearly all of the top 50 MSAs contain a significant number of competitive switches."[158] However, the FCC did not provide any meaningful explanation as to how that finding translated into a three line (or any specific line) limit. Indeed, in his Separate Statement, Commissioner Harold Furchtgott-Roth pointed out the absence of evidence supporting a three line limit when he stated:

[157] Before the Federal Communications Commission, In the Matter of Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, CC Docket No. 96-98, Third Report and Order and Fourth Further Notice of Proposed Rulemaking ("UNE Remand Order"), Decision FCC 99-238, Released November 5, 1999, ¶ 278.
[158] *Id*, ¶ 281.

> We have before us no clear evidence that there are *material*, switching-related differences in the cost of serving customers with different numbers of lines. Certainly, there is no basis whatsoever for concluding there are *material* differences in the cost of providing switching to customers with three lines, rather than four…..From a technological and economic perspective, there is no difference between a carrier that serves four one-line customers and a carrier that serves one four-line customer. There is consequently no reason to discriminate between the two carriers by giving the first access to local circuit switching, but denying such access to the second. [159]

Q. DOES MERE EVIDENCE OF THE EXISTENCE OF COMPETITIVE SWITCHES SUPPORT A THREE LINE LIMIT?

A. No. In considering the evidence regarding the number of competitive switches in zone 1 in the top 50 MSAs, the FCC failed to consider what type of customers were being served by the switches. What the FCC did not appreciate at the time of the UNE Remand Order – and what it does appreciate now, is that competitive switches are used to serve large business enterprise customers. Thus, as the FCC found in the TRO:

> We find that the extent of competitive LEC circuit switch deployment varies tremendously in the enterprise and mass markets. In particular, we 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.[160]

[159] Separate Statement of Commissioner Harold Furchtgott-Roth, Concurring in Part and Dissenting in Part, Re: Implementation of the Local Competition Provisions of the Telecommunications Act of 1996, Third Report and Order and Fourth Further Notice of Proposed Rulemaking, CC Docket 96-98, FCC 99-238, pp. 2-3.

[160] TRO, ¶ 435.

Q. HOW SHOULD THIS COMMISSION DEVELOP THE CROSS OVER POINT?

A. I recommend that the analysis be based on the economic and operational factors that a CLEC must face in deciding whether to serve a customer using multiple UNE-P lines or lines that are aggregated onto one or more DS1 services. This analysis compares the total costs to provision DS1 services at a customer's location to the costs needed to serve that same customer via UNE-P.

The costs to provision DS1 service at a location are characterized by substantial, upfront marketing, non-recurring and investment costs and monthly recurring costs that are generally not dependent upon the number of lines served at the customer's location. That is because it generally costs a CLEC roughly the same to serve a customer with a DS1 based service whether the customer has one line or twenty-four lines.[161] In contrast, a CLEC's costs to order and provision UNE-P service include virtually no investment or upfront non-recurring costs. The CLEC's monthly recurring costs are directly related to the number of loops served at a location.[162] For example, if the ILEC's rate for a UNE-P service is $20 per line per month, then the total monthly cost to serve a customer with five lines is $100.

[161] A DS1 loop can serve up to 24 voice grade equivalents.

[162] A CLEC that provides a customer with service using UNE-P will certainly incur some non-recurring expenses for activities such as creating an internal order once the customer has agreed to subscribe to the CLEC's service and submitting an order to the ILEC. However, those expenses would also occur if the CLEC served the customer using a DS1 based service. To

To arrive at the recommended cross over point, I calculate the total monthly cost to sell, install and maintain a DS1 based service at a customer's location and then I divided that result by the monthly UNE-P costs of serving that same customer. This result (rounded to the next higher whole number) yields the number of UNE-P lines at which the CLEC should be economically indifferent between using UNE-P or DS1 lines to serve that location. My analysis also generally compares and contrasts the operational issues associated with using UNE-P and DS1 services.

Q. HOW DOES YOUR ANALYSIS ACCOUNT FOR THE DIFFERENT UNE RATE ZONES IN THIS STATE?

A. The costs for a DS1 capable loop and UNE-P can vary substantially by rate zone. Thus, there could conceivably be a different cross over point for each rate zone. However, for the sake of simplicity and administrative efficiency, I recommend a cross over point based upon a weighted average of the cross over points for the individual zones. The weighting is based on the percentage of unbundled loops that are found in each zone.[163]

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simplify the analysis, CLEC costs to order either UNE-P or DS1 loops are excluded from the analysis.

[163] Since the analysis determines rate zone specific cross over points, the Commission can alternatively use it to establish cross over points for each rate zone. The analysis can also be used to develop weighted average cross over points for if the Commission defines geographic market areas that include more than one rate zone.

Q. DOES A CLEC TYPICALLY CHOOSE BETWEEN SERVING A MULTI-LINE POTS CUSTOMER BY USING UNE-P OR A DS1 BASED SERVICE?

A. Yes, it does. If a multi-line customer is already being provided a DS1 based service by its current provider, a CLEC that wishes to win that customer will very likely have no choice but to offer a DS1 based service. Once a customer has invested in a key system[164] or a small PBX, it is very unlikely that the customer will want to abandon that investment, invest in new analog CPE and take a technologically backward step to a UNE-P service. In addition, for customers that are being served via ILEC or CLEC provided CPE and a DS1 based service, it is likely that the customer has already concluded that the cross over point has been surpassed. Therefore, for such customers, UNE-P is not a realistic option. In contrast, multi-line POTS customers potentially offer CLECs a choice of whether to continue to serve the customer with multiple POTS lines (i.e., UNE-P) or a DS1 based service.

C. UNE-P AND DS1 NETWORK ARCHITECTURES

Q. DO THE RELATIVE NETWORK ARCHITECTURES OF UNE-P AND DS1 SERVICE AFFECT THE COSTS USED IN THE ANALYSIS?

[164] Key systems or key telephone systems are systems in which the telephones have multiple buttons requiring the used to directly select central office phone lines and intercom lines. Key systems generally and traditionally find most appropriate application in relatively small business environments, typically in the range of 50 telephones and require relatively unsophisticated functionality and feature content.

A. Yes. To understand the analysis, one must first understand the UNE-P and DS1 network architectures.

Q. PLEASE DESCRIBE THE NETWORK ARCHITECTURE FOR UNE-P.

A. The network architecture for UNE-P is the same simple, POTS architecture that ILECs use to provide retail service to their own end users. To obtain service, a customer with one or more telephone lines merely plugs its analog telephone sets into wall jacks. Each jack will be associated with one or two of the customer's telephone numbers.[165] The wall jacks are connected to the customer's inside telephone wire. The inside wire for a premises terminates at the customer's Network Interface Device ("NID"). For a residential customer, the NID is generally located on the side of the customer's house. For small business customers, the NID can be located on the side of the customer's building or inside the customer's building in some type of equipment closet. For each POTS line at a customer's location, an ILEC twisted copper loop is connected to the NID. The copper loop provides the electrical current necessary to ring the customer's telephone when an incoming call is received and to provide dial tone when the customer attempts to make a call.[166] Because all of the electrical current required to make and receive telephone calls is provided over the copper loop, a

[165] A telephone jack can be wired to support two different telephone lines with two different telephone numbers. This permits a customer to use both telephone lines with a single, two-line, analog telephone set.

[166] If the customer's cooper loop is connected directly to the circuit switch, the switch will provide the ringing current and dial tone. If the customer's loop has multiplexing equipment in the loop, the multiplexing equipment provides the ringing current and dial tone.

customer's telephone service will operate even when the customer has experienced an electrical power outage.

Thus, in its simplest form, with a POTS architecture, each telephone line has its own separate connection from the customer's premises to the local circuit switch serving that customer. For example, a customer with eight POTS lines will have eight separate loop connections to the local circuit switch serving those lines.

Q. DOES A UNE-P ARCHITECTURE REQUIRE THE CLEC TO MAKE ANY INVESTMENT IN CPE OR NETWORK EQUIPMENT?

A. Generally speaking, a CLEC does not have to make any network or CPE investments to serve a customer using UNE-P. A CLEC may, however, invest in its own equipment to provide voice mail service or to provide its own operator or directory assistance services. For the purposes of this analysis, no CLEC investment is assumed when the CLEC serves a customer using UNE-P.

Q. WHAT NON-RECURRING UNE-P COSTS ARE CONSIDERED IN THE ANALYSIS?

A. The analysis assumes a customer with POTS service from the ILEC would be migrated to CLEC UNE-P service. In Washington the UNE-P migration recurring charge is $0.27 - for the first line and $0.14 for each additional line on an order.[167] Because the non-recurring costs incurred by the ILEC to migrate a

[167] Qwest Washington SGAT, Exhibit A, Section 9.23.2.1, November 14, 2003.

customer from retail to UNE-P are so low, I did not include them in the analysis. There are no other non-recurring UNE-P costs that I considered in the analysis.

Q. WHAT ARE THE MONTHLY RECURRING UNE-P COSTS THAT ARE CONSIDERED IN THE ANALYSIS?

A. For the purpose of this analysis, the following Washington UNE-P monthly recurring costs were used:

Rate Zone	Monthly UNE-P Rate
1	$10.09
2	$15.03
3	$16.44
4	$17.99
5	$22.74

The UNE-P rate is comprised of the rate zone specific unbundled analog loop cost, the monthly recurring switch port charge, and any applicable usage sensitive costs (e.g. switching, shared transport, signaling, databases, and Daily Usage File).[168]

Q. PLEASE DESCRIBE THE NETWORK ARCHITECTURE FOR THE DS1 SERVICE.

A. With a DS1 service, instead of maintaining a separate connection (analog loop) from the customer's premises to the local circuit switch for each telephone line, special equipment at the customer's premises is used to aggregate the multiple telephone lines onto a single connection (a DS1-capable loop) from the

[168] The usage sensitive charges assumed 1,668 minutes of combined originating and terminating local and toll calling.

customer's premises to the switch. As with the POTS architecture, with a DS1 architecture a customer with one or more telephone lines can plug analog telephone sets into wall jacks that are connected to the customer's inside wire and that inside wire will terminate at a NID.

In order to aggregate multiple, analog lines onto a common DS1 loop, the signals from all of the customer's analog lines must be converted into digital signals and then multiplexed. The equipment that must be installed at a customer's premises to convert the multiple analog lines onto a single digital DS1 loop is called channel bank equipment. If a customer does not already have such equipment (and considering the circumstances being reviewed, there is no reason to assume that it will), then the CLEC must provide it, because the customer would not be willing to incur such costs simply because regulatory rules require that it be moved from "mass market" to "enterprise" status.

With digital DS1 services, unlike analog POTS service, the electric current necessary to ring the customer's telephones and provide dial tone cannot be provided through the digital DS1 loop. Instead, they are provided by the CLEC channel bank equipment at the customer's premises. The channel bank equipment is typically installed inside a customer's premises, either on a wall or on the floor. Although there are varying numbers of lines that may terminate on a single card,

the channel bank unit will typically have a 24-line capacity.[169] Examples of frequently used channel bank units are Premisys SlimLine Channel Bank and the Adtran Total Access 750 units.

To power the CLEC's channel bank equipment at the customer's premises, the equipment must be plugged into the customer's commercial AC power. The channel bank unit typically has the ability to convert the customer supplied AC power to the DC power needed to run the customer's CPE. And, as noted above, however, the DS1 loop architecture does not allow the electrical current needed for ringing and dial tone to be provided from the carrier's switch. Thus, in order to provide the customer with continuous service during power interruptions, the CLEC must also provide DC battery back up. To do so, a separate power unit is required to manage the battery string to assure the batteries are fully charged and can be accessed in the event of a power failure. For the purpose of this analysis, an Adtran Total Access 750 Channel Bank with 24 analog line ports, an Adtran AC/DC Power Supply and Battery Charger and an Adtran Battery Backup System (Wall mount) is employed.[170] The backup battery system will provide power during an interruption of commercial power for the channel bank for up to eight hours. The list price of the Adtran channel bank equipment, AC/DC power supply and battery charger and backup battery system is $3,161. I assumed a

[169] This 24-line limit is a natural result in that the capacity of a DS1 loop is 24 voice grade channels.

[170] Technical descriptions of the Adtran Total Access 750 and the associated AC/DC Power Supply and Battery Charger and Battery Backup System is provided in **Exhibit JFF-3** to this testimony.

discount of 30 percent off of the list price of the Adtran CPE to account for discounts that efficient CLECs would likely obtain from the supplier of the channel bank equipment. The net CPE cost that I used for the analysis was $2,212.70.

In sum, regardless of the variety of names applied to the CPE provided by telecom equipment suppliers, the fundamental set of functionalities that must be provided to support DS1 service are channel banks, power management and battery backup.

Q. WHAT MUST THE CLEC DO TO INSTALL THE CHANNEL BANK AND BATTERY BACKUP EQUIPMENT?

A. To install the equipment, a CLEC must have a technician travel to the customer's premises. To connect the inside copper wires from the individual telephone lines to the channel bank equipment, the CLEC must either provide a wired connection from the NID to the channel bank equipment or disconnect the inside wires from the NID and reconnect them to the channel bank. For the purpose of this analysis a CLEC installation cost of $128 was used. This cost assumed two hours for the installation of the equipment at a rate of $64.00 per hour.[171]

[171] As a proxy for the CLEC technician labor rate for installing the CPE, I used the Miscellaneous Equipment Installation Charge of $64.00 from the Qwest Washington SGAT, Exhibit A, Section 9.20.17, November 14, 2003.

Q. WOULD THE INSTALLATION BE THE ONLY TIME THAT A CLEC TECHNICIAN WOULD NEED TO SERVICE THE CHANNEL BANK AND BATTERY BACKUP EQUIPMENT?

A. No, a CLEC technician would also have to visit the customer's premises to service the equipment in the event that the equipment needed repair, or in the event that the customer discontinues service altogether or switches its service to another provider.

Q. HOW OFTEN IS THE EQUIPMENT THE CLEC INSTALLS AT THE CUSTOMER'S PREMISES IN NEED OF REPAIR?

A. It is quite difficult to pinpoint an exact failure frequency. However, for the purposes of this exercise I would suggest that one visit by a CLEC technician to service the CLEC equipment every three years would be a reasonable projection. Some customers may require service sooner or later than once every three years. For the purpose of this analysis, I assumed the costs of 1/3 of a repair visit during the period that the CLEC serves the customer. I would also estimate a single visit would require one hour for the repair. For the purpose of this analysis I used an average maintenance cost per year of $21.33.[172]

[172] 1/3 of a visit * 1.00 hour per visit * $64.00 per hour.

Q. DOES YOUR ANALYSIS INCLUDE A COST FOR EQUIPMENT REMOVAL IN THE EVENT THAT THE CUSTOMER DISCONNECTS ITS SERVICE WITH THE CLEC?

A. Yes, it does. If the customer stops obtaining service from the CLEC, the CLEC would have to send a technician to the customer's premises to disconnect and remove the CPE. For the purpose of the analysis, I estimated $64.00 in equipment removal costs. I estimate that the removal of the CLEC's equipment from the customer's premises would take one hour at a rate of $64.00. To account for the fact that the equipment removal costs will take place in the future, I calculated the net present value ("NPV") of the $64.00 expenditure assuming the customer will find a different provider of DS1 service in two years. The ("NPV") of a $64.00 expenditure made two years into the future is $51.36.[173]

Q. HOW WOULD THE CONNECTION FROM THE CPE TO THE CLEC'S SWITCH BE MADE?

A. The connection from the channel bank to the CLEC's collocation is provided by a 4-wire DS1-capable loop that terminates in the ILEC central office on a DSX-1 panel or its equivalent. The DS1 loop provides the connection between the CPE and the ILEC's central office. Assuming that the ILEC had DS1 capable loops available at the customer's location, the ILEC could install the DS1 loop in

[173] For the net present value calculation, I used a cost of capital of 11.63 percent. This figure was determined by adding 2 percent to the approved cost of capital for Qwest in this state (9.63 percent.) I added a 2% premium to the ILEC cost of capital to account for the additional risk lenders face in loaning money to a CLEC industry that is replete with bankrupt CLECs.

parallel with the existing analog loops that the customer uses for its POTS service. The ILEC installation would involve performing cross connections between the DSX-1 panel and the CLEC's collocation. For the purpose of this analysis, the non-recurring and recurring costs for a DS1 capable loop and the non-recurring cost for a DS1 interconnection tie pair were used. To accommodate a migration with as little disruption to the customer as possible and to ensure that the newly installed DS1 loop operates properly, the non-recurring costs assumed for the DS1 capable loop are based upon a coordinated conversion with cooperative testing. In Washington, the non-recurring costs for coordinated installation with cooperative testing of a DS1 unbundled loop is $332.34.[174] The recurring cost of an interconnection tie pair for a DS1 unbundled loop is $1.29.[175] If, at some point in the future, the customer were to leave the CLEC to obtain service from another provider, the CLEC would incur a disconnection charge for the DS1 unbundled loop of $27.99.[176] To account for the fact that the disconnection charge will take place in the future, I calculated the net present value ("NPV") of the $27.99 expenditure assuming the customer will find a different provider of DS1 service in two years. The ("NPV") of a $27.99 expenditure made two years into the future is $22.46.

[174] Qwest Washington SGAT, Exhibit A, Section 9.2.5.3.2.3, November 14, 2003.
[175] *Id*, Section 9.1.
[176] *Id*, Section 9.2.5.1.1.4.

Q. PLEASE DESCRIBE THE EQUIPMENT A CLEC USES IN ITS COLLOCATION TO RECEIVE THE DS1 LOOP.

A. A multiplexer is required in the CLEC collocation in order to consolidate individual DS1 loops onto a higher capacity DS3 transport facility connecting the collocation to the CLEC switching node. The EdgeLink100 from Telco Systems is a product that is frequently used to multiplex DS1 circuits onto a DS3 circuit.[177] For the purposes of this analysis, I use a cost of $3,600 for the Edgelink 100 multiplexer. Assuming that twenty-eight DS1 circuits are being multiplexed by the multiplexers in the CLEC's collocation, a single DS1 loop would be responsible for 1/28 of the $3,600 cost of each multiplexer, or $128.57.[178]

Q. HOW DOES THE MULTIPLEXED DS3 CIRCUIT REACH THE CLEC'S LOCAL SWITCH?

A. The DS3 circuit would be backhauled from the CLEC's collocation in the ILEC central office to the CLEC's local switch location. As previously discussed, at the CLEC's switch location, the DS3 circuit must be demultiplexed back to individual DS1 circuits. The individual DS1 circuits are terminated at the CLEC's switch into a DS1 switch port. The DS1 switch port is necessary whether the DS1 is carrying one line of a customer's voice traffic or the maximum of 24 lines of a customer's voice traffic. For the purposes of this analysis, I used a monthly

[177] A technical description of the Telco Systems EdgeLink 100 is provided in **Exhibit JFF-4** to this testimony.
[178] The per DS1 loop investment assumed for this analysis was calculated as follows: 1 multiplexer * 1/28 * 3,600 = $128.57.

recurring cost of $13.87 to backhaul the customer's DS1 service on the transport DS3.[179] For the multiplexing at the CLEC's switching location, CLEC DS1 switching costs and the transport between the CLEC switch serving the customer and other switches, I used a monthly recurring cost of $40.60.[180] A diagram of the DS1 based architecture can be found in **Exhibit JFF-5**.

D. OPERATIONAL ISSUES

Q. DOES THE MIGRATION OF A CUSTOMER'S SERVICE TO A DS1 BASED SERVICE INVOLVE A HOT CUT AND A LOSS OF SERVICE BY THE CUSTOMER?

A. Yes, it does. For customers with existing POTS service, the process of the CLEC connecting the customer's inside wire to the channel bank will require some period of time when the customer is totally out of service and unable to make or receive incoming telephone calls. In addition, even after the CLEC technician has completed the process of installing the channel bank and other equipment, the customer will be unable to receive telephone calls until the customer's telephone numbers have been ported by the CLEC. The interval between when the CLEC technician starts the conversion until the CLEC ports the customer's telephone numbers can be over an hour.

[179] The backhaul cost conservatively assumes the distance between the collocation and the CLEC's switch node is 3 miles and the backhaul is provided via ILEC special access.
[180] The $40.60 cost assumed 12 lines were being served at the customer's location. That cost includes the transmission equipment, the switch investment and transport facilities. For an discussion of these costs, please see the Direct Testimony of Michael R. Baranowski.

Much attention has been given lately to the hot cut process for individual customer analog loops. In that process, the movement of the wires is done by the ILEC in the ILEC central office. With a DS1 based service, a hot cut with the accompanying loss of service is still necessary; the difference is that it is performed by the CLEC at the customer's premises instead of the ILEC at the ILEC central office.

The TRO may have created the mistaken impression that hot cuts are unnecessary for customers served via a DS1 based service when it stated, "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."[181] While it is true that hot cuts at the incumbent LEC's central office would be avoided, it is also true that since wires at the customer's location must be disconnected and reconnected, a hot cut at the customer's premises would be required.

Q. DOES THE MIGRATION OF A CUSTOMER'S SERVICE TO A DS1 BASED SERVICE ALSO REQUIRE THE PORTING OF THE CUSTOMER'S TELEPHONE NUMBERS?

A. Yes, it does. Virtually all customers – and certainly all business customers -- want to retain their existing telephone numbers if they change their local service

[181] TRO, n. 1544.

provider. Thus, a customer served by a DS1 loop must still have its numbers ported. The steps needed to port a customer's telephone number when the CLEC uses a DS1 based service are the same as if the CLEC migrated multiple analog loops.[182]

Q. ARE THERE ANY REASONS WHY A CUSTOMER USING MULTIPLE POTS LINES WOULD NOT BE INTERESTED IN A DS1 BASED SERVICE?

A. Yes, there are several. First, the customer must set aside inside and protected floor or wall space to accommodate the CLEC's channel bank, power management and backup battery equipment. With a POTS service such as UNE-P (and even UNE-L), there is no need to install and maintain any CLEC equipment at the customer's premises. Thus, it is likely that some customers will be unable or unwilling to set aside the protected space needed to accommodate the required CLEC equipment. This, in turn, inherently limits the number of customers that a CLEC could serve with a DS1 based service. At a minimum, it takes additional sales and related support resources to convince a customer to allow the CLEC to make the necessary changes at its premises.

Second, even if the customer were willing to devote protected space to house the equipment needed to support a DS1 based service, it must also be subjected to a

[182] Therefore, the ILEC must still establis hed the ten digit trigger for the ported numbers before the port, and the CLEC must still send the message to port the customer's telephone numbers to the Number Portability Administration Center ("NPAC") as soon as possible after the customer's inside wire has been connected to the channel bank.

premises visit by the CLEC technician and cope with a service outage. These inconveniences will also limit the number of customers that are willing to change from multiple ILEC-provided POTS lines to a CLEC-provided DS1 service. And again, convincing the customer to subject itself to these inconveniences requires considerably more sales support than a UNE-P order, which does not (or at least should not) require the customer to suffer any inconveniences at all.

E. THE COST ANALYSIS

Q. WHAT TYPES OF COSTS ARE GENERALLY CONSIDERED IN THE ANALYSIS?

A. Generally speaking, the analysis considered three types of costs. These include: 1) investment in customer premises equipment ("CPE") and network equipment, 2) non-recurring costs and 3) monthly recurring expenses.

Q. HOW WERE THE CPE AND NETWORK INVESTMENT COSTS CONSIDERED?

A. The investment costs were converted to an amortized monthly cost using the PMT function in Microsoft Excel. The costs were amortized based on a CLEC cost of capital of 11.63 percent.[183] For the CPE, I used an economic life of ten years in the amortization calculation. As previously discussed, the switching investment and the costs of the transport necessary to carry calls to and from the DS1 customer was converted to a monthly recurring cost.

[183] *See* note 173.

Q. HOW WERE THE NON-RECURRING COSTS CONSIDERED?

A. The non-recurring costs were converted to an amortized monthly cost again using the PMT function in Microsoft Excel. The non-recurring costs were amortized over a two-year period. I estimated that the expected time a CLEC would be serving an average customer would be two years.[184]

Q. HOW WERE THE MONTHLY RECURRING EXPENSES CONSIDERED?

A. The monthly recurring expenses were used in the analysis without adjustment.

Q. HOW DID YOU ARRIVE AT THE TOTAL MONTHLY COST FOR THE DS1 BASED SERVICE?

A. The analysis separately calculated the DS1 costs for each rate zone. In calculating the DS1 costs, I first added the: 1) amortized monthly CPE investment, 2) amortized monthly network equipment investment, 3) amortized monthly non-recurring costs and 4) monthly recurring expenses. Then, I divided that total by the rate zone specific monthly recurring costs for UNE-P. This is the cross over point because it represents the number of UNE-P lines that would create costs equal to the monthly costs to provide a customer a DS1 service. After calculating the cross over point for each rate zone, I next calculated a statewide weighted average cross over point. The weighted average cross over point was based upon

[184] Industry analysts have estimated an annual churn rate for CLECs of 42.8 percent of the customer base. *See* Banc of America Securities, Research Brief Wireline Telecommunications, *AT&T Corporation A Case for Consumer Services*, April 30, 2003, p. 10. Using that number, a CLEC will, on average, lose a customer within two years.

the percentage of ILEC loops that were found in each rate zone and it was rounded up to the next whole number. The spreadsheets supporting the analysis are provided in **Exhibit JFF-6**.

F. CONCLUSION

Q. WHAT ARE YOUR OVERALL CONCLUSIONS FOR THE CROSS OVER POINT?

A. When a fact-based, quantitative analysis is performed using cost information from this state, the point at which it is economically rational for a CLEC to use a DS1 based service is when a customer 12 or more lines. The evidence used to arrive at this conclusion is objective and quantitative and the analysis performed was granular, specific to this state and representative of how a CLEC would view a decision to serve a customer with UNE-P or a DS1 based service. As previously discussed, the Commission can easily use the analysis to calculate cross over points for whatever markets the Commission eventually identifies.

VI. IMPAIRMENT ANALYSIS FOR MASS MARKET LOCAL SWITCHING: INTERPRETATION AND APPLICATION OF THE FCC TRIGGERS

A. IMPAIRMENT ANALYSIS GENERALLY

Q. HOW DOES THE *TRIENNIAL REVIEW ORDER* ANALYZE IMPAIRMENT FOR MASS MARKET LOCAL SWITCHING?

A. As the FCC recognized, "incumbent LECs [must] make an element available so long as requesting carriers would be impaired without it."[185] The FCC made a national finding that CLECs are impaired without access to unbundled local switching to serve mass market customers.[186] Any impairment analysis for mass market switching must begin then with the FCC's finding of nationwide impairment. At the same time, as discussed above, the FCC delegated to the states the role of determining whether an exception should be made in any particular area to the national impairment finding. The FCC identified two processes for making this investigation, one a more streamlined determination of whether certain "triggers" have been met, and the other a full analysis of the economic and operational barriers to entry that CLECs face in attempting to serve mass market customers without access to unbundled local switching.[187] It is essential to recognize that both analytical processes are intended to – and indeed must – reach the same answer to the same question, *i.e.*, whether the

[185] TRO, ¶ 117.
[186] *Id.* ¶ 502.
[187] *Id.* ¶¶ 462, 463.

defined area supports multiple, viable entrants that can serve mass market customers using non-ILEC switching. Thus, both analytical processes are also part of the broader analysis to determine "whether lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers that are likely to make entry into a market uneconomic."[188] Both prongs of the impairment test are intended to provide a "less demanding" standard than "necessary" when evaluating the barriers to entry that exist in the absence of access to ILEC-provided unbundled switching.[189]

Q. WHAT ANALYTICAL STEPS SHOULD THE COMMISSION FOLLOW IN CONDUCTING THE IMPAIRMENT ANALYSIS?

A. In order to apply the triggers and full-scale impairment analysis, state commissions are required to define a "geographic market," a process that the FCC recognizes must entail the gathering and analysis of detailed data.[190] A more complete discussion of how the Commission is to define the relevant geographic areas within Washington, using the factors outlined in the *Triennial Review Order,* is contained in section III of my testimony, *supra*.

In any geographic area in which an ILEC challenges the national finding of impairment, the *Triennial Review Order* directs state commissions to first apply defined triggers based on "objective" data. If the triggers are met, then the state commissions must conclude that a lack of impairment exists unless exceptional

[188] *Id*. ¶ 56.
[189] *Id*. ¶71.
[190] *Id*. ¶ 495.

barriers prevent other competitors from entering without unbundled switching.[191] If the triggers are not met, the state commissions may then (if requested) conduct an analysis to determine whether operational and economic conditions in the defined geographic area allow multiple competitors to enter economically without access to the ILEC's unbundled switching.[192] If impairment is found to exist under this unabridged impairment analysis, the states are to look at whether all of the identified impairments can be eliminated if unbundled switching were available on a "rolling acquisition" basis that enables CLECs to acquire customers using UNE-P for a minimum of 90 days and then transition them to a CLEC switch.[193]

Q. HOW DOES APPLICATION OF THE TRIGGERS FOR MASS MARKET UNBUNDLED SWITCHING FIT WITHIN THE OVERALL IMPAIRMENT ANALYSIS?

A. Both the trigger analyses and the full-scale economic and operational impairment test are intended to determine whether CLECs are able to serve mass market customers without access to the incumbent's unbundled local switching. As the FCC held, "[a] requesting carrier is impaired when lack of access to an incumbent LEC network element poses a barrier or barriers to entry, including operational and economic barriers, that are likely to make entry into a market uneconomic."[194]

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[191] *Id.* ¶ 462.
[192] *Id.* ¶ 463.
[193] *Id.* ¶ *7.*
[194] *Id.* ¶ 7.

The trigger analysis focuses exclusively on the *actual* competition that exists today.[195] In contrast, even if a trigger is not met, the full-scale impairment test takes into account the level of actual competition that exists today, and also considers whether existing conditions would allow an efficient CLEC to profitably enter a market without access to unbundled switching.[196] Under both prongs of the impairment analysis, actual marketplace evidence is reviewed to determine "whether *new entrants*, as a practical matter, have surmounted barriers to entry in the relevant market."[197] Both the triggers and the full-scale impairment test are part of a holistic approach to determining whether CLECs have (under the former test), or reasonably could (under the latter test), overcome the general economic and operational obstacles to entry without access to unbundled switching.[198] Critically, both tests, as all unbundling decisions, must yield results that are "economically rational."[199]

[195] *Id*. ¶¶ 461 & 498.
[196] *Id*. ¶ 463.("[S]tates must consider evidence of actual competitive deployment of local circuit switches, operational barriers to competitive entry, and economic barriers to competitive entry.")
[197] *Id*. ¶ 93.
[198] *Id*. ¶71.
[199] *Id*. ¶ 78.

B. IMPAIRMENT ANALYSIS UNDER THE TRIGGER PRONG

Q. HOW ARE THE TRIGGERS FOR MASS MARKET UNBUNDLED LOCAL SWITCHING DEFINED?

A. The FCC has established two triggers for state commissions to use to determine if CLECs have overcome the nationally identified impairment with respect to mass market switching in a specific geographic area. The first trigger analyzes whether at least three competitors are actively using their own switching to serve residential and small business customers in the identified area. The second trigger examines whether at least two unaffiliated wholesalers are providing unbundled switching, and whether they are willing and operationally able to meet the switching needs of all competing providers serving the mass market in the area.[200] Although the FCC recognized that there is little evidence that such wholesalers currently exist,[201] the *Order* includes this alternative trigger in anticipation of possible market changes and for potential application in future impairment reviews.

Q. WHAT IS THE COMMISSION'S ROLE IN INTERPRETING AND APPLYING THE MASS MARKET SWITCHING TRIGGERS?

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[200] *See Id.* ¶¶ 498-505.

[201] "[W]e have little to no evidence of a wholesale market for switching services from alternative vendors." *Id.* ¶ 113.

A. The FCC has expressly endorsed the Commission's authority to interpret and apply the trigger aspect of the impairment analysis for mass market switching. Indeed, the FCC expressly stated:

> As we examine the evidence of facilities deployment by competitive LECs in the specific UNE discussions, we will give it substantial weight, but we do not agree that we must find it conclusive or presumptive of a particular outcome *without additional information or analysis*.[202]

The Commission must therefore exercise appropriate discretion in applying the triggers, especially since the FCC made its national impairment finding on the basis of substantial record evidence. The FCC recognized that state commissions are best positioned to "gather and assess the necessary information"[203] to make the "granular" reviews required by its decision and the D.C. Circuit's prior ruling.[204] Thus, it is proper – and indeed essential -- that the Commission exercise its expertise and judgment in applying triggers.

Indeed, the ILECs cannot reasonably be heard to argue otherwise. For example, in their filings with the Court of Appeals objecting to the FCC's decision, USTA, Verizon, BellSouth and SBC claimed that the impairment analysis in the *Triennial Review Order* represented a "blank check abdication" by the FCC of the unbundling determinations to the state commissions.[205] Further,

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[202] *Id.* ¶ 94 (emphasis added).
[203] *Id.* ¶ 188.
[204] *Id. 493.*
[205] Reply Brief in Support of Petitions for Writ of Mandamus to Enforce the Mandate of this Court, *United States Telecom Assoc. v. FCC,* Nos. 00-1012, 00-1015, p.1 (Oct. 16, 2003).

the ILECs vigorously challenged whether the FCC's "competitive triggers" provide "meaningful limits" on the discretion of state commissions.[206]

1. Self Providers

Q. HOW SHOULD THE COMMISSION'S DISCRETION BE EXERCISED?

A. Perhaps the most critical area in which the Commission must exercise its judgment is in developing the quantitative and qualitative criteria it will apply to the carriers that it will "count" for purposes of meeting the triggers. The TRO provides many guidelines to state commissions in this regard. In order for any carrier to count in the trigger analysis it must meet all qualifications outlined in the *Triennial Review Order*.

Q. WHAT SHOULD THE COMMISSION DO TO PREPARE ITSELF BEFORE IT APPLIES THE TRIGGERS?

A. At a minimum, the Commission should familiarize itself with the facts that give rise to CLECs' economic and operational impairment in Washington. A background in this evidence is important to understand why impairment exists and the customer affecting implications of a decision that a trigger has been met.[207]

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[206] *Id*. at 9; *see also id*. at 9 n. 4 ("The Order abdicates to the states tasks that are far from 'mechanical.'")

[207] Further, as a practical matter, a party raising a challenge on appeal would be entitled to demonstrate that CLECs remain economically and/or operationally impaired even though a trigger was declared to be met.

Q. WHAT CRITERIA MUST A CARRIER MEET IN ORDER TO "COUNT" AS A SELF PROVIDER UNDER THE FCC TRIGGERS FOR MASS MARKET UNBUNDLED SWITCHING?

A. As a threshold matter, any carriers relied upon in the self-provisioning trigger analysis must be unaffiliated with the ILEC and with one another.[208] Assuming the affiliate test is met, a qualifying competitive switch provider must be using its own self-deployed, "separate switches" to "actively provid[e]" voice service to mass market customers.[209] Critically, any candidate CLEC also must be "currently offering and able to provide service, and [be] likely to continue to do so."[210] All three "trigger" carriers must be "serving mass market customers in a particular market with the use of their own switches."[211] And, each such provider must be a "true alternative" to the ILEC.[212]

Each of these qualifications must be met before the Commission may find that the self-provisioning trigger is satisfied. Together, these self-provisioning criteria require the Commission to determine if today's mass market customers (both residential and small business) wherever located within the designated geographic area have multiple independent, competitive alternatives to the incumbent's voice grade service. Each of the carriers must be actively providing such competitive

[208] *Id.* ¶ 499.
[209] *Id.*
[210] *Id.* ¶ 500.
[211] *Id.* ¶ 501.
[212] *Id.* at ¶ 499.

service, and be likely to continue to actively provide that service over its own switches in the future.

Q. HOW DOES A CARRIER QUALIFY TO BE A TRIGGER CANDIDATE?

A. Application of the FCC's triggers for mass market switching begins with the identification of potential candidates for the analysis. The intent of the triggers is to identify competitors who "demonstrate[] adequately the technical and economic feasibility of an entrant serving the mass market with its own switch."[213]

In making this identification in a trigger analysis, the Commission, by definition, looks only at "actual deployment," *i.e*., the places and customers that a CLEC "currently" serves.[214] Thus, the Commission cannot make any assumptions regarding a CLEC's *potential* ability to serve other customers or locations without moving away from a trigger analysis and to an unabridged "potential deployment" analysis. This is true for two independent reasons. First, the "objective" data reviewed in the trigger analysis does not include information on why or how the CLEC was able to provide service without using the ILEC's switching, and the CLEC's success may well be the result of unique or idiosyncratic circumstances. Second, any conclusions about a CLEC's ability to expand its offering beyond the offices where it currently offers service necessarily require predictive judgments that are solely the function of the "potential deployment" test.

[213] *Id*. ¶ 501.
[214] *Id*. n. 1561. *See also id*. ¶ 500 (requiring that trigger candidates be "currently" offering service)

Q. WHAT DOES IT MEAN THAT A CARRIER SELF DEPLOYING ITS OWN SWITCHING MUST BE A "TRUE ALTERNATIVE" TO THE ILEC?

A. Each competitive switch provider counted in the self-provisioning trigger must be a "true alternative" to the ILEC.[215] The FCC determined that its impairment analysis "should center on those telecommunications services that competitors provide in direct competition with the incumbent LECs' core services," including local exchange services, particularly POTS.[216] While the FCC adhered to the requirement that a Track A facilities-based carrier for purposes of Section 271 must be a "competing" provider, the *Triennial Review Order* clarifies that the standard used in the Track A analysis is less demanding than that applicable to the impairment standard.[217] Thus, only head-to-head competitors of the ILEC should be considered.

[215] *Id*. at 499.
[216] *Id*. ¶ 139.
[217] *Id*. ¶ 230 (noting that wireless substitution was relied on in New Mexico and Nevada section 271 proceedings, but that CMRS providers do not yet provide the quality and breadth of services equal to the incumbent for purposes of impairment analysis); *see also* n. 1361 (finding wireless substitution to support Track A findings was "based on a different analysis than that required under the necessary and impair standards.")

Q. EXAMINING THE SPECIFIC ELIGIBILITY CRITERIA IN THE *TRIENNIAL REVIEW ORDER*, WHAT SIGNIFICANCE SHOULD BE GIVEN TO THE REQUIREMENT THAT A COMPETITIVE SWITCH PROVIDER MUST BE "ACTIVELY PROVIDING" VOICE SERVICE?

A. As discussed above, in order to be eligible to meet the self-provisioning trigger, a competitive carrier must be "actively providing" voice service to mass market customers in the market.[218] The "actively providing" requirement should be interpreted to mean, among other things, that any candidate CLEC must be "currently offering and able to provide service, and [be] likely to continue to do so."[219] Thus, for example, a carrier that is using its own switching only to serve "legacy" customers and not adding significant numbers of new UNE-L customers cannot be deemed to be "actively" providing service. Rather, in order to count in the trigger analysis, a carrier should be in a customer acquisition mode, focused on growing its business through expanded use of self-deployed switching capacity.

Q. MUST A CARRIER BE ACTIVELY PROVIDING VOICE SERVICE, AS OPPOSED TO, FOR EXAMPLE, DATA SERVICE ONLY, IN ORDER TO COUNT IN A TRIGGER ANALYIS?

A. Yes. The FCC was explicit that "the identified competitive switch providers should be actively providing ***voice service*** to mass market customers in the

[218] *Id*. ¶ 499.
[219] *Id*. ¶ 500.

market."[220] This requirement is consistent with the FCC's definition of the mass market, which consists of "analog voice customers that purchase only a limited number of POTS lines, and can only be economically served via DSO loops."[221] Thus, a carrier that does not offer voice service, or that offers it only incidentally as part of an offer focused on delivery of other services, should not be eligible to satisfy the self-provisioning trigger. Under this analysis, a carrier offering data service over analog DSL lines, for example, is not serving traditional POTS end users.

Q. CAN A SWITCHING TRIGGER BE MET IF THE TRIGGER NOMINEES ARE NOT ACTIVELY SERVING BOTH RESIDENTIAL AND SMALL BUSINESS CUSTOMERS USING THEIR OWN SWITCHES?

A. No. The mere presence of a switch-based CLEC cannot reasonably provide evidence of non-impairment in serving the mass market unless there is evidence that it has the "ability to serve each group of customers" within the relevant geographic area.[222] As defined in the *Triennial Review Order,* the "mass market" consists of *both* residential and small business customers who can only be economically served through the use of voice grade loops.[223] The treatment of residential and small business customers as a single customer group is consistent

[220] *Id*. ¶ 318 (emphasis added).
[221] *Id*. ¶ 497.
[222] *Id*. ¶ 495.
[223] *Id*. ¶ ¶ 127, 459.

with the approach the FCC took in the *Bell Atlantic/NYNEX Merger Order*.[224] Moreover, it is an appropriately "granular" view of the marketplace, because it groups together all customers served by a specific network architecture (i.e., voice grade loops).[225] Accordingly, CLECs that do not provide service to all types of customers in the designated geographic area cannot reasonably qualify for purpose of the trigger analysis.

Again, the trigger analysis is a surrogate for the results that would be obtained in a full review of operational and economic barriers faced by carriers serving both residential and small business customers. Thus, a trigger analysis that relies primarily on evidence of competing switch providers that serve only small business lines (with average revenues exceeding those of all mass market customers on average) would not provide an economically rational view of the impact of a determination that the trigger is met for the mass market as a whole, which predominantly includes residential customers. Thus, without convincing proof that three viable competitors are using their own switches today to serve residential customers generally, the Commission should not find that the trigger has been met. Indeed, the "clear and measurable benefit to consumers"

[224] *Bell Atlantic/NYNEX Merger Order*, 12 FCC Rcd at 20016, para. 53.
[225] Indeed, this approach is further supported by the requirement that the Commission exclude from the "mass market" customers actually served with multiple voice grade loops that could economically be served by DS1 loops. ¶ 497

unbundling standard cannot be met if *either* residential *or* small business customers as a class are disregarded when applying the triggers.[226]

Q. SHOULD A COMPETITIVE SWITCH PROVIDER SERVING AN AREA SMALLER THAN THE DEFINED GEOGRAPHIC MARKET AREA COUNT TOWARD MEETING THE TRIGGER?

A. No. Each carrier that "counts" toward the trigger must be "serving mass market customers in a particular market with the use of [its] own switch[]."[227] Thus, a carrier reaching customers on a facilities basis in an area smaller than the defined geographic market does not qualify for purposes of determining whether the triggers are met in a larger area. Otherwise, the consumer welfare mandates of the *Triennial Review Order* discussed below cannot be satisfied, because there is no reasonable expectation that all customers within the defined area will have the benefit of multiple, alternative sources of facilities-based competition.

Q. IS THE VIEW THAT CARRIERS MUST BE SERVING THE ENTIRE MARKET CONSISTENT WITH THE FCC'S REASONING?

A. Yes. The FCC's potential deployment analysis recognizes that a carrier that serves less than the entire mass market cannot meet the requirements of the trigger analysis. In its discussion of the evidence of actual deployment of local circuit switches as part of the potential deployment analysis, if the state finds that a competitor "is serving the local exchange mass market with its own switch" the

[226] *Id*. n. 1332.
[227] *Id*. ¶ 501.

FCC directs the state commissions to "consider whether the *entire* market could be served by this switch."[228] (emphasis added) Recognizing that a competitor serving less than the entire market cannot satisfy the trigger (the actual deployment prong), the FCC took an additional step of requiring the states to decide if that switch could be used to service the entire market (the potential deployment analysis). Clearly, the FCC's preferred outcome is that competitors would be serving the entire market.

An interpretation that a competitor must be serving the entire market before it can counted in the trigger analysis is also fully consistent with the effects of the enterprise loop and dedicated transport triggers analysis, which were unanimously agreed upon by the entire FCC and are the model for the switching triggers.[229] When those triggers are met, there is no question that all retail customers at a particular location (for loops) have a reasonable opportunity to obtain loop facilities from alternative suppliers.[230] Similarly, when the transport trigger is met, all CLECs needing to transport traffic along a particular route will have actual access to meaningful competitive alternatives to unbundled ILEC facilities.[231] Notably, in that context as well, the FCC expressed concern that if

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[228] *Id*. ¶ 510.

[229] The FCC majority emphasized that its approach to triggers for mass market switching is "essentially identical" to what the entire Commission agreed to with respect to the triggers for high capacity loops and dedicated transport. *Id*. n. 1315.

[230] The FCC's insistence that each end user should have the benefit of competitive alternatives is evident, for example, in its requirement that wholesale high-capacity loop providers have access to the entirety of a multiunit customer premises and that they offer alternative facilities on "a widely available wholesale basis." *Id* ¶ 337.

[231] *Id*. ¶¶ 329, 400-401.

the triggers are met carriers must "remain capable of serving end-user customers in all areas."[232] If the Commission were to use a less exacting standard in applying the mass market switching triggers, the results would not be consistent with those flowing from the use of the loop and transport triggers and would not be "economically rational,"[233] because consumers would be left unprotected from the ILEC's market power.

Thus a requirement that customers and locations within a defined geographic area may not be overlooked when applying the triggers is also consistent with the FCC's *explanation* of the impairment standard. With respect to the former, the FCC is clear that the competition thresholds incorporated in its current special access pricing flexibility rules (which granted such flexibility based on the percentage of central offices where CLECs are physically collocated within a Metropolitan Statistical Area (MSA)) are not a proper basis to measure impairment.[234] Rather, the FCC expressly *declined* to apply that same concept to impairment, because it recognized that even if competition "in some parts of a market" may be sufficient to constrain pricing throughout a larger area, it may be

[232] *Id.* ¶ 407.
[233] *Id.* ¶ 78.
[234] For purposes of setting its pricing flexibility rules, the FCC accepted (albeit incorrectly, as experience has shown) that facilities-based competition in some but not all locations within a geographic area may be sufficient to constrain anticompetitive pricing in the larger area. *Id.* ¶ 104. Notably, the FCC recognized in the Pricing Flexibility Order itself that the standards applicable to pricing flexibility would not necessarily be the same as those applicable to unbundling. *See Access Charge Reform*, CC Docket Nos. 96-262, 94-1, 98-157, CCB/CPD File No. 98-63, Fifth Report and Order and Further Notice of Proposed Rulemaking, 14 FCC Rcd 14221, 14224-25, (1999) (*Pricing Flexibility Order*).

"insufficient to demonstrate a lack of impairment."[235] The FCC explained that the distinction is that the competition threshold for pricing flexibility (*i.e.*, collocations in some but not all central offices throughout an MSA) is aimed only at protecting consumers from anticompetitive pricing, while the unbundling rules "go to asking whether entry into a market is economic and to serving a host of statutory goals beyond protecting consumers from anticompetitive pricing."[236] Thus, it is critical that a trigger cannot be met unless the "trigger eligible" carriers are able to offer service throughout the designated area.

Q. DO THE RBOCs AGREE THAT CARRIERS MUST BE SERVING THE ENTIRE MARKET TO QUALIFY AS TRIGGER CANDIDATES?

A. Apparently so. In their arguments to the Court of Appeals about the *Triennial Review Order*, the ILECs harshly criticized the FCC for setting higher competitive thresholds for unbundling than those incorporated in the current pricing flexibility rules.[237] In addition to complaining that the FCC should not have required actual competitive alternatives on a location-specific basis in its loop and transport impairment analysis, the ILECs also criticized the switching trigger for requiring that impairment be based on evidence of "mature" competition, rather than on the more amorphous "suitability" of a market for

[235] *TRO*, ¶104.
[236] *Id*.
[237] Reply Brief in Support of Petitions for Writ of Mandamus to Enforce the Mandate of this Court, *United States Telecom Assoc. v. FCC*, Nos. 00-1012, 00-1015, p.12-13 (Oct. 16, 2003).

facilities-based competition.[238] Those criticisms, however misplaced, underscore that the *Order* requires evidence that a market is already "fully competitive" based on the service provided by "four operating facilities-based competitors (including the incumbent)" before a self-provisioning trigger can be met.[239]

Q. WHAT THRESHOLDS SHOULD THE COMMISSION ESTABLISH FOR HOW MANY MASS MARKET CUSTOMERS A COMPETING SWITCH PROVIDER MUST SERVE?

A. A CLEC that only serves a small number or proportion of customers, or focuses only on a niche within the mass market is not serving a competitively meaningful number of customers. Thus, its presence is not meaningful evidence of non-impairment.[240] Moreover, a CLEC that lacks adequate scale in its current operations does not demonstrate a significant likelihood that it will be able to "continue" to offer facilities-based service,[241] especially in the mass market, which the FCC recognizes is characterized by both low margins and substantial churn.[242] Indeed, scale is critical in the mass market, because competitors cannot rely on long term contracts to assure that they will recover the additional costs they must incur (a large portion of which are sunk) to provide service for each

[238] *Id*. at 11.
[239] *Id*.
[240] *Id*. ¶ 438 (Bell Operating Company claim that three million residential lines were served using CLEC switches as of year-end 2001, even if accepted as true, represents only a small percentage (less than three p ercent of reported residential voice lines) and does not accurately depict entering competitors' abilities to overcome barriers to entry from hot cut process to serve the mass market using incumbent LEC loops) .
[241] *See Id*. ¶ 500.
[242] *Id*. ¶¶ 471, 474.

individual analog loop.[243] Notably, the FCC recognizes that "if scale economies are present, it would be difficult for an entrant with a small market share to achieve costs as low as the TELRIC price."[244]

Nor does a carrier that serves only a niche demonstrate that it is capable of serving "the mass market." This is particularly important, because the FCC's test for economic impairment properly assumes that an efficient CLEC can only expect to earn the "typical revenues gained from serving the average customers" in the mass market.[245] This requirement is sensible for many reasons, not the least of which is that any other standard (particularly one based on so-called "cherry-picking") would effectively prevent most mass market customers from enjoying the benefits of competition. Although all carriers (including the ILEC) reasonably focus on attracting the highest revenue customers, no carrier can expect to win and retain a disproportionate share of the small number of high margin customers.[246] Accordingly, if a proposed "trigger" CLEC only serves customers with high revenues, its existence clearly does not demonstrate that it can (or would) serve the mass market in general. And just as important, it does not

[243] *Id*. ¶ 237.
[244] *Id*. n. 379.
[245] *Id*. ¶ 472.
[246] For example, if the efficient CLEC needs about a 10 percent market share in order to achieve its efficient scale and only 20 percent of customers qualified as the "high revenue" segment, that carrier would need to win -- and retain -- *half* of all those high value customers to achieve the necessary scale. Not only is this an irrational assumption with respect to initial customer acquisitions, it is even more irrational to assume that the ILEC would not take extraordinary steps to win those customers back.

demonstrate that the "efficient CLEC" reviewed under the potential deployment test would be able to serve "the mass market" profitably.

Therefore, in order to be eligible to meet a trigger, *each* nominated self-provisioning carrier should be *currently* providing service to a competitively meaningful number of customers, which, consistent with the FCC's findings in the *Triennial Review Order*, should be more than three percent of the total mass market demand in a specific area.[247] Moreover, in order to be able to maintain the consumer benefits already achieved, those carriers should also be capable of serving the entire UNE-L and UNE-P demand already established in that same area, and be able to continue to do so for the foreseeable future.

Q. WHERE DOES THE 3 PERCENT RECOMMENDATION COME FROM?

A. When presented with claims that three million residential lines use competitive switches (less than 3 percent of residential voice lines), the FCC concluded that the line count "does not accurately depict the ability of an entering competitive LEC to overcome the barriers to entry generated by the hot cut process, and to serve the mass market using incumbent LEC loops."[248] Thus, self-providers serving competitively insignificant numbers of mass market customers cannot act as proxies for the likelihood that further UNE-L entry is economically or operationally feasible.

[247] *Id*. ¶ 438 (finding that national facilities-based competition of three percent insufficient to demonstrate a lack of impairment).
[248] *Id*. ¶ 438-439.

Overall, when considering a reasonable number or percentage of lines that would need to be served within a defined market to make a carrier "count" in the trigger analysis, the Commission should be mindful of the FCC's acknowledgement that "producing telecommunications services requires very substantial economies of scale and scope."[249] Many of the competitors' average costs will be higher than those of the incumbent, because competitors are "likely to achieve *substantially smaller* levels of sales than the incumbent."[250] Further, the current number of lines a carrier serves using its own switch may be small, or its new acquisition rates limited, because of existing limitations in its switching capacity. Because the maturity, extent and stability of facilities-based competition that is not reliant on the incumbent's unbundled switching is key, the Commission should "count" in the trigger analysis only those carriers who have achieved at least the minimal penetration rate necessary to attain efficient scale.

As discussed above, the trigger analysis cannot rationally result in a finding of impairment when the opposite result would be reached under the operational and economic impairment analysis. Accordingly, it may be reasonable to consider the size of the customer base that is necessary for a hypothetical, efficient CLEC using optimal technology to make sound investments and offer service to the mass market economically over non-incumbent facilities. To the extent any proposed carrier identified as a self provider is not individually reaching that number or

[249] *Id.* ¶ 86.
[250] *Id.* ¶ 87 (emphasis added).

percentage of mass market customers, the Commission should be very concerned that it does not qualify as a provider actively serving the mass market. It may be instructive for the purpose of gauging the penetration a carrier would need to achieve to make a mass market UNE-L offer viable for the long term to assume, at a minimum, a 5 to 10 percent penetration (per carrier) of the lines served in wire centers exceeding 5,000 lines.[251] While a 5 to 10 percent penetration rate may not in fact cause such an entry to be economic, it provides a bare minimum standard for determining whether each carrier is "actively providing" service in the defined market and likely to be able to continue to do so in the future.[252]

Q. SHOULD CARRIERS DEPLOYING ENTERPRISE SWITCHES AND ONLY INCIDENTALLY PROVIDING COMPARATIVELY FEW ANALOG LOOPS COUNT IN THE TRIGGER ANALYSIS?

A. No. A CLEC serving predominantly enterprise customers over digital loops and using its enterprise switch only incidentally to provide a small number of analog lines (*e.g.*, for fax service) should not be counted for purposes of applying a trigger. Neither the actual experience, nor the business plan, of such a CLEC demonstrates it is economically feasible to serve typical mass market customers.

[251] *Id.* n. 1493 (FCC notes that even RBOC data do not support a finding of non-impairment in offices of 5,000 lines or less)

[252] If competitive mass market penetration in a specific area represents a greater total share than three times the minimum established by the Commission, the Commission should assure itself that the trigger companies could absorb all of that demand if it were to find a trigger is met and UNE-P would no longer be available.

Indeed, the FCC explicitly concluded that "switches serving the enterprise market do not qualify for the triggers."[253]

Q. SHOULD CARRIERS WHOSE MARKET ENTRY PLAN IS NOT REPRESENTATIVE OF THE ABILITY OF OTHER CLECs TO ENTER USING THEIR OWN FACILITIES COUNT IN THE TRIGGER ANALYSIS?

A. For reasons similar to those stated above, a carrier that serves only a defined niche in the mass market also should not qualify as a carrier that meets a trigger. Success in executing an idiosyncratic market plan, particularly one that was based a unique set of circumstances that applies only to a limited set of customers, does not demonstrate that that carrier could reasonably serve the mass market generally. Carriers that serve "niche" customer segments (*e.g.*, customers with poor credit, high revenue customers) also should not be counted in the trigger analysis because their actual use of switching does not reflect competitors' ability to serve average customers that generate typical revenues.

[253] *Id.* ¶ 508.

Q. MAY THE COMMISSION SIMPLY "COUNT TO THREE" WITHOUT REGARD TO THE SUITABILITY OF A SELF-PROVISIONING CLEC AS A PROXY FOR ECONOMIC ENTRY OPPORTUNITIES WITHOUT ACCESS TO UNBUNDLED SWITCHING?

A. Absolutely not. Identifying CLECs that are actively serving the mass market using their own switches is a valid exercise only if the identified competitors have staying power and are representative of similar opportunities available to other competitors. Indeed, if the trigger analysis were intended as an entirely mechanical task, the FCC would not have concluded that it should be conducted by state commissions, which the FCC found are best positioned "to gather and access the information" necessary to make such determinations.

Q. SHOULD CUSTOMER WELFARE BE TAKEN INTO ACCOUNT IN THE TRIGGER ANALYSIS?

A. Yes. In describing the impact of its impairment analysis for unbundled switching, the FCC's majority stated that its approach "maintains appropriate incentives ***without throwing away the competition that exists today***."[254] Thus, the FCC assumes that application of *either* the trigger *or* the unabridged impairment analysis *will not reduce* the competitive options available today to mass market

[254] *Id*. n. 1365 (emphasis added).

consumers.[255] Thus, it recognized that the "clear and measurable benefit to consumers" standard must be applied when addressing unbundled switching.[256] Moreover, the FCC recognized that impairment may be found even in places where sufficient competition exists to constrain prices and to protect consumers from anticompetitive pricing.[257] This is a dramatic statement of the quality and quantity of switch-based competition that state commissions should find before concluding that CLECs in a particular geographic area are no longer impaired without access to mass market switching. To apply a familiar dictum from the field of medicine to the local competition decisions the Commission will be facing, "First, do no harm." It would be antithetical to the goals of the Act if a Commission decision on triggers resulted in less consumer choice, less competition and higher prices.

Q. HOW DID THE FCC'S *ERRATA* IMPACT HOW THE COMPETITIVE TRIGGERS ARE TO BE APPLIED IN A DEFINED MARKET?

A. The FCC's Errata modifies language in the *Triennial Review Order*, for example in paragraph 499, regarding application of the triggers within a geographic area. The FCC issued the Errata following outcries from the ILECs complaining that the original language of the order would have required that *each* unaffiliated self-

[255] Indeed, the entire FCC also stated its expectation that where consumer benefits do not follow from increased CLEC investment in facilities because such investment is uneconomic, those network elements will continued to be unbundled. *Id.* n. 233.
[256] *Id.* ¶ 1332.
[257] *Id.* ¶ 104 ("competition in some parts of a market may be sufficient to constrain prices, but insufficient to demonstrate a lack of impairment").

provider counted for a trigger be economically and operationally capable of serving *each and every* individual customer, without exception, within the defined geographic area. In other words, the existence of a single customer exception would have disqualified a provider from being counted as a trigger. This extreme reading of the original language, which assumed a requirement of four facilities-based competitors (including the incumbent) of "carrier of last resort" size to meet the trigger was hyperbolic. Thus, the Errata addresses the ILECs' essentially phantom concern, but it does not and cannot turn the entire order on its head. Indeed, the ILECs themselves have argued an errata cannot be relied upon to make substantive changes to an FCC order.[258] Nor can the removal of a few sentences change the entire tenor of a 500-page order. Indeed, the ILECs have further complained that the "so called erratum replaces a standard that was affirmatively inconsistent" with earlier Court of Appeals guidance on unbundling "with no standard at all."[259] But the ILECs are wrong when they argue that the order leaves state commissions "standardless" with regard to the triggers.

Q. HOW SHOULD THE COMMISSION EVALUATE THE DATA PRESENTED FOR A TRIGGER ANALYSIS, SINCE THOSE DATA ARE

[258] *See, e.g.*, Ex Parte Letter from Joseph Mulieri, Verizon, to Marlene Dortch, FCC (filed CC Docket 94-157, July 21, 2003), *supra*, found at http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6514286634.

[259] Reply Brief in Support of Petitions for Writ of Mandamus to Enforce the Mandate of this Court, *United States Telecom Assoc. v. FCC*, Nos. 00-1012, 00-1015, p.11 n. 8 (Oct. 16, 2003).

NOT DIRECTLY RELATED TO A COMPREHENSIVE REVIEW OF ECONOMIC AND OPERATIONAL IMPAIRMENT?

A. The result of any rational trigger analysis is a surrogate for the results that would be obtained after a complete review of the facts on economic and operational impairment. Indeed, the FCC stated that evidence of actual competitive use of alternative network elements is to be used to "show[] . . . whether new entrants, as a practical matter, ***have surmounted barriers to entry*** in the relevant market**.**"[260] Part of the challenge for state commissions, however, is that there are no studies proving out the reliability of the trigger analysis. Nor are there any studies that verify the adequacy of the trigger analysis as a substitute for a detailed impairment analysis under a variety of conditions.

On the other hand, it is clear that use of a rote shorthand formula cannot reasonably substitute for a more detailed review unless experience has shown that the former virtually always arrives at the same results as the latter. Therefore, the Commission should review all data presented in support of a trigger analysis with care, and it should develop threshold criteria for applying those data that reasonably assure that a trigger will only be met in areas where CLECs have in fact "surmounted" the nationally recognized entry barriers.

[260] TRO, ¶ 93. This is consistent with the use of abbreviated versions of analysis in other legal contexts, which is justified only by a demonstration that the use of a "short form" analysis does not impact the reliability of results.

Q. HOW SHOULD THE COMMISSION ASSURE ITSELF THAT THE TRIGGER ANALYSIS PRODUCES A RATIONAL RESULT?

A. The underlying assumption of the *Triennial Review Order* is that the triggers will be met only where the defined area: (1) already supports multiple, actively competitive carriers that use non-ILEC switching to serve the mass market and (2) can be expected to continue to do so in the future (3) without losing the competitive gains made to date. If the evidence does not provide strong support for such a conclusion, the Commission should find that the triggers are not met.

Q. IS MERE EVIDENCE OF FACILITIES DEPLOYMENT ALONE SUFFICIENT UNDER THE *TRIENNIAL REVIEW ORDER* TO DETERMINE THAT THE TRIGGERS HAVE BEEN MET?

A. No. As noted above, the FCC expressly rejected arguments by the ILECs that "evidence of facilities deployment by competitive CLECs" must or even can be treated as "conclusive or presumptive of a particular outcome ***without additional information or analysis***."[261] Thus, although evidence of actual facility deployment by CLECs "may indicate a lack of impairment," the FCC expressly disagreed with ILEC assertions that such evidence should be "dispositive of [or create] a rebuttable presumption of no impairment."[262] Instead, the FCC acknowledged that "[i]n deciding what weight to give this evidence" -- and thus

[261] *TRO*, ¶ 94 (emphasis added). The FCC expressly declined to presume, for example, that the facilities deployment levels sufficient to support a grant of pricing flexibility in a market would require a finding of lack of impairment. *Id*. ¶ 104.

[262] *Id*. ¶ 94.

whether it is probative of a claim of non-impairment -- a Commission must consider factors such as "***how extensively carriers have been able to deploy*** such alternatives, ***to serve what extent of the market***, and ***how mature and stable*** that market is."[263] Moreover, the FCC found that evidence that competitors using their own switches for other purposes have not converted them to serve mass market customers bolsters its findings that significant barriers make use of CLEC switching to serve such customers uneconomic.[264] Thus, any notion that the trigger analysis is simply a matter of counting switches, particularly those switches used to serve the enterprise market, must be soundly rejected.

Q. HOW DOES THE "LIKELY TO CONTINUE TO PROVIDE SERVICE" REQUIREMENT APPLY IN IDENTIFYING SELF PROVIDERS FOR THE TRIGGER ANALYSIS?

A. The "likely to continue" requirement is also critical in the trigger analysis. Without it, there is no assurance that any self-provider "counted" toward meeting the trigger has the sustained ability to serve the mass market economically without access to the incumbent's switching. Accordingly, carriers that have not executed a broad-based UNE-L entry strategy should not qualify in the Commission's analysis. For example, a carrier that is only pursuing a limited number of customers to absorb existing excess switching capacity using a controlled marketing strategy should be excluded. Such a carrier clearly does not

[263] *Id*. (emphasis added)
[264] *Id*. n. 1365 & n. 1371.

demonstrate that it is economically capable of expanding its mass market penetration using UNE-L. Indeed, such a carrier is real-world proof that its chosen form of entry is *not* economic, or at least is viable only for a limited number of customers rather than the mass market generally. In either case, its mere existence does not provide evidence that it (or any other CLEC) is not impaired in serving the mass market generally. And its inability to attain reasonable scale means that it has limited -- if any -- ability to constrain the ILEC's market power or to assure that mass market customers generally will be able to enjoy the lower prices, innovation and improved customer service that inevitably results from full and open competition.

2. Wholesale Trigger

Q. WHAT DID THE FCC OBSERVE ABOUT THE EXISTENCE OF THE WHOLESALE SWITCHING MARKET TODAY?

A. The FCC found that "no significant third-party alternatives to unbundling local switching exist."[265] Accordingly, it is doubtful that the wholesale trigger will be the focus of trigger applications regarding mass market switching.

Q. WHAT ARE THE ATTRIBUTES OF A QUALIFYING WHOLESALE PROVIDER UNDER THE MASS MARKET SWITCHING TRIGGER ANALYSIS?

[265] *Id*. ¶ 442.

A. Wholesale carriers must be "actively providing [on a wholesale basis] voice service used to serve the mass market, and be operationally ready and willing to provide service ***to all competitive providers in the designated market*.**"[266] Further, wholesale carriers should be capable of "provid[ing] competitive pressures on pricing and terms."[267]

Q. TO WHAT EXTENT SHOULD A QUALIFYING WHOLESALE CARRIER BE SERVING IN THE GEOGRAPHIC MARKET?

A. Satisfaction of this trigger must demonstrate that current UNE-P carriers and other future competitive providers can look to the identified wholesaler as an alternate source of unbundled switching. If in fact a carrier cannot fill that role, either because it is unwilling to do so or because no proof exists that it is operationally ready to do so, the carrier does not qualify for consideration under the trigger analysis. Thus, as the FCC emphasized in its discussion of wholesale alternative transport suppliers, the substitute facility must be "widely available" in order to count in the trigger analysis.[268]

Q. WHAT DOES IT MEAN TO BE OPERATIONALLY READY TO SERVE ALL COMPETING PROVIDERS IN THE GEOGRAPHIC MARKET?

A. To qualify as a third-party wholesaler under the trigger analysis, a carrier must be in all respects a substitute source of unbundled local switching. The ability to serve as an alternative to the incumbent requires more than just having sufficient

[266] *Id*. ¶ 499 (emphasis added).
[267] *Id*. ¶ 505.
[268] *Id*. ¶ 414.

switching capacity available, although limitations in that capacity obviously would disqualify a potential candidate. Beyond sufficient switching capacity, an unaffiliated wholesaler must be able to "provide a means of accessing the local loop," an attribute which the FCC found to be "a crucial function" of the incumbent's local circuit switch.[269] Further, a substitute wholesaler must offer competing providers the full range of pre-ordering, ordering and provisioning, maintenance, and billing functionalities necessary to support customer acquisition, migration, and care. And those operational support functionalities must be available on a scale sufficient to serve all CLECs in the designated area. The Commission must satisfy itself that the evidence of operational readiness and scalability to serve all competing providers is clear before a carrier can be deemed an unbundled switching wholesale alternative.

Q. HOW CAN THE COMMISSION ENSURE THAT ITS IDENTIFICATION OF QUALIFYING WHOLESALE PROVIDERS IS CONSISTENT WITH STANDARDS SET FORTH IN THE *TRIENNIAL REVIEW ORDER*?

A. At a minimum, before an identified wholesale switching provider should "count" in the trigger analysis, the Commission should examine how the incumbent has reacted in its wholesale pricing, marketing, and innovation in response to the alternative wholesaler's presence in the market. If the offering of the alternative wholesale provider has not directly caused the incumbent to: (1) drop its prices

[269] *Id*. ¶ 439.

for unbundled switching, (2) aggressively market wholesale switching to CLECs, and (3) introduce service and product innovation, including expanded offerings delivered as a result of increased investment in new technology, then impairment still exists *regardless* of whether two or more wholesalers technically operate in the market.

Q. WHAT EVIDENCE OF PRICE DISCIPLINING COMPETITION SHOULD TAKEN INTO ACCOUNT?

A. A carrier that is so small that it can only engage in "umbrella pricing," *i.e.* one that offers services at prices "immediately below the price of the larger market leader," perhaps only for some segment of the mass market as a whole, "but does not have sufficient presence market-wide to affect the market leader's price," does not have the kind of market presence that should be counted toward the triggers.[270]

This is consistent with the proper focus of the entire impairment analysis on consumer welfare.[271] The mass market switching triggers are not met unless the facts on the ground prove that the mass market is generally contestable by CLECs without using unbundled switching, *i.e.* that there is sufficient market pressure to restrain ILEC pricing to cost-based levels and force product innovations.[272]

C. THE ROLE OF INTERMODAL COMPETITION IN AN EXAMINATION OF IMPAIRMENT.

[270] *Id.* ¶¶ 505, 413, & n. 1275.
[271] *Id.* ¶¶ 1, 139, 161.
[272] *Id.* ¶ 94.

Q. HOW SHOULD THE EXISTENCE OF INTERMODAL COMPETITORS BE FACTORED INTO THE IMPAIRMENT ANALYSIS?

A. The FCC defines "intermodal" as referring generally to facilities or technologies "other than those found in traditional telephone networks"[273] and confirms that it does "not find the presence of intermodal alternatives dispositive in our impairment analysis. . . ."[274] Providers of telephony services may not be counted toward the trigger aspect of the impairment analysis unless they are shown to provide "alternatives [that] are comparable in cost, quality, and maturity to incumbent LEC services."[275] All proposed trigger candidates that supply voice services using other than circuit switches must be reviewed under these criteria.[276]

Q. HOW SHOULD CABLE COMPANIES BE EVALUATED IN ANY ASPECT OF THE IMPAIRMENT ANALYSIS?

A. The FCC found that "[c]able telephony and cable modem service, for example have developed because cable operators have been able to overlay additional capabilities onto networks ***that they built for other purposes***, often under government franchises, and therefore have ***first-mover advantages*** and ***scope economies*** not available to other new entrants, which lower their incremental costs of providing the additional services."[277] Thus, the FCC correctly stated that

[273] *Id.* n. 325.
[274] *Id.* ¶ 97.
[275] *Id.* & n. 1549.
[276] *Id.*¶ 97 ("[W]e do not find the presence of intermodal alternatives dispositive in our impairment analysis, as some commentators suggest") .
[277] *Id.* ¶ 98 (emphasis added).

it "may give less weight to intermodal alternatives that do not provide evidence that self-deployment of such access is possible to other entrants. In addition, if the record evidence shows that there are limitations on the number or types of customers that can be served by a particular technology, we will consider whether an entrant could use this technology profitably to target only those customers that can be served by the alternative technology."[278]

This is consistent with the FCC's directive that "when one or more of the three competitive providers is also self-deploying its own local loop, this evidence may bear less heavily on the ability to use a self-deployed switch as a means of accessing the incumbent's loop."[279] In addition, the FCC notes that it "may give less weight" to intermodal alternatives that "do not provide evidence that self-deployment of such access is possible to other entrants."[280] Fundamentally, as the FCC recognizes, the ability of a competitor to enter using self-deployed switching is different if access to the incumbent's local loops is required.[281] The overwhelming majority of competitors serving the mass market still require connectivity to the incumbent's local loop facilities, a factor that must be accounted for in any impairment analysis. Thus, as the *Triennial Review Order* concludes, cable telephony facilities deployment "provides no evidence that

[278] *Id.*
[279] *Id.* n. 1560.
[280] *Id.* ¶ 98.
[281] *Id.* ¶ 439.

competitors have successfully self-deployed switches as a means to access the incumbents' local loops."[282]

Q. SHOULD WIRELESS CARRIERS BE "COUNTED" IN THE TRIGGER ANALYSIS APPLICABLE TO MASS MARKET SWITCHING?

A. No. Commercial Mobile Radio Service (CMRS) providers may not be considered in application of the triggers because the FCC expressly found that "wireless is not yet a suitable substitute for local circuit switching."[283] Citing the small number of CMRS subscribers (three to five percent) who use wireless service as a replacement for fixed wireline service, the FCC also concluded that "CMRS does not 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."[284] This observation applies to all alternate forms of wireless technologies, including satellite, mobile, and fixed.

On the specific issue as to whether they should be considered in the trigger analysis, the FCC states unequivocally, "***we do not expect state commissions to consider CMRS providers in their application of the triggers***."[285] Thus, any

[282] *Id*. ¶ 440.
[283] *Id*. ¶ 445.
[284] *Id*. n.1549; *see also* ¶ 445 ("wireless CMRS connections in general do not yet equal traditional landline facilities in their quality and their ability to handle data traffic"). The FCC cites evidence in its record that wireless service is engineered to provide only roughly 70 percent call completion rate while wireline call completion rates exceed 99 percent. *Id*. n. 1363.
[285] *Id*. n. 1549 (emphasis added).

CMRS providers proposed by Qwest as supporting a case that triggers have been met should be excluded from consideration.

Indeed, the FCC's conclusion was echoed in recent comments from SBC's Chief Executive Edward E. Whitacre, Jr. who recently agreed that wireless is "not going to displace the wire-line network. . . . It's never going to be the substitute. Reliability is one reason."[286]

Q. ARE THERE OTHER INTERMODAL ALTERNATIVES THAT SHOULD BE GIVEN WEIGHT IN A TRIGGER ANALYSIS FOR MASS MARKET LOCAL SWITCHING?

A. No, unless it is demonstrated that they are actively in use, actually providing service to mass market customers according to the criteria described above, and are shown to provide service that is equivalent to ILEC wireline local service in terms of cost, quality and maturity. As the FCC stated, impairment analyses necessarily focus on "the current technical capabilities, economic characteristics, and patterns of use of intermodal alternatives," with the expectation that "changes going forward" may affect future impairment proceedings.[287]

Q. HOW DOES THE FCC'S EMPHASIS ON CURRENT TECHNICAL CAPABILITIES IMPACT CONSIDERATION OF VOICE OVER INTERNET PROTOCOL (VoIP) AS A RELEVANT INTERMODAL

[286] "A Wireless World," *Business Week*, p. 111 (Oct. 27, 2003).
[287] TRO, n. 331.

TECHNOLOGY FOR THE MASS MARKET SWITCHING IMPAIRMENT ANALYSIS?

A. Voice Over Internet Protocol (VoIP) is an example of an emerging technology that may become a promising alternative to traditional circuit architecture in some circumstances. Today, however, VoIP has not yet achieved the degree of substitutability necessary to have it weigh into or impact the mass market unbundled switching impairment analysis. Its current limitations as a substitute for delivery of voice service "comparable in cost, quality, and maturity to incumbent LEC services"[288] are well known.

First, unlike today's customers using traditional landline services, VoIP subscribers will experience a loss of service in the event of any power failure. This occurs because the end user must use AC power for the phone adaptor unit that is necessary to convert the signal from the analog handset into the IP packets required for transmission over the IP based data network. Other customer acceptance issues exist as well. Because phone service is provided through this power adaptor, the customer's existing phone jacks and the "phone extensions" supported by those jacks are rendered useless. As a result, end users who use jacks to provide access through extensions, must be willing to replace their existing "home network architecture" with either cordless phones or wireless phone jacks, a transition that can be costly. And, from a call quality perspective,

[288] *Id*. n. 1549.

questions as to the quality of voice transmission using VoIP have been raised by ILECs and equipment manufacturers alike.[289]

The cost, convenience, and quality issues associated with delivery of voice service over VoIP, however important from a customer acceptance perspective, may also be overshadowed by customer expectations for call delivery to the E911 Public Safety Answering Point (PSAP). Today, with traditional E911 service, a call from a home or business telephone automatically transmits information including the location and telephone number of the caller, the billing name of the subscriber, capabilities that consumers once thought extraordinary and now take for granted. A 911 call from a VoIP subscriber today, in contrast, does not automatically transmit these data. Instead, the caller (regardless of age, medical condition, and the exigencies of the circumstances) must be able to verbally communicate information sufficient to allow the dispatcher to identify the nature of the emergency, the assistance needed, and the location where emergency assistance should be dispatched**.**

D. CONDUCTING THE IMPAIRMENT ANALYSIS.

Q. HOW SHOULD THE COMMISSION CONDUCT THE FULL FLEDGED IMPAIRMENT ANALYSIS IF THE TRIGGERS ARE NOT MET?

[289] *See* "Packet Voice Spurs Debate on Fate of Circuit Switches" at www.eetimes.com/story/OEG20011130S0072; "Defining the Space: VoIP, IP Telephony and Convergence" found at www.avaya.com.

A. The Commission must consider the operational and economic barriers to entry that exist in any challenged market. For Washington, those facts are discussed in the testimony of Robert Falcone, Lee Selwyn and William Lehr filed by AT&T in this case.

Q. WHAT IS THE RELATIONSHIP BETWEEN THE TRIGGER ANALYSIS AND THE FULL IMPAIRMENT ANALYSIS?

A. From the perspective of end user consumers, it is critical that all of the Commission's decisions regarding impairment, including its decisions on the triggers, ensure that competitive forces are available to discipline the incumbents' market power in the local markets they now dominate. Thus, as the FCC noted, a "key consideration" with respect to the self-provisioning trigger is whether the self-providers used in the trigger analysis "are ***currently*** offering and able to provide service, and ***are likely to continue to do so***."[290] Similarly, under the wholesale trigger, carriers that are used to apply that trigger must be substantial enough to "provide competitive pressures on pricing and terms . . ."[291] Thus, before the Commission determines that a trigger is met, it must require firm proof that the defined area *already supports* multiple switch-based carriers that provide meaningful competitive alternatives for mass market customers, and it must be confident that that market will *continue to support* meaningful facilities-based competition in the future if access to UNE-P were eliminated.

[290] TRO, ¶ 500.

[291] *Id*. ¶ 505.

In its section 271 proceeding, Qwest was required to demonstrate that it had met the Track A and Public Interest Requirements as part of demonstrating that its local service market was "irreversibly open" to competition. Qwest Witness David Teitzel relied heavily on the availability of UNE-P as support for its claim that the local market in Washington was "irreversibly open."[292] Mr. Teitzel clearly indicated that his definition of a facilities based provider included use of Qwest's unbundled network elements.[293] Now that it has achieved its section 271 objectives, Qwest seeks to eliminate that very same competition that it used to argue that its markets were irreversibly open to competition.

Indeed, as mentioned previously, Qwest relies even today on the existence and proliferation of UNE-P to further its own agenda to seek competitive classification of its business services in one docket here in Washington, all the while seeking to eliminate UNE-P as an avenue for market entry in this docket.[294] This is not a matter to treat lightly. The Commission cannot ignore the fact that an ill-founded decision on impairment will likely result in drastically reduced choices for local consumers, as well as a reversal of the prior determination that

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[292] Before the Washington Utilities and Transportation Commission, *In the Matter of the Investigation Into U S WEST Communications, Inc.'s Compliance With Section 271 of the Telecommunications Act of 1996*, Docket No. UT-003022, Direct Testimony of David L. Teitzel, May 16, 2001 ("Teitzel Direct"). It is noteworthy in this context that the FCC determined that UNE-P competition was "facilities based" for purposes of its section 271 reviews. *In the Matter of Joint Application by SBC Communications Inc., Southwestern Bell Telephone Company, and Southwestern Bell Communications Services, Inc. d/b/a Southwestern Bell Long Distance for Provision of In-Region, InterLATA Services in Kansas and Oklahoma*, CC Docket No. 00-217, FCC 01-29, Released: January 22, 2001, ¶ 41.

[293] Teitzel Direct, p. 40.

[294] *In the Matter of the petition of Qwest Corp. for competitive classification of basic business exchange telecommunications services*, Docket No. UT-030614, *supra*.

the local market is irreversibly open to competition. Therefore, unless and until the ILEC adduces clear evidence establishing that consumers will not be competitively harmed if the Commission eliminates cost-based access to UNE-P, the Commission should not conclude that CLECs can economically serve the mass market without access to unbundled switching.

Critically in this regard, it does not matter whether the evidence supporting the Commission's decision is the "shorthand" data that are reviewed in a trigger analysis or the more detailed data that will be presented in a full review of economic and operational impairment. In either case, the consumer effect is the same -- competitive access to UNE-P will be lost.

As a result, the outcome of a trigger analysis cannot be contrary to the result that would follow from a full impairment analysis. Indeed, if the Commission eliminated access to unbundled switching and UNE-P under a trigger test even though CLECs remain impaired under the FCC's general impairment standard, the result would be economically irrational, and thus inconsistent with the *TRO's* requirements.[295]

Finally, it is important to realize that the ILECs cannot be harmed if the Commission applies appropriate rational criteria to its trigger analysis, because if a trigger is not met the ILECs still have the opportunity to demonstrate that CLECs *could* reasonably use their own switching to serve mass-market customers

[295] TRO, ¶ 78 ("any reasonable application of the impairment standard and unbundling requirements should be economically rational"). *See also id.*, ¶¶ 55-56, 69.

under the full-scale impairment test. Under those circumstances, the Commission cannot treat the trigger analysis as a simple "counting" exercise. Instead, it must use its experience and judgment to create a rational set of criteria for reviewing the "trigger" data, so that it can be assured that its decision based on those limited data will yield the same result as a full economic and operational impairment analysis.

Plainly put, the Commission should not conclude that the triggers have been met unless it is confident that competitive providers can economically thrive using UNE-L and provide competitively meaningful service to "the mass market" within the geographic market areas it establishes within Washington.

Q. IS MERE EVIDENCE OF FACILITIES DEPLOYMENT ALONE SUFFICIENT UNDER THE *TRIENNIAL REVIEW ORDER* TO DETERMINE THAT THE TRIGGERS HAVE BEEN MET?

A. No. As noted above, the FCC expressly rejected arguments by the ILECs that "evidence of facilities deployment by competitive CLECs" must or even can be treated as "conclusive or presumptive of a particular outcome ***without additional information or analysis***."[296] Thus, although evidence of actual facility deployment by CLECs "may indicate a lack of impairment," the FCC expressly disagreed with ILEC assertions that such evidence should be "dispositive of [or

[296] *TRO*, ¶ 94 (emphasis added). The FCC expressly declined to presume, for example, that the facilities deployment levels sufficient to support a grant of pricing flexibility in a market would require a finding of lack of impairment. *Id*. ¶ 104.

create] a rebuttable presumption of no impairment."[297] Instead, the FCC acknowledged that "[i]n deciding what weight to give this evidence" -- and thus whether it is probative of a claim of non-impairment -- a Commission must consider factors such as "***how extensively carriers have been able to deploy*** such alternatives, ***to serve what extent of the market***, and ***how mature and stable*** that market is."[298] Moreover, the FCC found that evidence that competitors using their own switches for other purposes have not converted them to serve mass market customers bolsters its findings that significant barriers make use of CLEC switching to serve such customers uneconomic.[299] Thus, any notion that the trigger analysis is simply a matter of counting switches, particularly those switches used to serve the enterprise market, must be soundly rejected.

E. CONCLUSION

Q. WHAT ARE YOUR CONCLUSIONS WITH RESPECT TO THE TRIGGER ANALYSIS?

A. There are several. First and foremost, the trigger analysis is intended to determine whether and to what extent there are *actual and effective* alternatives to the switching capability of the RBOC, in this case Qwest. This does not mean merely counting switches. Instead, it requires that the Commission familiarize itself with the facts that give rise to CLECs' economic and operational impairment in

[297] *Id*. ¶ 94.
[298] *Id*. (emphasis added)
[299] *Id*. n. 1365 & n. 1371.

Washington, and exercise appropriate discretion in applying the TRO's guidelines to develop the quantitative and qualitative criteria necessary to determine which alternative switching sources should be considered in the trigger analysis. It also means performing a granular analysis, to look at "actual deployment," i.e., the places and customers that a CLEC *currently* serves. as opposed to mere potentiality. That actual deployment must include service to both residential and business customers, and not the mere presence of a switch serving one class of customers but not the other. In addition, the qualified provider (whether a self-provider or a wholesaler) must be actually serving the *entire* geographic at issue, and not just a subset of that market. And lastly in this regard, the Commission must assure itself that the trigger analysis has produced a rational and lasting pro-competitive result. The triggers will be met only where the defined area already supports multiple, active competitors using non-ILEC switching to serve the mass market, under circumstances that can be expected to continue for the indefinite future, without losing the competitive gains made to date. A fundamental concern, and potential danger, is that the elimination of unbundled mass market switching will reverse the progress of competition, and force CLECs to exit the market.

VII. OVERALL CONCLUSION.

Q. WHAT ARE YOUR OVERALL CONCLUSIONS?

A. During the course of my testimony I have first tried to provide a brief synopsis of the TRO, and essentially give the Commission a roadmap to follow in conducting these proceedings. I have also provided an overview of the Commission's critical role in the process of examining whether—as the FCC has found nationally—CLECs are impaired in their attempts to enter the market here in Washington, without the continued availability of ILEC-provided mass market switching, priced at TELRIC rates. I have explained that such impairment is determined by means of a two-step process, *i.e.*, an actual usage test (called a trigger analysis) and a potential deployment test. Both of these tests, however, are ultimately intended to answer the exact same question: whether mass market customers in the defined markets will be able to obtain competitive services from multiple suppliers.

Secondly, I have described the "unbundled network element platform" (or "UNE-P") in terms of a) its role in fostering and developing local exchange competition, b) the tangible economic benefits which it brings to consumers, and c) its promotion of investment by CLECs and ILECs alike. I conclude that the capability of UNE-P to bring competition quickly to a wide-spread area is absolutely unparalleled among the available avenues for local market entry. There is, quite simply, no other method an entrant can use which will allow entry in a broad geographic market quickly and effectively. In addition, the benefits to consumers resulting from UNE-P entry are clear, and have been independently

documented: an increased number of choices among providers, a broader selection of offers from each provider, competitive response from the ILECs, and, most importantly, falling prices. In short, UNE-P provides *real* competition and *real* consumer benefits. Moreover, contrary to the claims of the ILECs, the available data demonstrates that UNE-P stimulates investment by the Bells and new entrants alike. In fact, the great irony of the ILECs' argument against UNE-P is that they have absolutely no economic reason to promote more facilities-based competition to their monopolies. They fully understand that UNE-P is a stepping stone to investment in infrastructure, and they hope to remove it, and replace it with a stumbling block.

Thirdly, I have examined the notion of defining a "geographic market" for purposes of this impairment analysis. I conclude that it is useful to think of the geographic market as an "impairment evaluation zone," because that is the singular purpose to which they will be put. The factors to be used in establishing these zones is expressly set out in the TRO, and include, *inter alia*, 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 competitors' ability to target and serve specific markets economically and efficiently using currently available technologies. I also conclude that establishing these zones will be a dynamic and fact-intensive process, in which it will be necessary for the Commission to obtain solid data, and not rely on a one-size-fits-all approach.

While the FCC has said that a geographic market should be less than the entire state in size, it is clear that one of the goals of the Act is to encourage broad competition throughout the entire state. I conclude in my testimony that, for many reasons, it makes economic sense to view the market more broadly, and as a larger area, rather than a more confined area. In this context, the Commission might want to consider using LATA boundaries or Qwest's service area within the state as the defining characteristic of these impairment evaluation zones. Whatever geographic area the Commission ultimately settles on for its impairment analysis, it should not lose sight of the most important fact here: only UNE-P works at a scale and scope that is necessary to support mass market competition throughout Washington.

Fourth, I have provided an analysis to aid the Commission in determining the crossover point at which it makes more sense to utilize a DS1 application instead of "POTS" to serve a multi-line customer. I conclude there, for numerous reasons, that the crossover point should be set at twelve (12) lines, meaning that when a customer is served by twelve or more lines, a CLEC should be economically indifferent between UNE-P or DS1 lines to serve that location.

Lastly, I have provided a fairly thorough examination of the so-called trigger analysis found in the TRO, where I have reached several important conclusions. Most importantly, the trigger analysis is intended to determine whether and to what extent there are *actual and effective* alternatives to the switching capability

of the RBOC, in this case Qwest. This does not mean merely counting switches, but instead requires a careful analysis of economic and operational impairment in Washington, and the application of quantitative and qualitative criteria to determine which alternative switching sources should be considered in the trigger analysis. Next, I conclude that the Commission should look at "actual deployment," *i.e.*, the places and customers that a CLEC *currently* serves. which must include service to both residential and business customers. In addition, the qualified provider (whether a self-provider or a wholesaler) must be actually serving the *entire* geographic area at issue, and not just a subset of that market. And lastly in this regard, the Commission must assure itself that the trigger analysis has produced a rational and lasting pro-competitive result. A fundamental concern, and potential danger, is that the elimination of unbundled mass market switching will reverse the progress of competition, and force CLECs to exit the market.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.