Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers	)	CC Docket No. 01-338
	)	
Implementation of the Local Competition Provisions of the Telecommunications Act of 1996	)	CC Docket No. 96-98
	)	
Deployment of Wireline Services Offering Advanced Telecommunications Capability	)	CC Docket No. 98-147

REPLY COMMENTS OF WORLDCOM, INC.

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Attachments

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REPLY COMMENTS OF WORLDCOM, INC.

WorldCom, Inc. (WorldCom), by its attorneys, respectfully submits the following reply comments in response to the Notice of Proposed Rulemaking (*NPRM*)[1] issued by the Federal Communications Commission (FCC or Commission) in the above-captioned proceeding.

I. INTRODUCTION AND SUMMARY

In its initial comments, WorldCom showed as a policy matter why certain network elements should be unbundled, and demonstrated that the result of such unbundling would be increased competition, investment, and innovation. After these comments were filed, the U.S. Court of Appeals for the D.C. Circuit issued its opinion in

[1] *Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers,* Notice of Proposed Rulemaking, 16 FCC Rcd 22781 (2001) (*NPRM*).

USTA v. FCC,[2] concerning the Commission's *UNE Remand Order*[3] and *Line Sharing Order*,[4] and the Commission asked parties to incorporate their review and analysis of the court's opinion into their reply comments.[5] WorldCom strongly disagrees with the Court of Appeals' decision, which is fundamentally at odds with the U.S. Supreme Court's recent decision in *Verizon v. FCC*,[6] and urges the Government of the United States to petition for writ of *certiorari* if the Commission's Petition for Rehearing should be denied.[7] Nonetheless, WorldCom takes this opportunity to address specific points and questions raised by the *USTA* court. In addition, WorldCom responds to legal arguments made by other parties in their comments.

As various parties explained in their initial comments, the continued availability of unbundled network elements (UNEs) at TELRIC-based prices is essential to competition, investment, and innovation.[8] The experience of the past six years has shown

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[2] *See United States Telecom Ass'n v. FCC*, 290 F.3d 415 (D.C. Cir. 2002) ("*USTA v. FCC*").

[3] *Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* Third Report and Order and Fourth Further Notice of Proposed Rulemaking, 15 FCC Rcd 3696 (1999) ("*UNE Remand Order*").

[4] *Deployment of Wireline Services Offering Advanced Telecommunications Capability and Implementation of the Local Competition Provisions of the Telecommunications Act of 1996,* Third Report and Order in CC Docket No. 98-147 and Fourth Report and Order in CC Docket No. 96-98, 14 FCC Rcd 20912 (1999) ("*Line Sharing Order*").

[5] *See Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers,* Public Notice, 17 FCC Rcd 10512 (2002).

[6] *Verizon Communications, Inc. v. FCC*, 535 U.S. __, 122 S.Ct. 1646 (2002) ("*Verizon v. FCC*").

[7] Petition for Rehearing or Rehearing *En Banc* of the U.S. Department of Justice and FCC, *USTA v. FCC* (D.C. Cir. filed July 8, 2002) (Nos. 00-1012, *et al.* & 00-1015, *et al.*) ("FCC Petition for Rehearing").

[8] *See, e.g.*, Comments of the New York State Department of Public Service; Comments of the People of the State of California and the California Public Utility Commission;

that the Commission's unbundling requirements can, and will, further the pro-competitive goals of the Act when they are implemented and enforced. During this brief period, unbundling has spurred substantial investment by Bell Operating Companies (BOCs) and competitors alike,[9] and has allowed competitors to provide key services (such as business-grade DSL) and unique product offerings (such as MCI's Neighborhood) that the BOCs do not offer.

Significant as these successes are, however, the bulk of the difficult regulatory work required to open local sectors remains to be done. As WorldCom explained in its initial comments, six years is not nearly enough time for the Commission to achieve the 1996 Act's ambitious goal of "uprooting the [incumbent LECs' local service] monopolies" by rendering them "vulnerable to interlopers."[10] It is thus not surprising, for instance, that competitors' networks still extend to only a small share of the locations of business customers, and that, with respect to broadband services, only one third of residential customers have a choice of even two providers.

If the Commission prematurely denies competitive carriers access to unbundled network elements, the incumbent LECs will not only retain their local service monopolies and bottleneck control of the last mile, but also will almost certainly extend their market power to other areas such as the long distance voice business, interLATA data services,

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Comments of the Indiana Utility Regulatory Commission; Comments of the Rural Independent Competitive Alliance; Comments of the Competitive Telecommunications Association. (All comments cited herein, unless otherwise noted, are from CC Docket No. 01-338.)

[9] *See* WorldCom Comments at 5-6 (pointing out that from 1996-2000, the BOCs invested $100 billion and competitive carriers $56 billion); *Verizon v. FCC*, 122 S.Ct. at 1651.

[10] *Verizon v. FCC*, 122 S.Ct. at 1661.

Internet access, and even the Internet itself. By contrast, the continued availability of UNEs will provide competitive carriers with the means and the incentive to continue building their networks and customer bases. Increased competition, in turn, will benefit consumers, providing them with greater choice, lower prices and more innovative services. In short, as a matter of law, economics, and common sense, the Commission should afford competitive carriers nondiscriminatory access, at TELRIC-based rates, to UNEs and UNE combinations – including enhanced extended links (EELs) and the unbundled network element platform (UNE-P).

As explained in Section II below, the Commission should retain the "material diminishment" standard for determining impairment, but should clarify what constitutes "materiality," and address the Court of Appeals' questions about the relevance of economies of scale and geographic variation to the impairment analysis. In determining whether a requesting carrier has been impaired, the Commission should consider all relevant factors, including cost, timeliness, quality, and operational factors.

As WorldCom explained in its initial comments, competitive carriers suffer substantial cost disadvantages relative to the incumbent LECs. WorldCom now shows that the cost disadvantages faced by new entrants to the telecommunications sector are different in kind and severity from those faced by new entrants in other industries. WorldCom also describes the circumstances in which a more "granular" analysis may be appropriate in determining impairment under section 251(d). For elements such as Operational Support Systems (OSS) and call-related databases, for which there is no relevant geographic variation, and for which a granular analysis would merely be burdensome, the Commission should adopt national rules. For other elements, such as unbundled transport, a more granular analysis may be useful. In these cases, the Commission should adopt guidelines listing factors that should be considered in an unbundling analysis, but ask state commissions to conduct the analysis and evaluate the relevant facts. As part of its discussion of granularity, WorldCom also explains why variations in local rates, particularly those arising from "cross-subsidization," are not germane to the impairment analysis.

Section II also addresses various arguments made by the BOCs, many of which have already been rejected by the Commission or by the courts. For instance, the BOCs urge the Commission to find that the presence of a single competitor providing a similar service without using UNEs proves lack of impairment for all competitors. As WorldCom explains, a standard that would be satisfied by the existence of a single competitive LEC using a non-incumbent LEC element to serve a specific set of customers, without reference to whether competitive LECs are "impaired" under section 251(d)(2), would be inconsistent with the Act's goal of creating robust competition for telecommunications services. Robust competition can thrive only in the presence of multiple providers of local service that would drive prices down to competitive levels.

The Commission should also deny the BOCs' requests to adopt use restrictions and conduct service-specific impairment analyses. As WorldCom explains, use restrictions violate the plain language of the Act, which permits competitive carriers to use any capability of a UNE to provide any "telecommunications service" they seek to offer. The Supreme Court has ruled that under the Act, incumbent LECs may be required to offer EELs, either as UNEs or as new combinations of UNEs.[11] The Commission should therefore clarify that incumbent LECs, upon request, must convert existing special access to EELs as well as provide new EELs in response to requests from eligible carriers where the requesting carrier is not currently relying on special access services.

As explained in Section III below, there is a sound economic basis for requiring incumbent LECs to provide access to unbundled network elements at TELRIC-based rates, and such access has positive effects on the incentives of both incumbent LECs and competitive LECs to invest and innovate. The Supreme Court has now put to rest assorted legal objections to TELRIC pricing by approving the TELRIC methodology adopted by the Commission in the *Local Competition Order* and dismissing arguments made by incumbent LECs. Section III explains the public policy benefits of requiring incumbent LECs to offer access to UNEs at TELRIC-based prices. Specifically, because such pricing is based on forward-looking costs, it allows competitors to share in the incumbents' economies of scale and scope, and offers proper signals for investment in the network. The availability of UNEs at TELRIC-based rates allows new entrants to build customer bases and thereby increases the ability of these entrants to invest in their own facilities gradually and reduce their reliance on access to UNEs over time. Moreover, the availability of UNEs creates parallel paths for innovation by enabling multiple companies to use monopoly network resources as the foundation for new products and services.

In Section IV below, WorldCom evaluates individual network elements under Section 251(d)(2)(B). WorldCom first shows that new entrants seeking to deploy their own loops face overwhelming cost disadvantages relative to the incumbent LECs, and

[11] *Verizon v. FCC*, 122 S.Ct. at 1683-1687.

that these disadvantages do not vary by geographic area. The Commission, therefore, should find that competitive LECs are impaired without access to all types of loops on a nationwide basis. In response to the court's decision regarding line sharing in *USTA v. FCC*, WorldCom analyzes competition for broadband services, and explains that competition would be impaired unless competitors are given access to all loop types, including DSL-capable loops, the high-frequency portion of loops, and DSL-capable fiber-fed Next Generation Digital Loop Carrier (NGDLC) loop facilities. The Commission should also allow competitors to engage in line splitting, and should prevent incumbent LECs from discontinuing their DSL service when the customer switches its voice service to a competitive provider relying on UNE-P.

With respect to dedicated interoffice transport, WorldCom demonstrates that for the vast majority of incumbent LEC central offices, including those in larger metropolitan areas, competitors continue to lack alternatives to the incumbent LECs. Incumbent LECs still possess significant economies of scale that competitors cannot rival. A more granular impairment analysis, conducted by state commissions and focusing on individual wire centers, may be warranted for interoffice transport, but the presence of four or more unaffiliated competitive providers offering transport services over physically distinct facilities should be a necessary (but not sufficient) predicate to a finding that competitive LECs are not impaired without access to incumbent LEC interoffice transport. State commissions should also evaluate other factors, including competitors' access to rights of way, before finding a lack of impairment. In addition, the transport unbundling obligation should not be relaxed unless the incumbent LEC permits other carriers to migrate special access circuits to cost-based EELs upon demand, and permits "commingling" as explained below.

As WorldCom demonstrates, UNE-P is critical to competition for customers that use voice-grade loops to meet their communications needs, principally residential and small business customers. The record shows that there are no viable alternatives to UNE-P, and that the availability of UNE-P encourages investment in facilities. Thus, each of the elements necessary for UNE-P to serve residential and small business customers must be available nationwide, including loops, switching, and shared transport, as well as other elements described below.

The final subsections of Section IV discuss the remaining UNEs, and explain why they continue to be critical to the provision of competitive telecommunications services. These subsections demonstrate that competitive LECs will be impaired in their ability to offer telecommunications services without unbundled access, on a national basis, to signaling networks and call-related databases, OSS, network interface devices (NIDs) and inside wire.

WorldCom is submitting six attachments in support of its reply comments, including:

- *Declaration of Mark T. Bryant* – This declaration describes the economic characteristics of telecommunications networks, and discusses economies of scale for loops, transport, and switching. Based on an analytic model of competitive LEC entry scenarios, Dr. Bryant also shows that the availability of unbundled transport at TELRIC prices, which can be combined seamlessly and efficiently with unbundled loops, is a necessary (although not sufficient) condition to concluding that requesting carriers are not impaired without access to unbundled switching.

- *Declaration of Daniel Kelley* – This declaration addresses economic arguments made by several parties in their initial comments. In particular, it shows that: (i) all forms of competition – and not just facilities-based competition – provide benefits to consumers; (ii) unbundling neither reduces incentives to invest nor deters innovation; (iii) TELRIC compensates the incumbents for all costs of unbundling; (iv) regulation is a necessary prerequisite to competition; and (v) variations in incumbent LEC retail rates for local service do not affect the impairment analysis.

- *Report of Janusz A. Ordover* – This paper explains that TELRIC provides the proper basis for the pricing of unbundled network elements. It also explains that the incumbent LECs' criticisms of TELRIC are flawed, and that TELRIC is far superior to any of the available alternatives for establishing the incumbent LECs' costs of providing network elements to competitors.

- *Declaration of Richard A. Chandler* – Mr. Chandler's declaration describes the limits on the ability of companies to use Ka-band satellites to offer competitive broadband services. In particular, it demonstrates that a combined EchoStar-Hughes entity would face significant limits on satellite capacity for two-way Internet access. Mr. Chandler concludes that the merged entity's combined satellite capacity for two-way Internet access is far short of that required to serve even a majority of rural households, let alone a significant fraction of households nationwide.

- *Joint Declaration of Tom Stumbaugh, David Reilly, and William M. Drake* – This joint declaration responds to and corrects a number of misimpressions created by SBC and Verizon in their initial comments. Specifically, it explains that: (i) it is technically feasible to unbundle fiber-fed loops and subloops; (ii) SBC and Verizon are deploying fiber-fed NGDLC systems in order to cut expenses, increase network efficiencies and capacity, and increase the reach of broadband services; and (iv) competitive LEC access to fiber-fed NGDLC architectures on an unbundled basis does not create stranded capacity.

- *Declaration of Wayne Huyard* – Mr. Huyard's declaration describes MCI's recent introduction of its "all-distance" Neighborhood calling plan and the significant benefits that plan will bring to consumers. It also explains that the success of the Neighborhood offering depends on the continued availability of the UNE-P at TELRIC prices, and that any decision to limit or discontinue UNE-P would significantly undermine the prospects for competitive local services.

II. THE COMMISSION SHOULD APPLY SECTION 251(d)(2) IN ACCORD WITH THE STATUTE AND THE *USTA* DECISION

If the Commission is to realize the vision of robust competition that underlies the 1996 amendments to the Communications Act, it must ensure that its UNE rules enable rival carriers to compete with the incumbent LECs. In this section, WorldCom describes how the FCC should apply section 251(d)(2) in a manner that is consistent with the Act, and with the court's decision in *USTA v. FCC*. While WorldCom strongly disagrees with the Court of Appeals' decision, and considers it to be fundamentally at odds with the U.S. Supreme Court's recent decision in *Verizon v. FCC*, in this pleading, WorldCom responds to the Commission's request that parties take the Court of Appeals' decision into account in their comments.

As the Commission has noted, many aspects of the *USTA* decision are inconsistent with *Verizon v. FCC*.[12] WorldCom therefore supports the Commission's petition for rehearing of *USTA v. FCC*, and urges the Government of the United States to petition for writ of *certiorari*, should rehearing be denied. As the FCC explained in its petition for rehearing, the Court of Appeals: (i) improperly suggested that the FCC must compare evidence of actual competitive investment under the existing unbundling regime with hypothetical investment that "would have occurred in the absence of the prospect of unbundling";[13] (ii) improperly assumed that network element unbundling requirements necessarily will create investment disincentives for both incumbents and new entrants;[14]

[12] FCC Petition for Rehearing.

[13] *Compare USTA v. FCC*, 290 F.3d at 425, *with Verizon v. FCC*, 122 S.Ct. at 1675-76. *See* FCC Petition for Rehearing at 8. *See also* section IV.A.3(d) below.

[14] *Compare USTA v. FCC*, 290 F.3d at 427, *and id.* at 424-25, 429, *with Verizon v. FCC*, 122 S.Ct. at 1667 n.20, 1672 & n.27, 1675 & n.33. *See* FCC Petition for Rehearing at 8-

and (iii) improperly assumed that a TELRIC-based price for a network element is a "price below true cost" that will exacerbate the perceived investment disincentives of unbundling.[15] In addition, contrary to the Supreme Court's holding in *Iowa Utilities Board*,[16] the Court of Appeals improperly attempted to limit the extent to which cost disparities are relevant to the impairment analysis,[17] and improperly interpreted the relevance of "cross-subsidies" to the impairment analysis.[18]

Despite these legal flaws, for purposes of this pleading, WorldCom describes an approach to the impairment analysis that is both consistent with the statute and responsive to the Court of Appeals. Specifically, WorldCom urges the Commission to continue to find that impairment exists when,

> taking into consideration the availability of alternative elements outside the incumbent's network, including self-provisioning by a requesting carrier or acquiring an alternative from a third-party supplier, lack of access to that element materially diminishes a requesting carrier's ability to provide the services it seeks to offer.[19]

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9. *See also* section III below, and Janusz A. Ordover, *Pricing Network Elements at TELRIC: A Necessary Prerequisite for Local Competition,* appended hereto as Attachment D, at 7-13 ("Ordover Report").

[15] *Compare USTA v. FCC*, 290 F.3d at 424, *with Verizon v. FCC*, 122 S.Ct. 1676 n.33, 1687. *See* FCC Petition for Rehearing at 9. *See also* section III below, and Ordover Report at 9.

[16] *AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366, 119 S.Ct. 721 (1999) ("*Iowa Utilities Board*").

[17] *Compare USTA v. FCC*, 290 F.3d at 426-28, *with Iowa Utilities Board*, 525 U.S. at 389-90.

[18] *Compare USTA v. FCC*, 290 F.3d at 422-23, *with Iowa Utilities Board*, 525 U.S. at 393-94. *See* FCC Petition for Rehearing at 14-15. *See also* section II.F below.

[19] *UNE Remand Order* ¶ 51. In applying this standard, the Commission also should continue to consider "the totality of the circumstances to determine whether an alternative to the incumbent LEC's network element is available . . . as a practical, economic, and operational matter." *Id.* ¶ 62.

The Commission should, however, define "materially," and respond to the court's questions about the relevance of economies of scale and geographic variation. In determining whether a requesting carrier has been impaired, the Commission should consider all relevant factors – including cost, timeliness, quality, and operational factors.

As WorldCom explains below, the cost disadvantages faced by new entrants to the telecommunications sector are different in kind and severity from those faced by new entrants in other industries. In addition, WorldCom describes the circumstances in which it is appropriate for the FCC to ask the states to conduct a "granular" analysis. As part of its discussion of granularity, WorldCom also explains why variations in retail local rates are not relevant to the impairment analysis.

In addition, WorldCom responds to a number of baseless arguments and requests made by the BOCs, including their requests that the Commission adopt use restrictions and conduct service-specific impairment analyses. As WorldCom shows, allowing use restrictions would violate the plain language of the Act, which permits a competitive carrier to use any capability of a UNE to provide any "telecommunications service" it seeks to offer. In addition, now that the Supreme Court has ruled that it is legal to require EELs, either as UNEs or as new combinations of UNEs, the Commission should clarify that incumbent LECs must convert existing special access to EELs as well as provide EELs where the requesting carrier is not currently relying on special access services.

A. Costs Are a Relevant Factor

Costs are highly relevant in determining whether lack of a network element would "impair" a competitive carrier's ability to offer telecommunications services.[20] As the Court of Appeals recognized, any competitive impairment will "necessarily be traceable to some kind of disparity in cost."[21] With enough money and time, competitive LECs could in theory duplicate any incumbent LEC facility. In reality, however, new entrants must compete against incumbent LECs that derive significant cost advantages from their economies of scale and scope.[22] The Supreme Court has ruled that a *de minimis* increase in cost caused by denial of a network element cannot, by itself, justify a finding of impairment.[23] Thus, a cost disadvantage must be material in order to cause impairment.[24] In the Court of Appeals' view, a cost disadvantage is material to the impairment analysis if it: 1) is more than minimally greater than those disadvantages

[20] Indeed, as WorldCom explained in its comments, cost is arguably the single most important factor in determining impairment. WorldCom Comments at 51.

[21] *USTA v. FCC*, 290 F.3d at 426.

[22] *Verizon v. FCC*, 122 S.Ct. at 1662; Declaration of Mark Bryant, appended hereto as Attachment A, ¶¶ 2-4 ("Bryant Declaration"); Declaration of Daniel Kelley, appended hereto as Attachment B, ¶ 13 ("Kelley Declaration").

[23] *Iowa Utilities Board*, 525 U.S. at 389-390 (explaining that "[a]n entrant whose anticipated annual profits from the proposed service are reduced from 100% of investment to 99% of investment . . . has not *ipso facto* been 'impair[ed] . . . in its ability to provide the services it seeks to offer'"); *id.* at 392 (Commission may not regard "*any* 'increased cost or decreased service quality' as establishing a 'necessity' and an 'impair[ment]'").

[24] Although the Supreme Court focused on TELRIC issues in *Verizon v. FCC*, that decision provides guidance on the relevance of cost to the ability of new entrants to offer telecommunications services. *See Verizon v. FCC*, 122 S.Ct. at 1669, 1672, n.27 (noting that low prices for the elements to be leased may be "crucial in inducing [a] competitor to enter and build."); *id.* at 1675 (explaining that a 10% increase in UNE rates may be enough to keep a potential competitor out of the market).

faced by new entrants in all industries;[25] and 2) is not balanced by an offsetting competitive advantage.[26]

B. The Cost Disadvantages Faced by New Entrants into the Local Telecommunications Business Are Not Universal to New Entrants in All Industries

As the Court of Appeals noted, certain cost disadvantages are common to new entrants in virtually all industries. New entrants may, for example, need to incur up-front costs for launching mass-market advertising campaigns or installing billing systems before they can begin acquiring customers and generating revenue. In many industries, start-ups also face diseconomies of scale because they have few if any customers from whom to recover their fixed costs (*i.e.*, costs that do not vary in relation to output).[27] Thus, it is not uncommon for costs to be higher on a per-unit or per-customer basis for new competitors than for established firms that are able to spread such costs over a large existing customer base. As explained below, however, while certain cost disadvantages may be common to many new entrants "into virtually any business,"[28] new entrants into the telecommunications industry face disadvantages that exist in only a few other industries.

The telecommunications industry is characterized by unusually large upfront costs, a very high percentage of which are both fixed (as opposed to variable) and sunk.[29]

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[25] *USTA v. FCC,* 290 F.3d at 427 (noting that "average unit costs are necessarily higher at the outset for any new entrant into virtually any business").

[26] *See id.*, 290 F.3d at 422-423.

[27] *See* Clarke Declaration (Attachment B to AT&T Comments, CC Docket No. 01-338, filed April 5, 2002) ¶¶ 11-12.

[28] *USTA v. FCC*, 290 F.3d at 427.

[29] Bryant Declaration ¶¶ 3, 5-26.

This combination serves as a barrier to entry that is both formidable and rare. For example, while any industry that requires an investment in fixed costs will exhibit some economies of scale,[30] these economies of scale are much more pronounced in the telecommunications industry than in most other industries.[31] Moreover, achieving the scale necessary to compete requires enormous upfront investments that make it difficult to enter the telecommunications business, a problem that is exacerbated by the fact that many of these costs are sunk and cannot be recovered upon exiting the industry.[32]

The incumbent LECs' primary advantage over new entrants is their extensive local distribution networks which, combined with their large embedded base of customers, allow them to add new customers at minimal additional cost, aggregate traffic, route it efficiently and otherwise exploit the scale economies inherent in the telecommunications industry. The cost of loops, for example, is largely fixed (*i.e.*, insensitive to the number of customers being served),[33] and "once a cable route is established, there are only very small incremental structure costs to serving additional customer lines located along the route."[34] Indeed, as Richard Clarke explained in his declaration, the technologies used to provision local telephone service display "such pronounced economies of scale and density" that a new entrant seeking to construct its

[30] Clarke Declaration ¶ 12.

[31] *See* Bryant Declaration ¶ 8.

[32] The daunting challenge posed by the twin burdens of high fixed costs and high sunk costs is readily apparent from the slew of bankruptcies in the telecommunications industry. *See* WorldCom Initial Comments at 21; *see also*, *e.g.*, Mitchell Pacelle and Kara Scannell, "XO to Submit Chapter 11 Filing Amid Turmoil," The Wall Street Journal at A3 (June 17, 2002).

[33] *See* Bryant Declaration ¶¶ 11-14.

[34] Clarke Declaration at ¶ 23 (also noting that these characteristics are true of fiber-fed loops as well as all-copper loops).

own local network will face unit costs far in excess of those incurred by the incumbents, at least until the new entrant is able to develop a large customer base of its own.[35] Even then, some economies of scale will continue to persist until a competitor matches the incumbent's market share.[36]

A significant proportion of the total costs incurred by new entrants into the telecommunications industry are not only fixed, but sunk.[37] Carriers must make extensive investments to deploy facilities, such as copper or fiber plant, that are not fungible (*i.e.*, cannot be resold or re-used in another location or for another purpose). These very high fixed costs that are mostly sunk are not characteristic of most industries. Indeed, it is the high proportion of sunk costs that distinguishes the telecommunications industry from other industries that are also characterized by high fixed costs.[38]

New entrants in the airline industry, for example, may need to procure airplanes and other equipment before they can begin offering service, but this equipment can easily be moved in response to changes in demand. Unlike fiber, which is literally sunk in the ground, an airplane can be redeployed to wherever demand is greatest: if there is reduced demand on the New York to Los Angeles route, an airline can simply shuffle its fleet to another route where demand is greater.

A telecommunications company, on the other hand, cannot easily redeploy or reroute outside plant from one location to another. If a customer served over a competitor's local loop decides to switch back to the incumbent, then the competitor's

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[35] Clarke Declaration at ¶ 24; *see also id* at ¶ 23.

[36] *See* Bryant Declaration ¶ 29.

[37] Bryant Declaration ¶ 3.

[38] *See* Bryant Declaration ¶ 8.

investment in the loop will be stranded.[39] Unlike investments in airplanes, investments in loop plant, transport, collocation arrangements and other facilities are largely sunk costs that cannot be moved or reused to serve different customers or different locations. Once a carrier builds a loop to serve a particular customer, it can recover its costs only from that end user.

Airlines also are able to lease equipment, including airplanes, at competitive prices.[40] This allows new entrants into the airline industry to lower their upfront costs (and risks) as they gain a foothold in the industry. Carriers seeking to enter the local telephone business have no such alternative, only the legally-mandated unbundling requirements that are at issue in this proceeding. Absent this legal compulsion, new facilities-based entrants in the local telecommunications business must therefore make large upfront investments in facilities and equipment, as well as back-office systems, before they can begin offering service.[41]

Incumbent LECs also enjoy other important advantages over new entrants that are not common to other industries. For example, the incumbents have obtained key rights of way and building access rights that are costly for competitors to duplicate. In some instances, new entrants may find it impossible to acquire all the rights of way they need in order to compete effectively, and often must contend with recalcitrant landlords in

[39] In this regard UNEs serve the incumbents well, allowing them to generate a return on their investment even if a customer served over the incumbent's facilities switches to another carrier. When WorldCom uses UNE-P to serve a local customer it has won from Verizon, it compensates Verizon at TELRIC-based rates for the use of Verizon's facilities, ensuring that Verizon continues to recover its costs for those facilities.

[40] *See, e.g.*, http://www.boeing.com/commercial/airtrade/flash.html.

[41] Of course, it is precisely because UNEs function as a lease-like alternative within the telecommunications industry that they lower the barriers to entry for competitors.

attempting to gain building access rights.[42] Even when competitors can obtain the access and rights of way they need, they often incur significant costs and experience extensive delays in negotiating the necessary agreements.[43] These too are barriers to entry specific to the telecommunications industry.

In evaluating the advantages enjoyed by the incumbent LECs, it is also important to remember that in contrast to many well-established firms in other industries, the incumbent local telephone providers did not achieve their market power by virtue of their "superior skill, foresight and industry."[44] Indeed, the incumbents did not enter the telecommunications industry in the same manner as new competitors. Rather, the incumbent LECs benefited from government-sanctioned monopolies that permitted them to build out their networks with an effectively guaranteed return on investment; obtain preferred access to rights of way (sometimes by exercising condemnation authority) and buildings; and achieve the scale necessary for a very low incremental cost of adding new customers.

C. The Incumbent LECs' Extensive Advantages Cannot Be Overcome by New Entrants' Offsetting Advantages

The Court of Appeals inquires whether competitive LECs may be able to overcome some of the incumbents' cost advantages through offsetting advantages of their own.[45] For example, competitive carriers may have back office systems superior to those

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[42] *See* WorldCom Comments at 33-34, 110. As explained below in section IV.C.2(a), competitors' problems in obtaining needed rights of way persist despite the provisions of section 224 of the Act.

[43] *See* WorldCom Comments at 21, 33-34, 110.

[44] *U.S. v. Aluminum Co. of America*, 148 F.2d 416, 430 (2nd Cir. 1945).

[45] *USTA v. FCC*, 290 F.3d at 422-423.

employed by the incumbents. Another advantage is the experience competitors have in serving enterprise customers (*i.e.*, larger business customers with multiple locations throughout a region or throughout the country).[46] These advantages – which are rapidly being eliminated as the BOCs gain section 271 authority – are far outweighed by the competitive disadvantages competitors face, however.[47]

Thus, it is clear that (1) competitive carriers face significant (not merely *de minimis*) cost disadvantages as they seek to compete in the provision of local services; (2) these cost disadvantages are not shared by all new entrants into all businesses; and (3) these disadvantages far outweigh any offsetting advantages competitors may have as they try to establish a foothold. The cost disadvantages faced by competitive LECs therefore are material and sufficient to justify a finding of "impairment" consistent with the statute and the Court of Appeals' decision.

D. Application of the Essential Facilities Doctrine is Not Appropriate

The BOCs have argued that the impairment standard should embody the criteria of the "essential facilities doctrine."[48] The essential facilities doctrine is an antitrust concept pursuant to which a monopolist may be required to "share its qualifying

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[46] Historically, the BOCs have been largely foreclosed from serving enterprise customers because of the lack of authority to provide in-region interLATA services.

[47] The BOCs also argue that there are significant costs to unbundling because TELRIC is not compensatory and discourages investment. As WorldCom explains in section III below, these arguments are without merit. Similarly, other obligations borne by the incumbent LECs have only a minimal impact on the overwhelming competitive advantages they enjoy. Indeed, as explained below, one of the main concerns raised by the Court of Appeals – state rules aimed at ensuring that residential customers are charged affordable rates for local service – is not relevant to the impairment analysis.

[48] *See USTA v. FCC*, 290 F.3d at 426.

monopoly facility with one or more rivals."[49] The BOCs' attempt to import this antitrust doctrine into the impairment analysis is unsupported by the plain language of the statute. The Act does not require the essential facilities doctrine to be considered as part of the impairment analysis,[50] and the Commission should reject the BOCs' attempts to equate the impairment standard established by the Act with the essential facilities doctrine that some courts use in evaluating antitrust claims.

E. A More Granular Analysis May Be Appropriate for Certain Elements

The Court of Appeals suggested that the Commission take a more granular approach in conducting its impairment analysis.[51] Although a more granular analysis may provide certain advantages, there also are, as the Commission has recognized, powerful reasons for national rules. Among their other benefits, national UNE rules promote administrative ease and reduce regulatory uncertainty, thereby facilitating competitive carriers' ability to devise viable business plans and attract investment capital.[52] Some competitive carriers, such as WorldCom, provide service nationwide. Others provide service in multiple states. If each state were to apply its own UNE standard, these carriers would be faced with an unworkable hodge-podge of regulatory schemes.[53]

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[49] Phillip E. Areeda & Herbert Hovenkamp, *Antitrust Law: An Analysis of Antitrust Principles and Their Application*, § 771b (2d Ed. 2002), Vol. IIIA, p. 171.

[50] *See USTA v. FCC*, 290 F.3d at 427 (stating that "we do not intend to suggest that the Act requires use of [the essential facilities] doctrine's criteria.").

[51] *USTA v. FCC*. 290 F.3d at 425-426; *see also id.* at 422-423.

[52] *See Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* First Report and Order, 11 FCC Rcd 15499, ¶ 242 (1996) ("*Local Competition Order*"); *see also, e.g.*, California PUC comments at 5-6, 14.

[53] *See Local Competition Order* at ¶ 59 (concluding that differences in market conditions

Unbundling elements on a customer-by-customer or state-by-state basis also could result in increased litigation, miring regulators in disputes between incumbent LECs and competitive carriers. Not only would such litigation tax regulatory resources, it also would impair competitive carriers' ability to provide the services they seek to offer as they would be required to battle constantly with the incumbent LECs over the nature and extent of the incumbents' unbundling obligations.[54] In many venues, the result would be higher barriers to entry, and some jurisdictions could be deprived of the benefits of competition altogether.

Nonetheless, a more granular analysis may serve the public interest, if and only if the analysis is conducted in a meaningful way, and can be achieved without high costs. Specifically, as WorldCom described in its initial comments, the analysis must: (1) be based on meaningful empirical market evidence that is "sophisticated and refined"; (2) support the ability of competitive carriers to serve the mass market; and (3) yield bright-

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do not coincide with state boundaries).

[54] For example, when the Commission left decisions regarding the unbundling of subloop elements and dark fiber up to the individual states, it led to dozens of state commission arbitrations and subsequent federal lawsuits. *See, e.g., MCI Telecommunications Corp. v. GTE Northwest, Inc.,* 41 F.Supp.2d 1157 (D. Or. 1999); *U S WEST Communications, Inc. v. Thoms,* No. 4:97-CV-70082 (S.D. Iowa Jan. 25, 1999); *U S WEST Communications, Inc. v. Garvey,* 55 F.Supp.2d 968 (D. Minn. 1999); *MCI Telecommunications Corp. v. BellSouth Telecommunications, Inc.,* 40 F.Supp.2d 416 (E.D. Ky. 1999); *MCI v. Bell-Atlantic,* 36 F. Supp.2d 419 (D.D.C. 1999); *U S WEST Communications, Inc. v. AT&T Communications of the Pacific Northwest, Inc.,* 31 F. Supp.2d 839 (D. Or. 1998); *Southwestern Bell Telephone Co. v. AT&T Communications of the Southwest, Inc.,* No. A97-CA-132SS, 1998 WL 657717 (W.D. Tex. Aug. 31, 1998); *MCI Telecommunications Corp. v. U S WEST Communications, Inc.,* No. C97-1508R, 1998 WL 34004509 (W.D. Wash. July 21, 1998); *U S WEST Communications, Inc. v. AT&T Communications of the Pacific Northwest,* No. C97-1320R, 1998 WL 1806670 (W.D. Wash. July 21, 1998); *MCI Telecommunications Corp. v. BellSouth Telecommunications, Inc.,* 7 F. Supp.2d 674 (E.D.N.C. 1998).

line unbundling rules that can be applied up front, before a competitive carrier deploys facilities and launches a particular service.[55]

The incumbent LECs have asked the Commission to conduct an impairment analysis that combines the worst of both worlds: it is not national, and therefore lacks the benefits of uniformity and administrative ease, but is not sufficiently granular to ensure that the Commission actually has the relevant information necessary to evaluate impairment for any particular element. BellSouth and Verizon, for instance, argue that for non-high capacity loops, the FCC should adopt a more geographically granular analysis.[56] As WorldCom explains in section III.A.1 below, this approach would impose significant administrative burdens on the Commission while yielding no offsetting benefits.

The Commission should reject the incumbent LECs' proposals and instead adopt the more rational approach explained below. Specifically, for each element, the Commission should balance the competing considerations described above (*i.e.,* the benefits of national rules; the element's susceptibility to meaningful granular analysis; and the potential for easily administered bright-line rules). For elements such as OSS and call-related databases, for which there is no relevant geographic variation, and for which a granular analysis would merely be burdensome, the FCC simply should adopt national

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[55] WorldCom Comments at 61-64.

[56] BellSouth Comments at 60-62 (recommending that Commission use MSAs as the relevant geographic market for loops); Verizon Comments at 40-41 ("[F]or POTS and other non-high capacity loops, the Commission should scrutinize the marketplace evidence to identify particular geographic locations or types of customers for which impairment still exists.).

rules rather than wasting carriers' and regulators' resources by undertaking a granularity analysis when the conclusion is obvious from the outset.

Precedent exists for adopting national rules where such rules are necessary as a matter of administrative practicality. For example, in determining dominance/nondominance in the interexchange context, the Commission defined the relevant geographic market as a point-to-point market, but for reasons of administrative practicality and efficiency decided to treat long distance calling as a single national market unless there is credible evidence indicating a lack of competition in a particular point-to-point market.[57] A similar aggregation technique may be useful in evaluating certain elements, such as loops, for which there is little geographic variation in the level of impairment.

This approach is consistent with the Act. In entrusting the impairment analysis to the FCC, Congress could not have intended the analysis to be so administratively burdensome as to be impossible for the FCC to carry out. Congress trusted the FCC's expertise, and the FCC is free to exercise its expertise in a manner that allows it to meet the goals of the Act while also maximizing administrative efficiency.

For elements, such as unbundled transport, for which a more granular analysis may be useful, the Commission should describe the circumstances under which the element no longer must be unbundled, but ask state commissions to conduct the granular analysis, including evaluating the facts. For example, using factors described by the FCC (as well as any other relevant criteria) for evaluating dedicated interoffice transport, state

[57] *See Regulatory Treatment of LEC Provision of Interexchange Services Originating in the LEC's Local Exchange Area*, Second Report and Order in CC Dkt. No. 96-149, 12 FCC Rcd 15756, ¶¶ 65-66 (1997).

commissions would conduct proceedings open to all affected parties (*i.e.*, any carrier purchasing, or intending to purchase, UNEs in that state from the incumbent LEC).[58] The proceeding would result in the designation of routes (based on wire centers) in which transport need not be made available. Following resolution of the proceeding, parties would be directed by the state commission to amend existing interconnection agreements and/or tariffs in accordance with the results of the proceeding. Pending amendment of the interconnection agreements and/or tariffs, incumbent LECs would remain obligated to provide UNEs under existing agreements and/or tariffs, except where a competitive LEC agrees to amend its particular interconnection agreement with the incumbent.

Consistent with the Act, state commissions also should continue to have the freedom to impose additional unbundling requirements if they find that additional UNEs would help promote competition in areas under their jurisdiction.[59] Thus, state commissions can add UNEs and make UNEs available in situations where they are not required nationally, and can limit the availability of certain UNEs by applying the FCC's factors.

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[58] A more detailed explanation of the analysis relevant to each specific element is provided in section IV below.

[59] Such a result clearly is permissible under the Act. *See, e.g., Iowa Utilities Board*, 525 U.S. at 388 (upholding states' right to make additional elements available on a case-by-case basis). While states are preempted from removing unbundling obligations imposed by the FCC, they remain free to add additional obligations necessary to promote intrastate competition. *See* 47 U.S.C. §§ 251(d)(3) and 261(c); *see also, e.g., Commission Investigation and Generic Proceeding of Ameritech Indiana's Rates for Interconnection, Service, Unbundled Elements, and Transport and Termination Under the Telecommunications Act of 1996 and Related Indiana Statutes*, Order, Cause No. 40611-S1, Phase II (Indiana Util. Reg. Commission, June 2002) (rejecting argument by Ameritech Indiana that the Court of Appeals' decision in *USTA v. FCC* diminishes states' authority to order unbundling, including authority to impose additional unbundling requirements).

F. Variations in Incumbent LEC Retail Rates Are Irrelevant to the Impairment Analysis

The Court of Appeals asks why variations in local retail rates, particularly those arising from "the cross-subsidization often ordered by state regulatory commissions," do not create variations in impairment.[60] In most cases residential local retail revenues are well above forward-looking costs. The forward-looking cost of a service provides the most accurate view of the economic cost of providing that service, and has been deemed by the Supreme Court to be a proper measure of cost under Section 251 of the Act.[61] Using forward-looking costs, it is clear that "in most cities local revenues cover local costs even without accounting for feature and access revenue."[62]

In areas where local rates are below forward-looking costs, subsidies may be either explicit or implicit. Neither case presents the competitive disparity that concerned the court.

1. Explicit Subsidies

In many of the geographic areas where incumbent LECs charge retail rates that are below forward-looking costs, they are compensated for the difference between rates and costs by universal service fund (USF) payments. Because interstate subsidies are required to be "explicit" and "available to all eligible telecommunications carriers on an

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[60] *USTA v. FCC,* 290 F.3d at 422.

[61] *See infra* section III.

[62] Kelley Declaration ¶ 63. In fact, it appears likely that the incumbent LECs improperly relied on historic costs in presenting their argument before the D.C. Circuit. *See USTA v. FCC*, 290 F.3d at 422 (discussing the effect of UNEs that are priced below "the ILECs' historic costs").

equitable, non-discriminatory, and competitively neutral basis[,]"[63] they do not place the incumbent LEC at a competitive disadvantage or create a disincentive for a new entrant to compete for the subsidized customer. Thus, carriers should be on an equal footing in serving those customers since the shortfall in revenues from retail rates will be made up for by USF payments, enabling carriers to recover the forward-looking costs of serving that customer. This situation does not implicate the kind of competitive disparity that concerned the Court of Appeals.[64]

2. Implicit Subsidies

There are two ways in which an incumbent LEC service might be subsidized implicitly. The first, and by far the most common kind of implicit subsidy occurs when an incumbent LEC provides residential customers a particular service at below-cost rates, but make up the shortfall through other revenues generated by that same customer class.[65] For instance, an incumbent LEC might charge certain customers less than the forward-looking cost for local voice service, but sell those same customers high-margin vertical services such as call waiting and caller ID. In this way, the incumbents are able to cover

[63] *Federal-State Joint Board on Universal Service*, Fourteenth Report and Order, Twenty-Second Order on Reconsideration, and Further Notice of Proposed Rulemaking in CC Docket No. 96-45, and Report and Order in CC Docket No. 00-256, 16 FCC Rcd 11244, ¶ 205 (2001). *See also Federal-State Joint Board on Universal Service,* Notice of Proposed Rulemaking and Order, 17 FCC Rcd 2999, ¶ 31 (2002) ("In the First Report and Order, the Commission adopted a plan for universal service support for rural, insular, and high cost areas to replace longstanding federal subsidies to incumbent local telephone companies with explicit, competitively neutral federal universal service mechanisms."); 47 U.S.C. § 254(e) (mandating that universal service support should be "explicit").

[64] *See* Kelley Declaration ¶ 60 (concluding that "universal service subsidies do not provide a basis for finding a lack of impairment.").

[65] *See id.* ¶ 61.

their forward-looking costs without resorting to charging artificially inflated prices to other customer classes.

For this reason, even with implicit subsidies, "the vast majority of residential customers generate revenues above forward-looking costs."[66] A competitive carrier seeking to serve that same customer would have to assemble a competitively priced package to match the incumbent LEC. In other words, the competition is for the whole customer, not just the allegedly above- or below-cost service. It is highly unlikely, for example, that a competitive LEC would be able to sell a customer call waiting while the customer continues to obtain basic voice service from the incumbent. Thus, even where there is an implicit subsidy, the competitive disparity that concerned the Court of Appeals is simply not present.

The second kind of implicit subsidy exists only in those relatively rare circumstances where the incumbent LEC does in fact charge one group of customers higher prices in order to charge another group of customers prices that are below forward looking costs. Even in this circumstance, however, the resulting disparity in retail rates should be viewed as irrelevant to the impairment analysis. It is highly unlikely that any competitors would begin to provide a service in a particular area pursuant to a business plan that depends on the incumbent LEC's continuing to charge artificially high retail rates.[67] Thus, it is clear that variations in retail rates arising from such cross-subsidies are irrelevant to the impairment analysis.

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[66] *Id.*

[67] *See* Kelley Declaration ¶ 64 ("CLECs will not sink substantial amounts in facilities that they would not be able to efficiently compete with if prices were driven towards cost.").

G. The Existence of Tariffed Arrangements and Resold Service Is Irrelevant to the Impairment Analysis

The incumbent LECs continue to argue that competitors cannot be impaired without access to UNEs as long as they have access to tariffed arrangements, such as special access, or have the opportunity to resell the incumbents' services.[68] The commission has rejected this argument, properly recognizing that it would allow incumbent LECs to avoid the requirements of section 251(c). The incumbent LECs' arguments also ignore key differences between UNEs and tariffed or resold services. For example, the difference in rates for tariffed special access services and the UNEs needed to provide similar functionality can be quite large. Similarly, resold services are not substitutes for UNEs.[69] Carriers reselling the incumbent LEC's local exchange service are constrained to provide the same services as the incumbent, making it harder for new entrants to differentiate themselves in the marketplace. With UNEs, however, competitors have more freedom to offer innovative products such as the Neighborhood program recently introduced by MCI, and Z-Tel's Z-lineHOME service.[70]

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[68] *See, e.g.,* Verizon Comments at 53-54; Shelanski Declaration at ¶ 19; SBC Comments at 27.

[69] *See Local Competition Order*, 11 FCC Rcd at 15643-44, ¶¶ 286-287; *Implementation of the Local Competition Provisions in the Telecommunications Act of 1996,* Third Order on Reconsideration and Further Notice of Proposed Rulemaking, 12 FCC Rcd 12460, ¶ 37 (1997) ("*Local Competition Third Order*") (rejecting the suggestion that requesting carriers are not impaired in their ability to provide a service merely because they can obtain the service at wholesale rates from an incumbent LEC). *See also Iowa Utilities Board,* 525 U.S. at 393-395, and *Iowa Utilities Board v. FCC*, 120 F.3d 753 at 810, 814-15 (8th Cir. 1997) ("*Iowa Utilities Board 1997*"), *reversed in part on other grounds, AT&T Corp. v. Iowa Utilities Board*, 525 U.S. 366 (1999) (the fact that a capability may be available as a service does not necessarily preclude that capability from being available as a network element).

[70] *See* Declaration of Wayne Huyard, appended hereto as Attachment C ("Huyard Declaration"); Z-Tel Comments at 1-2 (describing Z-Tel's innovative offerings provided