areas, among other relevant factors.[16] As the Commission previously has recognized, applying such a granular analysis will permit it "to distinguish situations for which there is impairment from those for which there is none."[17] *USTA I* and *II* demand nothing less.

While a nationwide finding is not appropriate where the record shows "market-specific variations in competitive impairment,"[18] the court has made clear that the FCC may make nationwide findings where the record shows the opposite – little or no variation in competitive impairment. In the *Triennial Review Order*, for example, the FCC found nationwide impairment with respect to copper loops.[19] In addition, the court has recognized that some over- and under-inclusiveness in the Commission's rules is inevitable.[20] Consequently, if the Commission were to find, after a granular analysis, that requesting carriers were impaired everywhere, with the exception of a very small number of markets, it would be reasonable for the FCC to adopt a nationwide finding of impairment, recognizing that the rule was slightly over-inclusive, but rejecting the alternative as adding substantial administrative complexity with very little benefit.

As a matter of logic, the results of the Commission's impairment analysis cannot be known until after the analysis itself has been conducted. The Commission therefore may not make findings regarding impairment, including on a national level, without first assessing impairment in the granular, market-by-market manner required by *USTA I* and *USTA II*. In order to apply the impairment standard, the Commission must examine

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16 *Triennial Review Order* ¶ 118.

17 *Id.*

18 *USTA I*, 290 F.3d at 422.

19 *Triennial Review Order* ¶ 248.

20 *USTA II*, 359 F.3d at 570.

whether competitors have entered into the relevant geographic and product markets using their own or non-incumbent LEC facilities.[21] This examination of entry and the state of competition is similar to Commission analysis in the context of merger review. In determining whether a merger is in the public interest, for instance, the Commission has consistently examined the sufficiency of competition by: (1) defining the relevant product market; (2) defining the relevant geographic market; and (3) identifying the firms that participate in the relevant market.[22] A finding of lack of impairment would have to be based on a similar granular, market-by-market analysis.

If the Commission were to make a national finding of lack of impairment for a particular network element without basing that finding on a granular analysis, the Commission would risk ignoring the court and leaving end users in particular geographic

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[21] *See infra* Section III.A.5 (explaining that the Commission should reconfirm its finding that actual deployment is the best evidence of impairment or lack of impairment).

[22] *See, e.g.*, *Applications of VoiceStream Wireless Corp., PowerTel Inc., Transferors, and Deutsche Telekom AG, Transferee, for Consent to Transfer Control*, 16 FCC Rcd 9779, ¶¶ 81-82, 97 (2001); *Application of GTE Corporation and Bell Atlantic Corporation for Consent to Transfer Control*, 15 FCC Rcd 14032, ¶¶ 101-105 (2000) ("*Bell Atlantic-NYNEX Merger Order*"); *Application of Ameritech Corp. and SBC Communications Inc. for Consent to Transfer Control*, 14 FCC Rcd 14712, ¶¶ 67-71 (1999); *Applications of NYNEX Corporation and Bell Atlantic Corporation for Consent to Transfer Control of NYNEX Corporation and its Subsidiaries*, 12 FCC Rcd 19985, ¶ 39 (1997). The Commission's framework is based on the framework set forth in the Horizontal Merger Guidelines ("HMG") of the U.S. Department of Justice and the Federal Trade Commission. *See* Department of Justice and Federal Trade Commission Horizontal Merger Guidelines, §§ 1.1-1.3 (April 2, 1992), *available at*: <http://www.ftc.gov/bc/docs/horizmer.htm>. As Dr. Pelcovits explains, although the FCC rejected certain applications of the HMG for purposes of an impairment analysis, the *Triennial Review Order* explicitly endorses the relevance of the HMG to the market definition that must underlie any impairment analysis. Declaration of Dr. Michael Pelcovits ¶ 34, appended as Attachment A ("Pelcovits Decl.") (quoting *Triennial Review Order* ¶ 130 n.439: "We take this lesson of geographic granularity from the HMG without adopting the HMG wholesale."). The Commission's reliance on the HMG for the purpose of defining markets "makes sense because the HMG have authoritative status in industrial organization economics." *Id.* ¶ 34.

markets where impairment *does* exist without a choice of competitive providers. Such a result would violate the mandate of *USTA II* and effectively reinstate incumbent LEC local monopolies in those markets, in contravention of Congress' goal in enacting the market-opening provisions of the 1996 Act.[23]

B. Consideration of Operational and Economic Barriers to Entry

The *USTA II* court, as noted, also affirmed the Commission's finding in the *Triennial Review Order* that its impairment analysis must take into account structural impediments to the provision of a particular network element, such as large sunk costs, absolute cost or first-mover advantages enjoyed by incumbents, and operational barriers (including hot cuts) within the sole or primary control of the incumbent LECs.[24] Further, both *USTA I* and *USTA II* left intact the FCC's conclusion that actual deployment of competing facilities within relevant geographic area is "the most persuasive and useful" evidence of lack of impairment.[25] Accordingly, the Commission on remand should

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[23] *See, e.g.*, *AT&T Corp. v. Iowa Utils. Bd.*, 525 U.S. 366, 371 (1999) (in the 1996 Act, Congress sought to "fundamentally restructure[] local telephone markets" by "end[ing] the longstanding regime of state-sanctioned monopolies" and subjecting incumbent LECs "to a host of duties intended to facilitate market entry"); *Verizon Communications Inc. v. FCC*, 535 U.S. 467, 476 (2002) (unbundling provisions of 1996 Act "were intended to eliminate the monopolies enjoyed by the inheritors of AT&T's local franchises; this objective was considered both an end in itself and an important step toward the Act's other goals of boosting competition in broader markets and revising the mandate to provide universal telephone service."); *USTA I*, 290 F.3d at 417-418 ("Congress passed the Telecommunications Act of 1996," including the unbundling requirements of section 251, "to 'promote competition and reduce regulation in order to secure lower prices and higher quality services for American telecommunications consumers and encourage the rapid deployment of new telecommunications technologies.'") (quoting 1996 Act Preamble, Pub. L. 104-104, 110 Stat. 56).

[24] *USTA II*, 359 F.3d at 571-572 (citing *Triennial Review Order* ¶¶ 75-76, 80, 86, 88-91 & nn. 244, 249, 302).

[25] *Triennial Review Order* ¶ 93.

affirm its conclusion in the *Triennial Review Order* that impairment exists where operational and economic barriers make entry into a market uneconomic, and confirm that the most probative evidence that competitors are not impaired is evidence of actual deployment in the marketplace.

C. Responding to the *USTA II* Court's Concerns

The Commission can readily address two concerns raised by the *USTA II* court regarding application of the FCC's impairment standard, first, with respect to the type of entrant, and second, regarding below-cost retail rates.

Uneconomic by Whom. With respect to the portion of the standard that directs the FCC to inquire whether economic and operational barriers "make entry into a market uneconomic," the court queried, "Uneconomic by whom?", noting that the Commission did not specify the type of competitive LEC for which entry must be possible – *i.e.*, whether it was "*any* CLEC, no matter how inefficient," or an average or representative competitive LEC.[26] One logical and practical way to answer the court's question would be for the Commission to state that impairment exists unless sufficient entry has occurred or is likely to occur to result in "workably competitive" downstream markets, such as retail local and long-distance services.[27] Workability would be defined as "reasonably satisfactory . . . marketplace performance," which is measured in terms of overall social welfare, rather than the well-being of particular competitors.[28] This focus on marketplace performance, which is measured in terms of overall social welfare rather than the well-

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26 *USTA II*, 359 F.3d at 572.

27 Pelcovits Decl. ¶ 8.

28 *Id.* (citing Joe S. Bain, *Industrial Organization*, John Wiley & Sons, 1959, at 15).

being of particular competitors, is fully consistent both with the pro-competitive goals of the Act,[29] and with the *USTA I* court's finding that the impairment analysis should focus on the general "competitive context" rather than on the services that requesting carriers seek to offer.[30] This standard also responds to the *USTA II* court's query by clarifying that entry must be feasible and likely by enough competitive LECs to create workably competitive conditions in downstream markets.[31] This will happen only if a sufficient number of competitive LECs can achieve a minimum viable scale and overcome other barriers to entry.[32]

Stated somewhat differently, workable competition is achieved when entry is profitable for representative competitive LECs, which possess neither atypical advantages (that would make entry unusually easy) or atypical disadvantages (that would make entry unusually difficult).[33] At one extreme, if only one or two atypically "advantaged" competitive LECs can enter a particular market, that market will become a duopoly or triopoly that creates high prices and sub-optimal performance in the downstream markets.[34] At the other extreme, an impairment test should not be based on the barriers to entry faced by an inefficient competitive LEC, because the downstream market will be competitive without the presence of that competitive LEC.[35] If enough competitive LECs

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29 Pelcovits Decl. ¶ 8.

30 *USTA I*, 290 F.3d at 429.

31 Pelcovits Decl. ¶ 9.

32 *Id.*

33 *Id.* ¶ 10.

34 *Id.*

35 *Id.* ¶¶ 10, 11 (explaining that once the point is reached where "typical" competitive LECs can enter the market successfully, competition among these

can enter a particular market successfully and compete on reasonably equal footing, prices will be driven to an efficient level and economic welfare will be optimized.[36] The impairment standard therefore should focus on whether entry is profitable for representative competitive LECs.

Below-Cost Retail Rates. The *USTA II* court also required the Commission to explain more fully the consequence of below-cost retail rates.[37] The Commission should explain that such rates, to the extent they exist any longer, are no impediment to unbundling where there is impairment. Foremost, marketplace developments, specifically the widespread and growing preference of consumers to purchase bundles of communications services, have rendered that concern largely irrelevant.

What was a pronounced marketing trend at the time of the *Triennial Review Order* has become the leading vehicle through which most consumers purchase service today. Carriers are increasingly offering – and consumers are increasingly purchasing – bundled packages of features and services, instead of stand-alone local and long-distance services.[38] According to a recent survey, more than half of U.S. households purchase a bundle of local and long-distance service,[39] which likely includes a number of vertical

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competitive LECs would drive down prices below the costs of an inefficient competitive LEC, making entry by such an inefficient competitor impossible in every market).

36 *Id.* ¶ 10.

37 *USTA II*, 359 F.3d at 573.

38 *See, e.g.*, Shawn Young, "All in One: Buying bundles of telecom services can make things easier – and cheaper – for consumers," Wall Street Journal at R6 (Sept. 13, 2004) (about 62% of households now get two or more services from the same company).

39 "Bundle Up," Wall Street Journal at B4 (July 15, 2004) (as of 2004, 51% of U.S. households purchase local/long-distance bundles); *see also* Interview of Chairman Powell by Gartner Fellow Kenneth McGee (June 15, 2004), located at: <http://www4.gartner.com/research/fellows/asset_91308_1176.jsp> (opining that it is difficult to make "a

features such as call waiting and caller ID. The number of customers purchasing bundled service from the same provider has roughly doubled in the past two years,[40] and will no doubt continue to grow in the future. To the extent that long-distance prices are too high (because the underlying access charges are set at rates designed to provide a source of subsidy for local rates), and local rates are too low, the purchase of a bundle of local and long distance has the same effect as rebalancing rates. That is, the stand-alone rates for local and long-distance services become irrelevant. Thus the dramatic increase in bundled products largely moots the court's concern about below-cost rates.

In sum, the impairment standard adopted by the Commission in the *Triennial Review Order* and substantially upheld by the court in *USTA II* remains a viable framework for the FCC to determine which network elements must be unbundled pursuant to section 251(d)(2).[41] As explained below, this framework, which includes consideration of evidence of actual deployment in particular geographic and product markets, can be tailored in its application to switching as well as high-capacity loops and transport.

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compelling case for a stand-alone long-distance company over a long period of time"); Christopher Stern, "So Long to Long-Distance?," Washington Post (Aug. 5, 2004) (long-distance appears "close to disappearing entirely" as a stand-alone offering due to popularity of unlimited cellular packages and bundled offerings from the Bells).

[40] "Bundle Up," Wall Street Journal at B4 (July 15, 2004).

[41] Of course, the *USTA II* court made clear that the FCC would have to conduct the impairment analysis on its own, rather than delegating that responsibility to the states.

III. APPLICATION OF STANDARD TO INDIVIDUAL NETWORK ELEMENTS

A. Switching

1. Overview

In this section, MCI describes the operational and economic barriers to entry that support the conclusion that competitive carriers are impaired without access to unbundled mass market switching. Because actual deployment is the best evidence of impairment or non-impairment, MCI also discusses evidence of lack of actual deployment to serve mass market customers, which is precisely the result that one would expect given the operational and economic barriers to entry that competitive carriers face. The Commission should conclude that barriers to mass market UNE-L-based entry remain in all relevant markets and should therefore renew its finding of national impairment for mass market switching.

In the *Triennial Review Order*, the Commission found that CLECs are impaired nationwide without unbundled access to mass market switching, based on the operational and economic barriers associated with the incumbent LEC manual hot cut processes.[42] The Commission also recognized that operational and economic barriers other than hot cuts may give rise to impairment in a given market and directed the states to examine evidence of such barriers during the state impairment cases.[43]

Volumes of data produced in those proceedings confirm the validity of the Commission's finding of nationwide impairment. In particular, the data confirm that very few competitive LECs use UNE-L to serve residential customers and in only the

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42 *Triennial Review Order* ¶ 459.

43 *Id.* ¶ 476.

rarest cases would more than one do so in any given market. This fact was true even in areas where competitors serve larger customers via their own facilities, and even where UNE-P is economically unviable.

Market Definitions. The Commission must determine whether lack of access to an incumbent LEC network element poses an economic or operational barrier to entry that is likely to make entry into the relevant market uneconomic. The relevant product market for purposes of assessing impairment for switching is the bundle of telecommunications services, including local service, offered to residential and small business customers, and the relevant geographic market is the wire center.

Operational Issues. The most significant operational barrier to entry in the absence of unbundled switching is the requirement that the loop be physically disconnected from the incumbent LEC switch and connected to the competitive switch via a process known as a "hot cut." Today, the incumbent LEC hot cut processes are highly manual, and the provisioning associated with the hot cut is exclusively manual, as the ILECs have eschewed any efforts at automated or electronic provisioning. As a result, hot cuts are labor-intensive, expensive, cumbersome, prone to error, and capacity-limited. They cannot accommodate mass market volumes. The hot cut process is manual everywhere in the United States – it persists in every market.

The hot cut problem is exacerbated by the widespread use by incumbent LECs of IDLC loops. Carriers suffer from a multitude of additional operational ills when seeking to serve customers currently served by the incumbent LEC via IDLC loops. Incumbent LECs will not unbundle IDLC loops to connect them to competitive switching, maintaining this position despite evidence that they can unbundle such loops. Given

current incumbent LEC procedures, this significantly increases the complexity of the provisioning process for IDLC loops, introduces further delay into the process, and often results in the substitution of inferior loops that, for example, degrade the quality of service available to end-user customers. The percentage of IDLC loops varies by wire center; the highest concentration of IDLC loops tends to be in wire centers serving predominantly residential customers.

Implementation of a "batch hot cut" process does not eliminate the barriers to entry caused by the hot cut process. While a batch hot cut process could be effective to transfer a base of customers from UNE-P to UNE-L if a CLEC were to convert from one service delivery mechanism to another, a batch hot cut process would not do anything to mitigate impairments associated with subsequent transfers of service, such as when a UNE-L CLEC's customer decides to switch to another UNE-L CLEC, or when a UNE-L CLEC wins new customers in the normal course, after the initial transfer of its customer base from UNE-P to UNE-L. CLEC-to-CLEC migrations are not even eligible for the incumbent LECs' proposed batch hot cut processes, which is understandable because batch hot cut processes were developed for bulk customer transfers from UNE-P to UNE-L, or *en masse* from one carrier to another, not for day-to-day, garden-variety hot cuts. Further, the batch hot cut processes proposed by the incumbent LECs entirely fail to address the central bottleneck in the hot cut process: exclusively manual provisioning.

In addition to hot cuts, and the problems raised by IDLC loops, there are additional operational obstacles, including the lack of reliable processes and standards for the exchange of customer service records, and inadequate processes governing number

portability and directory listings, as well as updates to certain informational databases such as the Local Facilities Administration and Control System ("LFACS").

Economic Barriers. Even if these operational barriers were addressed, MCI and other competitors face economic barriers to entry that independently support a finding of impairment in nearly every market. In connection with the state impairment proceedings, MCI asked the economics consulting firm Microeconomic Consulting and Research Associates, Inc. ("MiCRA") to construct a model to permit analysis of economic barriers. In order to come to a decision to enter a particular market, a competitive LEC must conclude that it has a reasonable prospect of obtaining sufficient revenue from its customers both to defray its operating expenses and recover any investments that it must make to enter the market. The model therefore examines the costs and revenues associated with UNE-L-based local service to residential customers. The broad categories of costs considered are loops, switches, the connection between the loop and the switch, collocation, the cost of digitization, concentration and aggregation, transport to the competitive LEC's switch, and the cost of cutting over the loop. Many of these costs are costs that incumbent LECs do not have to incur. The model shows that under any reasonable set of input assumptions, it is not profitable for competitive LECs to serve customers in the vast majority of wire centers in the absence of unbundled switching.

Actual Deployment. Based on these operational and economic barriers to entry, the Commission should conclude that competitive LECs are impaired nationwide without access to unbundled switching. As one would expect, in the face of these barriers to entry, there is in fact very little actual deployment of competitive switches used to serve residential and small business customers. To measure actual deployment, the

Commission adopted in the *Triennial Review Order* a local switching "trigger" analysis. Experience with the switching trigger in the state proceedings revealed that application of the switching trigger (in contrast to the loop and transport triggers) is not a ministerial task, but requires a series of critical judgments to assure that the evidence is properly evaluated. Depending on how the triggers are applied, the results could be dramatically different. This sensitivity in itself suggests that the trigger analysis is a somewhat imperfect tool.

Based on its experience in the state proceedings, MCI has identified the judgments that are required so that the results of the trigger analysis reflect marketplace realities and answer the question of whether end-user customers really have a choice of three independent service providers, in addition to the incumbent LEC. Accordingly, if the Commission were to conduct a trigger analysis as part of its assessment of impairment, it is critical that any company be required to meet the following minimum criteria if it is to be counted as an actual competitor:

- uses its own switches;
- is unaffiliated with a competitive LEC that has already been counted or with an incumbent LEC;
- is actively providing service and likely to continue to do so;
- offers service to all or nearly all of the relevant market, including residential customers;
- provides a service that is comparable in terms of cost, quality, and maturity to that offered by the incumbent LEC; and
- serves at least 1% of the market.

During the state impairment proceedings, MCI applied the above minimum requirements to the triggering companies identified by the incumbent LECs. Based on that data, there are only a handful of wire centers in which three or more unaffiliated carriers pass the test. This finding – that there is little actual deployment of switching facilities to serve mass market customers – is consistent with MCI's experience.

MCI's Experience. Today, MCI provides local exchange service to more than 3.4 million residential customers.[44] MCI also has significant local network facilities, including 123 circuit switches and 11,800 local route miles, which MCI uses to provide local service to business customers in 38 states and the District of Columbia.[45] Given its extensive local facilities, MCI has thoroughly analyzed the viability of a UNE-L strategy to serve its local customer base.[46] In particular, MCI conducted extensive analyses of ILEC wire centers to determine where MCI could profitably use UNE-L to serve the residential market.[47] MCI's analysis assumed improvements in the ILEC loop provisioning process and TELRIC-based hot cut non-recurring charges of $10 beginning in January 2006, as well as the costs associated with accessing unbundled loops and transporting that traffic to its nearest local switch.[48] As a result of these analyses, MCI's Board of Directors approved more than $180 million for local facilities investment in

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44 Declaration of Wayne Huyard ¶ 3, appended as Attachment B ("Huyard Decl.").

45 *Id.* ¶ 5.

46 *Id.* ¶ 6. Any rational company would pursue opportunities to minimize its dependency on its main competitors for critical inputs. UNE-P poses this type of dependency, which is why MCI has explored - *and would welcome* - the means to serve as much of its residential customer base as is operationally and economically feasible via UNE-L. *Id.*

47 *Id.* ¶ 7.

48 *Id.*

May 2004. That investment would have been earmarked toward the network build out necessary to permit MCI to compete for residential and small business customers via UNE-L in 700 central offices around the country.[49] Despite this level of investment, MCI still would have been able to reach only 46% of its existing residential customer base. For the remaining 54% of its customers, MCI's analysis demonstrated that building out collocations, installing transport, and upgrading switching facilities to offer service via UNE-L simply made no economic sense. In those areas, MCI's plan would not work without access to unbundled ILEC switching (UNE-P).[50] Absent the ability to offer service to customers outside of its network coverage via UNE-P, and necessary changes to the UNE-L provisioning process as well as reductions in non-recurring charges for hot cuts, and in other costs, MCI concluded that its entry plan is unviable. Accordingly, MCI has since put its investment plans on indefinite hold.[51]

Implications of Technological Change. In addition to examining actual deployment in determining its approach to the unbundling of circuit switching, the Commission should consider the policy implications of recent technological change. Packet switches are replacing circuit switches as the forward-looking switching technology. Broadband first mile (loop) facilities, whether fiber, fiber-fed, or fixed wireless, will become the loop technologies of the future. The introduction of packet

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49 *Id.* As explained in more detail in the Huyard Declaration, this investment can be broken into two large categories. First, MCI's central office collocations with voice-grade equipment would be augmented with additional port cards and cabling upgrades. The second category covered building new collocation facilities and augmenting other existing collocations to be UNE-L capable. This phase would require substantial time and expense – well over one year at a cost of over $100 million. *Id.* ¶ 8.

50 *Id.*

51 *Id.* ¶¶ 13-14.

switching and broadband loops will lead inevitably to the packetization of voice (VoIP) and ultimately to the convergence of voice and data.

The telecommunications industry is at the beginning of a period of great technological change. Ten years from now, most residential customers may have broadband loops and competitive choice. But that is not the case today, and the question is what to do now. It would make no sense at all to deprive residential customers of the choice they actually have today and consign them to a monopoly or, at best a duopoly, until such time as the broadband revolution has occurred. In addition, given the development of packet switching technology, it would be odd, to say the least, for the Commission to adopt policies designed to foster investment in additional *circuit* switches.

For all of these reasons, the Commission should conclude that competitors are impaired on a nationwide basis without access to unbundled switching. To allow for the possibility that circumstances may change in the future, the Commission should have in place a procedure for continuing review that permits incumbent LECs to petition for a finding of non-impairment in a given market based on removal of operational and economic barriers. The Bureau should use the MiCRA model to evaluate incumbent LEC showings with respect to economic barriers to entry. The task of evaluating such petitions could be delegated to the Wireline Competition Bureau. Finally, if the Commission were in the future to conclude that competitors are not impaired in particular wire centers without access to unbundled switching, it could at that point establish a necessary transition period.

2. Market Definition

The Commission has consistently begun its analysis of the sufficiency of competition by defining the relevant product and geographic markets. That approach is appropriate here as well.

a. Product Market

As explained in the attached declaration of Dr. Pelcovits, the appropriate product market for unbundled switching, both for purposes of the assessment of actual competitive entry and for purposes of analyzing potential deployment, is the bundle of telecommunications services, including local service, vertical features, and access service, provided over a local wireline facility to residential and small business customers.[52] Based on that definition, as explained further below, intermodal competitors, including wireless and cable, and service providers such as VoIP providers, are not providing services that are sufficiently comparable to be included in the relevant product market.[53]

b. Geographic Market

The appropriate geographic market for consideration of both actual and potential deployment is the wire center.[54] This market definition will ensure that the FCC's analysis reflects "on the most accurate level possible, while still preserving administrative practicality," whether a particular market can support "multiple, competitive supply" for

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52 Pelcovits Decl. ¶¶ 36, 51.

53 *See infra* Section III.A.5.a.-b.; *see also* Pelcovits Decl. ¶ 37.

54 Pelcovits Decl. ¶¶ 42, 51.

mass market customers.[55] This definition is sufficiently granular that evidence of actual facilities-based competition in any part of a given market accurately implies the ability to provide service to all (or nearly all) customers in that market. At the same time, this definition is not so granular that it is difficult to administer or fails to reflect economies of scale or scope.

In the *Triennial Review Order*, the Commission established five criteria to guide the states in defining geographic markets at the appropriate level of granularity:

> [S]tate commissions must define each market on a granular level, and in doing so they must take into consideration 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. 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.[56]

With respect to each of these criteria – (1) location of customers; (2) variations in ability to serve customers; (3) granularity; (4) practicality; and (5) economies of scale – the wire center definition is both appropriate and superior to alternative definitions.

First, a wire center definition would accurately reflect those locations where customers are actually being served by carriers using their own switches. In most cases, competitive LEC self-provisioning of local switching requires collocation at each wire

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55 *See Triennial Review Order* ¶¶ 130, 510.

56 *Id.* ¶ 495.

center the competitive LEC intends to serve.[57] Once collocated, competitive facilities would be capable of serving any loop in the wire center.[58]

Second, a wire center definition would take account of variations in competitors' ability to serve customers. In the *Triennial Review Order*, the Commission identified several factors that may vary geographically, including: (1) locations of customers actually being served; (2) variations in cost between wire centers; and (3) variations in capability to provide collocation space.[59] Because each of these factors differs among wire centers (but not within wire centers),[60] a geographic area that is larger than the wire center will not accurately reflect variations in these factors.

Third, wire centers reflect the appropriate level of granularity. Competitive LECs typically make entry decisions on a wire center-by-wire center basis, after comparing the projected stream of net operating income for a particular wire center to the sunk cost that must be incurred to establish the collocation or other arrangements needed to offer service in that wire center.[61] Often this cost-benefit analysis leads competitive LECs to enter only one or two wire centers in an MSA.[62] The fact that competitors may end up

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57 Pelcovits Decl. ¶ 43.

58 *Id.*

59 *Triennial Review Order* ¶ 496.

60 *See, e.g.*, Pelcovits Decl. ¶ 44 (explaining that a competitor's costs and revenues "vary, sometimes dramatically, between wire centers").

61 *Id.* ¶¶ 44, 47.

62 *See, e.g.*, MCI's Initial Post-Hearing Brief on Mass Market Switching Issues, Michigan PSC Case No. U-13796 at 25 (March 31, 2004) ("MCI Michigan Switching Brief"); MCI's Post-Hearing Response Brief on Mass Market Switching Issues, Michigan PSC Case No. U-13796 at 15-16, 28, 32 (April 12, 2004) ("MCI Michigan Switching Reply"); Murray Illinois Testimony at 77-80 (Jan. 20, 2004) (empirical data establishes that competitive LECs do not provide service ubiquitously throughout an MSA).

serving multiple wire centers does not always mean they decided to enter those wire centers as a group. Instead, competitive LECs first target wire centers where they believe entry would be profitable and operationally feasible, and then seek to serve as many customers as possible from those wire centers.[63] Likewise, it would be an error to conclude that entry is feasible in two wire centers because the present value of potential net revenues in the two wire centers collectively exceeds the sunk costs of entering the two wire centers. As Dr. Pelcovits explains,

> [t]he two wire centers may be like a bucket of ice water and a bucket of boiling water, which, on average, are a comfortable temperature. The fact that entry is feasible in one wire center but not the other will not be revealed from examination of average or total costs for the two wire centers. If the Commission were to find no impairment in both wire centers, the result will be that end users in one of the wire centers will lose the competitive alternatives that would be available to them if CLECs were to retain unbundled access to the incumbent's local circuit switch.[64]

Fourth, a wire center definition is readily administrable. For the analysis of triggers, the logical data on which to rely initially – facilities in place in the incumbent's wire centers, capabilities of competitors' facilities, capacity available for expansion – are data that are available and most accurately interpreted at the wire center level.[65] Other information, such as incumbent LEC tariff data and consumer demographic data, are also readily available at the wire center level.[66] In the state impairment proceedings, data at the wire center level were routinely produced by the incumbents.

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63 Pelcovits ¶ 47.

64 *Id.* ¶ 46.

65 *Id.* ¶ 45.

66 *Id.*

Finally, wire centers are broad enough to encompass economies of scale. Such scale economies arise, for instance, from collocation and DLC equipment, the costs of which are borne at the wire center level. In addition, transport costs are subject to economies of scale. As Dr. Pelcovits explains, most transport tariffs provide substantial volume discounts, and, unless a competitor has enough traffic to utilize a DS3 or higher circuit, it will pay a high per unit cost for using DS1 circuits.[67] It is true, of course, that some cost categories (*e.g.*, purchase of a switch, OSS systems) have large economies of scale related to serving larger geographic areas. As explained more fully below, however, the fact that competitors consider these costs when deciding to enter a larger geographic area in no way undercuts the conclusion that the wire center is the appropriate geographic market for the Commission's switching impairment analysis. Rather, it simply means that there are several steps in the entry decision, with a decision to enter a larger geographic area (*e.g.*, a BOC region, state, or MSA) logically preceding a decision to enter a particular wire center in that area.

In addition to meeting the criteria previously established by the FCC, a wire center definition would be consistent with sound economic principles. As the attached declaration of Dr. Pelcovits explains, a strict application of the Horizontal Merger Guidelines ("HMG") of the U.S. Department of Justice and the Federal Trade Commission would result in a market definition for switching that is identical to the customer's premises "[b]ecause qualifying services provided to a location other than to a customer's own premises will not be a satisfactory substitute."[68] Indeed, "[t]he location-

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67 *Id.* ¶ 79.

68 *Id.* ¶ 38.

specificity of the delivery of services is one of the unique characteristics of markets for telecommunications services, and it is crucial to the task of defining markets," as the Commission recognized in the *Triennial Review Order*.[69] At the same time, such a narrow definition raises concerns about administrative practicality. It is possible to aggregate individual mass market customer locations at the wire center level, thereby allowing the FCC to analyze customer-specific locations in large numbers, while "preserv[ing] much of the accuracy of customer-by-customer analysis."[70] As Dr. Pelcovits points out, the Commission made clear in the *Triennial Review Order* that the granular impairment analysis for mass market switching should identify substitutes to the incumbent's local circuit switch "as a means of accessing the local loop."[71] Because wire centers determine the point at which access to the incumbent LEC's loops must occur, the wire center provides a "natural" and accurate geographic unit for assessing impairment on a granular basis, in accord with sound economic principles.[72]

As the foregoing discussion makes clear, adopting a wire center definition would be consistent with the FCC's previous guidance and economic theory. By contrast, defining the geographic area to be larger than the wire center (*e.g.*, an MSA or LATA) would be inconsistent with both benchmarks and would undermine the Commission's ability to determine whether a market is suitable for multiple competitive supply. First, defining the geographic market as an MSA or LATA would overstate the existence of locations where customers actually receive competitive service. For instance, if three

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69 Pelcovits ¶ 39 (citing *Triennial Review Order* ¶¶ 328 & 309).

70 Pelcovits ¶ 39.

71 *Triennial Review Order* ¶ 429; *see also* Pelcovits Decl. ¶ 42.

72 Pelcovits Decl. ¶ 42.

competitive LECs have entered only a single wire center in an MSA, an MSA definition could lead to a finding of lack of impairment for the entire MSA, even though the overwhelming percentage of customers in the MSA might not have access to any competitive alternatives. Such a result would not serve the public interest, and certainly would not ensure that mass market customers have a real and current choice for local services among three non-incumbent facilities-based providers. Nor would an MSA definition be consistent with the fact that competitive LECs make entry decisions on a wire center-by-wire center basis.[73]

Likewise, an MSA or LATA definition would not account for key variations in the ability to serve customers. Several key factors vary significantly among wire centers, suggesting that a market definition that is larger than a wire center would be inappropriate. For instance, UNE loop rates are not necessarily uniform throughout an MSA because rate zones often cut across the MSAs; average revenue per customer, a key measure of profitability, varies widely within MSAs and in fact varies more within MSAs than between them; the cost of entry varies tremendously by wire center in large part because of differences in wire center density; the presence of IDLC loops varies by wire center; and operational barriers cause wire centers to vary in terms of their economic accessibility to competitors.[74]

An MSA or LATA definition also would not be sufficiently granular, nor would it be as administrable as a wire center approach. MSA boundaries are not fixed, do not

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[73] *See id.* ¶ 46; Huyard Decl. ¶ 7; *see also Triennial Review Order* ¶ 495 n.1537 (separate markets may be appropriate "if competitors with their own switches are only serving certain geographic areas").

[74] *See, e.g.*, Pelcovits Decl. ¶ 44; MCI Michigan Switching Brief at 23-25.

track wire center boundaries, and often include multiple incumbent LECs. In addition, MSAs do not necessarily include all wire centers in a state, as some wire centers may be outside MSAs.[75] Use of MSAs therefore requires a series of *ad hoc* adjustments that are not needed with wire centers.

Moreover, the fact that the scale and scope economies of a competitive LEC's switch may not be exhausted within an area served by a wire center does not require defining the geographic market more broadly than the wire center. Although it is, of course, in the interest of a competitive LEC to spread the cost of large fixed investments over as broad a customer base as possible, those costs are relevant to a carrier's decision to enter the larger geographic area (or not). They do not enter into its decision to serve a particular wire center (except to the extent that there are incremental costs associated with these cost categories). If a particular wire center cannot contribute to the bottom line, it simply will not make sense for the competitive LEC to offer services to customers in the wire center.[76] Therefore, by testing whether a particular wire center is profitable on an incremental basis (excluding many system-wide costs from the profit calculation), the Commission cannot be guilty of ignoring economies of scale by using the wire center as the defined market. If anything, the Commission would be erring on the side of finding no impairment when it did actually exist. As noted above, having conducted a granular analysis, the Commission may make a nationwide finding of impairment if it finds that barriers to entry are similar across geographic markets, or if it finds that barriers to entry exist in the overwhelming majority of wire centers.

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75 *See, e.g.*, MCI Michigan Switching Brief at 28-29.

76 Pelcovits Decl. ¶ 47.

3. Operational Issues

The dearth of competitive entry via UNE-L to serve the mass market can be traced in part to operational barriers that today exist in every wire center in the country and independently support a finding of nationwide impairment for unbundled switching. Many of these operational barriers are within the control of incumbent LECs.

a. Incumbent LECs Lack Incentives to Remove Operational Barriers

It should be understood at the outset that the incumbents have no incentive whatsoever to remove the operational barriers to entry that prevent UNE-L competition. In fact, one of the last things the incumbent LECs would want is for UNE-L competition to develop and become a viable service delivery mechanism.

Today, when a CLEC serves a mass market customer, it nearly always does so via UNE-P, unless it has the benefit of also being the incumbent cable operator. In a UNE-P scenario, the ILEC receives revenues for the wholesale services purchased by the competitive LEC, including the unbundled loop, switching, and shared transport. Granted, despite having convinced this Commission that their markets are open to competition, and despite having enjoyed substantial new revenue streams from in-region interLATA service as a result, the incumbent LECs' first preference is to eliminate competition in its entirety and again receive retail rather than wholesale revenues for these customers. But if the incumbents are not successful in that goal, they would much rather keep wholesale customers on their network as much as possible. The reason is obvious. In a UNE-L scenario, the incumbent LECs receive revenue only for the unbundled loop, and they receive no other revenue from the competitive LEC for

switching, shared transport, or other elements associated with UNE-P. Clearly, it is better for the incumbent LECs to receive more revenue, rather than less, and to keep competitors on their networks.

For example, in New York, if MCI were to serve a mass market customer via UNE-L, the monthly recurring revenue that Verizon would receive ranges from $7.70 to $15.51, under New York's current UNE rates. The New York Public Service Commission has estimated that the statewide average monthly loop charge is $11.49. The New York Commission has also estimated that the statewide average monthly UNE-P charge is $19.14 – a difference of $7.65 per line, per month. The New York Commission's UNE-P cost average only takes into consideration loop, switch port, and usage charges, and does not take into account additional monthly charges, such as switch feature charges and charges for the daily usage feed. Nevertheless, even adopting the New York Commission's understated estimate of the average UNE-P cost per month, Verizon stands to receive $7.65 less in revenue per month, per line if CLECs shifted mass market customers from UNE-P to UNE-L. At the same, almost all of Verizon's costs to serve these mass market customers are sunk and therefore unavoidable.

Perhaps this explains why Verizon's General Counsel for New York and Connecticut recently told competitive LECs and the New York Commission that Verizon "wants competitors on its network. . . . We want you on our network."[77] Other incumbents recently have expressed similar sentiments. SBC's Senior Vice President, for example, stated that SBC has "always . . . want[ed] competitors to stay on our

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[77] *Telecommunications Competition in New York Post USTA II Including Commitments Made in Case 97-C-0271*, NY PSC Case 04-C-0420, Procedural Conference, Tr. at 29 (Apr. 29, 2004).