Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matters of	)	
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Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach Metropolitan Statistical Areas	)	WC Docket No. 06-172
	)	
Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas	)	WC Docket No. 07-97

REPLY COMMENTS OF QWEST CORPORATION

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SUMMARY

The Commission in developing a standard for UNE forbearance pursuant to Section 10 of the Act should seek a standard that will further the goals of the Act, *i.e.*, promote competition in the local telecommunication market, spur investment and innovation, and reduce regulation. While some commenters urge the Commission to apply traditional antitrust principles, particularly in the form of the Department of Justice/FTC's Horizontal Merger Guidelines, to promote static efficiency; such an approach will not be appropriate for the telecommunications industry. The telecommunications market is a high-cost, capital-intensive, technologically-driven industry and regulators need to apply a standard that promotes dynamic efficiency. The Act, and the Commission's statements interpreting the Act, have recognized the dynamic component of the market and have tried to tailor regulation accordingly.

In the context of UNE forbearance, the Commission needs a standard that takes into account the potential for competition. The Commission's task in this context is not to protect a class of competitors or a particular platform, but to enable the seeds of competition to grow in a given market. The Commission should ensure that the industry participants have an equal opportunity to operate in a market but in no way should it try and guarantee a victor. Prof. Weisman and Dr. Tardiff have provided ten principles gleaned from competition analysis that they feel are well-suited for the Commission's task ahead. The principles are as follows:

THE PRINCIPLES

Principle 1. The optimal regulatory policy should recognize the tradeoffs between static and dynamic efficiency and its implications for consumer welfare.

Principle 2. The optimal regulatory policy should balance Type I errors (regulating when market forces provide sufficient competitive discipline) and type II errors (not regulating when market forces provide insufficient competitive discipline) so as to minimize the expected social cost of error.

Principle 3. The optimal regulatory policy should be platform-neutral and competitor-neutral in that it should serve to protect the integrity of the competitive process rather than individual competitors.

Principle 4. Market share tests are inherently problematic in regulated industries and the Commission should not rely upon them to draw inferences about market power.

Principle 5 Any dearth of competition in retail telecommunications markets is likely an artifact of regulatory-rate distortions that served to suppress competition.

Principle 6. Historical ratemaking polices in telecommunications that diverge from the competitive standard can lead regulators astray in applying standard market definition guidelines.

Principle 7. The cost structure for wireline providers (i.e., pronounced scale/scope economies) and the corresponding high price-cost margins required for financial viability implies that relatively modest levels of competition may be sufficient to impose the requisite pricing discipline.

Principle 8. The purpose of mandatory unbundling is not to control market power *per se*, but rather to enable competition that would not be possible otherwise.

Principle 9. Wholesale markets are relevant to the implementation of the 1996 Telecommunications Act only insofar as they are required for competition in retail markets.

Principle 10. Policymakers have recognized that (i) subscription to both wireless and wireline does not imply that the two services are complements, and (ii) wireless provides competitive discipline on wireline prices.

These principles will drive the Commission from an attempt at controlling market power to one of unleashing the power of the markets. The principles will enable the Commission to recognize the paradigm shift that has occurred in the telecommunications industry and to tailor regulation accordingly. These principles will allow the Commission to defer to competitive factors that will provide the requisite market discipline from within as opposed to discipline applied via regulation.

Clearly both Congress and this Commission anticipated that the time would come to ease the reins on regulation and let the market forces that they have nurtured since the enactment of the Act to take root. The market has reached a point where Section 10 should be imbued with

more potency as opposed to diluted. By crafting a standard that maintains forbearance as not only a crucial deregulatory tool but also a tool that can spur competition, innovation, and investment, the Commission will continue to fulfill its mandate under the Act.

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REPLY COMMENTS OF QWEST CORPORATION

In these Reply Comments, Qwest Corporation ("Qwest") responds to the August 20, 2009 Public Notice seeking comment on remands by the United States Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") of the *Verizon 6 MSA Forbearance Order* and the *Qwest 4 MSA Forbearance Order*.[1]

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[1] Public Notice, "Wireline Competition Bureau Seeks Comment on Remands of *Verizon 6 MSA Forbearance Order* and *Qwest 4 MSA Forbearance Order*," DA 09-1835 (rel. Aug. 20, 2009) and Order, DA 09-2083 (rel. Sept. 18, 2009); *In the Matter of Petitions of Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach Metropolitan Statistical Areas, Inc.*, WC Docket No. 06-172, Memorandum Opinion and Order, 22 FCC Rcd 21293 (2007) (*Verizon 6 MSA Forbearance Order*), *remanded*, *Verizon Tel. Cos. v. FCC*, 570 F.3d 294 (D.C. Cir. 2009) (*Verizon v. FCC*); *In the Matter of Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas*, WC Docket No. 07-97, Memorandum Opinion and Order, 23 FCC Rcd 11729 (2008) (*Qwest 4 MSA Forbearance Order*), *remanded*, *Qwest Corporation v. FCC*, No. 08-1257 (D.C. Cir. Aug. 5, 2009) (*Qwest Corporation v. FCC*).

I. INTRODUCTION

Congress enacted the Telecommunications Act of 1996 to spur the development of competition in the local telecommunications market while also reducing regulation. Section 10 of the 1996 Act provided the Commission one vehicle for deregulation – the forbearance process. In the intervening thirteen years, the Commission has utilized Section10 as a crucial component of achieving the Act's deregulatory goals and has crafted a standard for application of Section 10 that reflects and furthers the deregulation process. There is a certain industry segment that asks this Commission to repudiate the deregulatory goals of the Act by rendering the Section 10 forbearance mechanism a virtual nullity. These commenters propose a standard so rigid and impenetrable that its sole attribute is that it can rarely, if ever, be satisfied.

In these Reply Comments, Qwest advocates for a forbearance standard that reflects core competition principles, tailored for a dynamic market, and the goals of the Act. Qwest also presents a set of ten Principles of Competition and Regulation for the Design of Telecommunications Policy crafted by Professor Dennis L. Weisman and Dr. Timothy J. Tardiff. These principles build on points articulated in Qwest's comments regarding the need for a Section 10 forbearance standard that reflects the pro-competitive, deregulatory goals of the Act and promotes dynamic efficiency in the local telecommunications market. Such a standard will put in place the correct incentives for investment and innovation that Congress envisioned for the telecommunications industry almost fourteen years ago.

II. STANDARD

The D.C. Circuit's remand left the Commission with three options: (i) revert to the standard it applied in the *Omaha* and *Anchorage Orders*, (ii) develop a new standard, or (iii) attempt to maintain its approach in the *Verizon 6 MSA* and *Qwest 4 MSA Orders* by providing a valid justification for its departure from precedent. This decision is not to be made in a vacuum,

however. It needs to be made in the context of the goals of the 1996 Act, *i.e.*, promote competition in the local telecommunications market, stimulate investment and innovation in the industry, and reduce regulation. The decision also needs to take into account the technologically dynamic nature of the telecommunications marketplace.

The Commission needs to factor into its calculus the paradigm shift in telecommunications markets -- recognizing the interplay between technological and market forces and its implications for the scope of economic regulation. Dennis L. Weisman and Timothy J. Tardiff, *Principles of Competition and Regulation for the Design of Telecommunications Policy* ¶ 6 (*Weisman/Tardiff White Paper*). As Dr. Weisman counsels:

> The multiplicity of competitive platforms, including broadband and wireless, represents a metamorphosis of seemingly unprecedented proportion.[2] This paradigm shift necessarily calls for a reexamination and recalibration of the industry's regulatory institutions (and forms of governance) to conform to the changes in market structure that the emergence of these technologies has wrought.

Id. ¶ 14. The regulatory challenge is to facilitate competing technological platforms that are increasingly capable of providing the requisite discipline from within -- competitive discipline of the real kind rather than a surrogate fashioned at the hand of the regulator.[3] This entails a

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[2] *See, e.g.*, Jonathan E. Neuchterlein and Philip J. Weiser, *Digital Crossroads, American Telecommunications Policy in the Internet Age*. Cambridge MA: The MIT Press, 2005.

[3] *Weisman/Tardiff White Paper* ¶ 17. Professor Kahn observes that "the single most widely accepted rule for the governance of the regulated industries is regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible." Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions,* Vol. I, New York: John Wiley and Sons, 1970 at 17. Professor Bonbright observes that "Regulation, then, as I conceive it, is indeed a substitute for competition; and it is even a partly imitative substitute." James C. Bonbright, *Principles of Public Utility Rates.* New York: Columbia University Press, 1961 at 107.

corresponding shift in regulatory oversight from one of controlling market power (static efficiency) to one of unleashing the power of markets (dynamic efficiency).[4]

In the sections below, the principles espoused by Prof. Weisman and Dr. Tardiff are articulated and discussed in detail. In regard to the matter at hand, the Commission needs to develop a UNE forbearance standard that recognizes that the use of unbundling should be exceptional in nature -- a policy instrument reserved for market conditions in which competition is infeasible any other way. *Weisman/Tardiff White Paper* ¶ 15. At the very least, the Commission should return to application of the standard it utilized in the Omaha and Anchorage forbearance petitions. This standard will remove the obstacles to the pro-competitive, deregulatory goals of the Act that a market-power driven standard would present. If, however, the Commission is desirous of a standard that best promotes the goals of the Act and reflects the nature of the local telecommunications market, it should craft a forbearance standard that is more aligned with the principles underlying the UNE impairment standard,[5] *i.e.,* a standard that provides an efficient firm with the opportunity to compete in the local telecommunications market, and not to render a rival a more effective competitor. *Id.* ¶¶ 67-68.

III. PRINCIPLE 1: THE OPTIMAL REGULATORY POLICY SHOULD RECOGNIZE THE TRADEOFFS BETWEEN STATIC AND DYNAMIC EFFICIENCY AND ITS IMPLICATIONS FOR CONSUMER WELFARE.

The Commission should tailor its regulatory approach to recognize the primacy of dynamic efficiency. Dynamic efficiency involves optimal investment over time in capital formation, cost-reducing innovation and product innovation. *Weisman/Tardiff White Paper* ¶ 19.

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[4] *See* Dennis L. Weisman, "On Market Power and the Power of Markets: A Schumpeterian View of Dynamic Industries." The Free State Foundation, *Perspectives from FSF Scholars*, February 26, 2008, Vol. 3(5). http://www.freestatefoundation.org/images/Power_of_Markets.pdf.

[5] While Qwest does concur with the theoretical principles under the Commission's UNE impairment standard it does have concerns about how those principles are manifested in the application of the standard.

Dynamic efficiency is particularly vital in infrastructure industries such as the telecommunications industry. *Id.* Promoting dynamic efficiency in an industry, especially in a technologically-dynamic industry such as the telecommunications industry, may entail a trade-off in regard to other measures of efficiency, such as static efficiency. Economists have recognized the prominent role of dynamic efficiency over static efficiency in conferring benefits on consumers. *Id.* ¶ 19. The competition that really matters, however, is "competition from the new commodity, the new technology, the new source of supply, the new type of organization . . . ." *Id.* ¶ 20.[6]

Static efficiency, however, is not irrelevant to telecommunications regulation. In fact, the Act encompasses both static and dynamic efficiency objectives. *Id.* ¶ 20. Because the telecommunications industry is such a capital-intensive industry, high price-cost margins are needed not only for purposes of cost recovery but to spur additional investment. *Id.* ¶ 22. This counsels for limited regulation with respect to static efficiency to encourage product and process innovation and therefore promote dynamic efficiency. *Id.*

At its essence, the static efficiency-dynamic efficiency dichotomy is one of imitation versus innovation. Static efficiency is concerned with removing barriers of entry for competitors and limiting market power. *Id.* ¶ 22. Competition policies focused on static efficiency will promote forced sharing at competitor-favorable prices in the name of prompt market entry. All this does, however, is craft clones of the incumbent provider, as opposed to innovative competitors. The operative model for competitors becomes a reseller model as opposed to a facilities-based one, and the incentive is for the competitor to continue its reliance on the

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[6] *Quoting,* Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*. New York: Harper Torchbooks, 1975 (originally published in 1942) at 84.

incumbent, or even become more reliant, as opposed to innovative through facilities-based differentiation. *Id.* ¶ 22.

The fact that dynamic efficiency should take precedence in the telecommunications industry does not necessarily comport with the external pressures on regulators to ensure that prices remain low and service quality does not decline. The Commission, however, is well positioned given its ultimate mandate under the Act to promote competition while reducing regulation, and its role in ensuring consistency of achievement of these goals throughout the nation, to promote innovation via dynamic efficiency. *Id.* ¶ 23. Ultimately, for true and viable price competition to take root, as well as facilitating consumer choice through tangible product differentiation, the promotion of facilities-based investment is critical. Carriers need to be provided with the incentives to invest in the underlying network infrastructure and this means that they must have a reasonable prospect of recovering their costs so that the cycle of innovation may continue.

As Verizon noted in their comments, the Commission in conducting merger analysis, has recognized that market-share analysis may not accurately capture the import and competitive significance of existing firms and new entrants.[7] The Commission did recognize that the presence and capacity of other firms matters more for future competitive conditions than do current market shares.[8] The Commission has expressed dissatisfaction with the snapshot of a

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[7] Verizon Comments at 20, *citing,* Memorandum Opinion and Order, *Verizon Communications, Inc. and MCI, Inc. Applications for Approval of Transfer of Control*, 20 FCC Rcd 18433 (2005) ("*Verizon-MCI Merger Order*").

[8] *Id.* at 20-21, *citing*, Memorandum Opinion and Order, *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations*, 19 FCC Rcd 21522 (2004) ("*AT&T/Cingular Wireless Merger Order*").

LEC's market share at a given time as too static and one-dimensional.[9] The Commission has stated that, in assessing the state of competition, it will "consider technological and market changes, and the nature, complexity, and speed of change of, as well as trends within, the communications industry."[10] Verizon observed that the Commission has utilized this approach whenever it considers markets with dynamic and emerging competitors and where a static market share analysis would be insufficient, including contexts outside of UNE forbearance.[11]

In fact, the Commission's focus on future competition is consistent with the Department of Justice and FTC *Horizontal Merger Guidelines* which many parties recommend as the proposed framework for the UNE forbearance standard. The Guidelines provide that market share determinations should factor in "the best indicator of firms' future competitive significance" and factor in not only existing competitive success but also "entry alternatives that can be achieved within two years from initial planning to significant market impact."[12] The Justice Department itself has deemed that new entry is more likely the product of intermodal competition where competitors differentiate their products and compete on available service features.[13]

As will be discussed in further detail below, some carriers would like the Commission to maintain regulations that have the effect of stifling dynamic efficiency until a certain market

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[9] *Id.* at 21, *citing*, Second Further Notice of Proposed Rulemaking in CC Docket No. 94-1, Further Notice of Proposed Rulemaking in CC Docket No. 93-124, and Second Further Notice of Proposed Rulemaking in CC Docket No. 93-197, *Price Cap Performance Review for Local Exchange Carriers*, 11 FCC Rcd 858, 922-23 ¶ 143 (1995).

[10] *Id.* at 21, *citing*, *AT&T/Cingular Wireless Merger Order*, 19 FCC Rcd at 21544 ¶ 41.

[11] *Id.* at 21.

[12] *Id.* at 22, *citing*, U.S. Dep't of Justice and FTC, *Horizontal Merger Guidelines* § 1.41 (rev. 1997).

[13] November 2008 DOJ Study at 34.

share loss is achieved by the incumbent provider. To ensure that this market share is not reached competitors to the incumbent would like the Commission, in calculating market share, to define the market narrowly, disavowing all the competition that is not based on traditional facilities-based CLECs. For example, they ignore the impact of all intermodal competitors including wireless and VoIP-based providers. Thus, the very entities driving new and innovative services are to be written out of the equation.

The same carriers continue to have no incentive to deploy their own facilities as they continue to invoke the mantra of access to last mile facilities. Such access has generally not been a necessary component of the facilities-based competition from cable providers or wireless providers. A recent comprehensive study by Arbor Networks found that the majority of Internet traffic is bypassing Tier One incumbent networks. The study determined that content providers were increasingly finding ways to directly connect with their end users.[14] Thus, even non-carriers are identifying ways in which to surmount any last mile obstacles. A new traffic routing paradigm that will likely be a popular approach in deployment of broadband to rural areas is the building out of fiber to community anchors such as schools, libraries and hospitals. From these locations providers will be able to access end users via technologies such as Wimax.[15] This is exactly the type of innovation Congress anticipated in passing the 1996 Act. The competitors want the Commission's focus to be entirely on policies that discipline market power in a narrowly defined market, when the Commission's focus is better placed on policies that unleash the power of markets.

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[14] Two Year Study of Internet Traffic Will Be Presented at NANOG47, Arbor Networks Press Release (Oct. 13, 2009) at http://www.arbornetworks.com/en/arbor-networks-the-university-of-michigan-and-merit-network-to-present-two-year-study-of-global-int-2.html.

[15] E. Gubbins, *How Turnkey Can Open Community Fiber Become,* Telephony Online at http://telephonyonline.com/commentary/turnkey-community-fiber-1012/.

The innovations described above demonstrate how dynamic efficiency can thrive when regulators apply regulation with a relatively light touch and avoid measures that would, as a matter of course, tend to discourage innovation and investment. Consumers are beneficiaries of Commission policies that foster the competitive process (dynamic efficiency) rather than attempt to mandate the competitive outcome (static efficiency).

IV. PRINCIPLE 2: THE OPTIMAL REGULATORY POLICY SHOULD BALANCE TYPE I ERRORS (REGULATING WHEN MARKET FORCES PROVIDE SUFFICIENT COMPETITIVE DISCIPLINE) AND TYPE II ERRORS (NOT REGULATING WHEN MARKET FORCES PROVIDE INSUFFICIENT COMPETITIVE DISCIPLINE) SO AS TO MINIMIZE THE EXPECTED SOCIAL COST OF ERROR.

While the Act provides three avenues of competitive entry -- resale, unbundled network elements, and facilities-based carriers -- the Commission has long envisioned, and determined that, the ultimate endpoint would be facilities-based competition. *Weisman/Tardiff White Paper* ¶ 27.[16] Of course, such a goal is not self-effectuating, and this Commission, as well as state commissions, have grappled with the impact of various regulatory determinations on the market. As Dr. Weisman notes, some errors are more amenable to self-correction than others. *Id.* ¶ 25. He provides the example of pricing. A price that is above competitive levels will tend to be self-correcting, while prices pegged below market levels will discourage competition and investment. The latter approach is clearly at odds with the goals and objectives of the Act. *Id.* ¶ 25.

This logic should also guide the Commission's approach to mandatory unbundling. Again the Commission is faced with making a predictive judgment, *i.e.,* what impacts will

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[16] *Citing, In the Matter of Unbundled Access to Network Elements; Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, Order on Remand, 20 FCC Rcd 2533, 2535 ¶ 2, 2551 ¶ 33, 2652-53 ¶ 218 and n. 594 (2005) (*Triennial Review Remand Order* or *TRRO*), *aff'd sub nom. Covad Communs Co. v. FCC,* 450 F.3d 528 (D.C. Cir. 2006). Important goals of the Act include the deployment of advanced technology and infrastructure. The FCC used this authority to reject calls for unbundling of fiber-to-the-home and packet switching.

mandatory unbundling have in a particular market. As Dr. Weisman notes, "[t]hat decision should be duly informed by (i) the effect of mandatory unbundling on the ubiquity and intensity of facilities-based competition; (ii) the fact that retail regulation at the state level serves as a check on ILEC market power; and (iii) the risk that unbundling policies that are overly expansive in scope become a self-fulfilling prophecy." *Id.* ¶ 26. In the local telecommunications market, mandatory unbundling and facilities-based competition approach that of a zero sum game. One approach occurs at the expense of the other. The danger of mandatory unbundling is not only that it crowds out facilities-based competition but that carriers that rely upon it will need it in perpetuity; so much so that it becomes a type of addiction. *Id.* This leads to the worst case scenario of the incumbent refraining from investment in new facilities due to its inability to recover the cost of said facilities, and its wireline competitors will not invest because it is cheaper to lease. *Id.* Again this leads to an outcome that is the antithesis of what Congress intended in passing the 1996 Act.

For these reasons, and given the high social costs of mandatory unbundling, the Commission should establish a policy that mandatory unbundling is presumptively unnecessary absent credible evidence to the contrary. *Id.* ¶ 26. The risk of not unbundling is circumscribed by state level price regulation that will check any undue exercise of market power by the incumbent. Such a check is lacking for unfettered unbundling. *Id.*

As Qwest noted in its initial comments, the forbearance process provides a valuable deregulatory tool because it allows the Commission to focus on a discrete market in terms of assessing the state of competition. And Verizon noted that the Commission invited UNE forbearance applications because it allowed the Commission to assess local market realities on a

case-by-case basis.[17] Because of the high social cost of mandatory unbundling, and the deregulatory mandate of the Act, the Commission needs a mechanism to eliminate unbundling requirements in the markets where the actual and prospective levels of competition indicate that such a high level of regulation is not warranted. For these reasons, the Section 10 forbearance process requires a standard that will serve to promote rather than impede its deregulatory purpose.

V. PRINCIPLE 3: THE OPTIMAL REGULATORY POLICY SHOULD BE PLATFORM-NEUTRAL AND COMPETITOR-NEUTRAL IN THAT IT SHOULD SERVE TO PROTECT THE INTEGRITY OF THE COMPETITIVE PROCESS RATHER THAN INDIVIDUAL COMPETITORS.

There is no real question that the Act envisioned platform-neutral policies. There is no endorsement or adoption of a particular platform in the Act, and by necessity there could not be given the ever-evolving technology. The Act is also competitor-neutral in that its ultimate goal is promoting competition through reduced regulation and additional investment in infrastructure.[18] The commenters, however, who argue for a forbearance standard that would essentially eviscerate the process, are asking this Commission to enable them to maintain their method of provision of telecommunications service. Essentially they are urging this Commission to protect a particular type of competitor even if such policies undermine the vigor of the competitive process to the detriment of consumers.

For its simultaneous goals of enhanced competition, reduced regulation and increased investment to occur, the Act contemplates that at some time the Commission will relax the regulatory reins and allow the market to dictate which platform or platforms will prevail. This

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[17] Verizon Comments at 15.

[18] *See* 1996 Act Preamble, stating the purpose of the Act to be "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." Pub. L. No. 104-104, 110 Stat. 56 (1996).

evolution can be seen in the Section 271/272 framework. After achieving the requirements of Section 271, a RBOC is allowed entry into its in-region, interLATA telecommunications market. Initially it operates in this market via a Section 272 affiliate, but then that requirement is allowed to sunset. Thus, regulation defers to the marketplace as the enabler and protector of competition. Section 10 itself contemplates forbearance when the requirements of Section 251 have been fully implemented, a determination which the Commission made in its Omaha Order.[19]

Similarly, as the local telecommunications market evolves, the resale/unbundling modes of market entry would be expected to yield to facilities-based platforms. *Weisman/Tardiff White Paper* ¶ 27. As carriers deploy their own facilities there is more product differentiation which leads to more competition and infrastructure investment and therefore reduced regulation. Certain commenters, however, want to put the brake on this competitive evolution and park the industry in the mandatory unbundling phase. Despite the demonstrated development and success of competitive facilities-based platforms, these commenters urge the Commission to sustain their business model by effectively precluding forbearance from UNE requirements. This would have the effect of changing mandatory unbundling policies from one of "jump-starting" competition to one of derailing the competitive process.

The Commission should be wary of such requests because it undermines the competitive process to the detriment of consumers. *Id.* ¶ 30. The Commission should seek to foster competition on the merits without regard to any particular platform or business model. *Id.* ¶ 29. The Commission's mandate pursuant to the Act is to promote competition not the viability of certain competitors. What this means is protecting the competitive process as opposed to

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[19] *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area, Memorandum Opinion and Order*, 20 FCC Rcd 19415 (2005) (*Omaha Forbearance Order*), *pets. for rev. dismissed and denied on the merits*, *Qwest v. FCC*, 482 F.3d 471 (D.C. Cir. 2007).

protecting specific business models. As Professor Alfred Kahn has cautioned, regulators should be wary of converting their role of "maintaining level playing fields" to that of interference with the contest itself. As he astutely adds, preservation of what the regulator conceives to be the proper market share of various competitors is a movement from assuring a "fair and equal start" to ensuring an "equal finish." *Id.* ¶ 29.[20] The Honorable Justice Breyer noted that regulators and antitrust enforcers run the risk of thinking that the object of the law is to protect individual firms from business risks as opposed to bringing consumers the price and production benefits that typically arise from the competitive process. He added that the consequence of this misdirected protection is to threaten to deprive the consumer of the very benefits deregulation seeks. *Id.* ¶ 30.[21] The Antitrust Modernization Commission warned that protecting small firms in highly concentrated markets can lead to a less efficient economy in which consumers must pay higher prices. *Id.* ¶ 31.[22]

This protection does nothing to make the smaller firms more viable competitors. Instead they develop a dependence on the regulatory process for their survival. The incentives to operate efficiently or to migrate to a facilities-based platform are limited because they know they can always appeal to regulators for help. As a former Chief Economist of the Commission noted in regard to the long distance market but equally applicable in this context, the smaller firms exert economic power by threatening to fail. They know that this will propel regulators who have

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[20] *Quoting* Alfred E. Kahn, "The Uneasy Marriage of Regulation and Competition" *Telematics*, Vol. 1, Number 5 (1984) at 9.

[21] *Citing* Stephen Breyer, *Anticipating Antitrust's Centennial: Antitrust, Deregulation, and the Newly Liberated Marketplace*, 75 California Law Review 1018 (1987).

[22] Antitrust Modernization Commission, Report and Recommendations at 34 (2007).

invested much in developing competition to prop up the firms.[23] The rote argument against forbearance is that certain competitors will either fail or exit a market. But if the sole factor keeping a carrier in a market is regulatory support, then the market is fated to regulation in perpetuity. The market is also resigned to noncompetitive pricing and lack of innovation because neither the incumbent nor the competitors will have the requisite incentives to invest under these conditions. As Qwest noted in its initial comments, a former chairman of the Commission, as well as several high-ranking officials at the time, lamented that its attempts at regulatory protectionism in the long distance market resulted in "substantial, unnecessary costs for society" and "directly increased consumer costs."[24]

The Commission has been a tremendous champion of competition since the enactment of the Act and the numbers clearly bear that out. The Commission has promoted this competition by tailoring regulation to the realities of the local telecommunications market. The time is now for the next step which is forbearance in those markets where competition both actual and potential have been established.

VI. PRINCIPLE 4: MARKET SHARE TESTS ARE INHERENTLY PROBLEMATIC IN REGULATED INDUSTRIES AND THE COMMISSION SHOULD NOT RELY UPON THEM TO DRAW INFERENCES ABOUT MARKET POWER.

The Commission should not rely exclusively or predominantly on market share to infer market power in the telecommunications market. Because the telecommunications market, and in particular, Qwest's markets have been subject to regulatory fiat, market share determinations are highly misleading. This is because the shares are the outcome of a regulatory process as opposed to a market process. *Weisman/Tardiff White Paper* ¶ 36. As Landes and Posner noted

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[23] *Quoting* John R. Haring, "The FCC, the OCCs and the Exploitation of Affection," Working Paper No. 17, Federal Communications Commission, Office of Plans and Policy (1985).

[24] Qwest Comments at 13-14, n.32; *Weisman/Tardiff White Paper* ¶ 34.

in their seminal article, "Market Power in Antitrust Cases," when rates are regulated by a government agency, it severs the link between market power and market share and renders their market power analysis inapplicable. *Id.*[25] In fact, they note that an incumbent's high market share may, in fact, reflect the absence of market power. For example, in some regulated industries, firms are required to charge uniform prices in different product or geographical markets regardless of the different costs in serving those markets. Thus, the price may be above marginal cost in some markets, and below marginal costs in other markets. In the latter markets, the incumbent would likely have a 100% market share not due to any market power but because the market would be unattractive to other sellers. And, ironically, since the incumbent is precluded from leaving the market due to regulatory fiat or is induced to remain in it so that it can recoup its losses in other markets, the incumbent's market share is 100% due to a lack of market power. *Id.* ¶ 37.[26]

Market share determinations are backward-looking and therefore quite limited in predictive value in markets that exhibit "fragility" due to their technologically-dynamic character, *i.e.,* the local telecommunications market. *Id.* ¶ 38. As Dr. Weisman observes, the theoretical link between market share and market power is not necessarily reflected in real world reality. As a threshold matter, it is hard to obtain market share data. This is particularly true in the telecommunications industry where carriers like to keep their customer information close to their vest. Furthermore, it is likely that the relationship between market shares and profitability is industry specific. Again, the telecommunications industry is a prime example of this as incumbents' market shares do not necessarily correlate with their financial bottom line. Thus,

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[25] *Citing* William W. Landes and Richard A. Posner, "Market Power in Antitrust Cases," 94 Harv. L. Rev. 975 (March 1981).

[26] *Citing id.* at 976.

there is no consensus amongst scholars on whether there is a "critical market share" where a firm "becomes sufficiently dominant that it can exercise unilateral market power." *Id.* ¶ 38.[27]

If the Commission nevertheless decides to pursue a market share analysis, one rooted in capacity as opposed to actual sales will be more reflective of market reality. As Judge Posner has determined, competition is regarded as "the state in which resources are deployed with maximum efficiency, and it is not so much the existence of actual rivalry, let alone any specific market structure or behavior, as the potential for rivalry, that assures competition." *Id.* ¶ 39.[28] This principle is elaborated upon by Landes and Posner. An entity with a market share of 80% may still lack market power if the output of competing producers of the good is highly responsive to changes in the market price.[29] The excess capacity of the "fringe" competitor(s) would limit the incumbent entity's ability to raise price above marginal cost. In these cases, market share needs to be redefined to reflect not only current output of the incumbent but also the fringe firm's capacity, *i.e.*, by their potential output as opposed to their current output. *Id.* ¶ 40.[30]

A capacity-based approach is not only apt for the local telecommunications market but the one most reflective of market phenomenon. Dr. Weisman provides the following example:

> Consider, for example, a particular market in which the ILEC and a cable company compete. Suppose the cable company quickly garners 5 percent of the customers and the ILEC files for deregulation. There may be a tendency to conclude that the ILEC continues to maintain market power since it has 95

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[27] *Quoting* ABA Section of Antitrust Law, ANTITRUST MARKET POWER HANDBOOK 82-83 (2005).

[28] *Quoting* Richard A. Posner, "The Effects of Deregulation on Competition," 23 *Fordham International Law Journal* 18 (2000).

[29] Per AT&T, the leading antitrust treatise notes that "a variety of circumstances may indicate that a firm's market share either overstates or understates its present or future competitive role." AT&T Comments at 4, *citing*, 4 Areeda, Hovenkamp & Solow ¶ 950b.

[30] *Citing* Landes and Posner, Op. Cit. at 948-49.

> percent of the customers. And yet, if capacity is truly the relevant measure of market share, and both the ILEC and the cable company are able to address 100 percent of the customers, the ILEC's market share is actually only 48.72 percent (95/(95 + 100)).

Id. ¶ 41. As AT&T notes, "existing, mature competition" is not a necessary precondition or condition to protecting the interests of consumers with low prices and high service quality. AT&T uses the example of a widget maker with a 100% market share. The market share percentage does not signify anything about its ability to exercise market power. The widget maker could not exercise market power commensurate with its market share if other firms are capable of producing substitute widgets at competitive rates if the incumbent raise its prices.[31] In the local telecommunications market, the massive investments that facilities-based providers such as cable companies have made in deploying telecommunications infrastructure will discipline the prices that an ILEC can charge regardless of whether the "sunk investment" is put to use "tomorrow or two years from now."[32] As AT&T observes, numerous courts have found this principle to be well-rooted in competitive analysis.[33] It notes the Seventh Circuit's observation that "it has been many years since anyone knowledgeable about" competitive analysis "thought that concentration by itself imported a diminution in competition."[34]

The recent experience of the Competition Bureau in Canada in grappling with market share determinations is quite illuminating. The Bureau determined that market shares should be defined in the manner that reflects the potential for the ILEC to exercise market power if it is

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[31] As the leading antitrust treatise observes, a firm with a 100% market share but charging a price at a competitive level is a likely indicator of a lack of market power. Demand may be so responsive or entry so easy that lower output at higher prices would be immediately or quickly unprofitable. AT&T Comments at 4, *quoting,* 2B Areeda, Hovenkamp & Solow ¶ 508.

[32] *Id.* at 2-3.

[33] *Id.* at 3.

[34] *Id.* at 3, n. 7, *Capital Cities/ABC Inc. v. FCC*, 29 F.3d 309, 315 (7th Cir. 1994)(Posner, J.).

granted forbearance. The Competition Bureau found that the mere presence of a competitor is more influential on ILEC behavior than its actual market share. It agreed with the concept that in geographic markets where there are two independent facilities-based service providers with sunk costs, that are not capacity constrained, and are equally capable of offering the relevant product, the capacity market share of the ILEC and the new entrant will each be 50%. *Weisman/Tardiff White Paper* ¶ 42.[35]

The Commission itself, in the context of evaluating proposed wireless mergers and the significance of Hirschman-Herfindahl Index (HHI) measures,[36] determined that the presence and capacity of other firms matter more for future competitive significance than do current subscriber-based market shares. *Weisman/Tardiff White Paper* ¶ 43.[37] As Dr. Weisman asserts, "it should not be necessary for an incumbent provider to demonstrate that the conditions for regulatory forbearance have been met in Market B if these conditions have previously been met in Market A and the two markets are comparable in terms of the relevant economic characteristics." *Weisman/Tardiff White Paper* ¶ 44. The Commission should draw inferences across markets that share common characteristics. In fact, the Commission has drawn inferences from other markets in determining whether there was impairment with respect to particular network elements. *Id.*[38]

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[35] *Citing* Canadian Radio-Television and Telecommunications Commission (CRTC), Telecom Public Notice CRTC 2005-2, *Forbearance from Regulation of Telecommunications Services*, Argument of the Commissioner of Competition, September 15, 2005, ¶¶ 61-62.

[36] The HHI is computed as the sum of the squared market shares of each firm in the market. The HHI ranges from effectively 0 in the case of atomistic competition to 10,000 in the case of a monopoly. *Weisman/Tardiff White Paper* ¶ 41, n. 49.

[37] *AT&T/Cingular Wireless Merger Order*, 19 FCC Rcd at 21579 ¶ 148.

[38] In the *TRRO,* the Commission specifically observed that:

> [I]n applying our impairment test, we draw reasonable inferences regarding the prospects for competition in one geographic market based on the state of

For this Commission to adopt an approach that focuses on current market shares, without more, would require a deviation from Commission precedent. This would not be a simple departure because as AT&T notes, in "context after context, the Commission has always understood that the only reasonable way to determine if a provider has sufficient market power to sustain a non-competitive increase in prices is to examine *both* the pressure from current competition and the prospect that additional competition would emerge if prices rise above sufficient levels."[39] For instance, in its *Omaha Order*, the Commission found that potential competition from established competitors in addition to Cox would limit "the risk of duopoly and of coordinate behavior or other anticompetitive conduct in this market."[40] In determining if Qwest had market power such that it could "raise and maintain price above the competitive level without driving away so many customers as to make the increase unprofitable," the Commission explicitly looked both at current market share and supply elasticity, *i.e.*, the ability of suppliers in a given market to increase the quantity of service supplied in response to an increase in price.[41] Not only does this demonstrate the Commission's focus on potential competition but it also demonstrates that Qwest did not have sufficient market power to raise prices above a competitive level without driving away a sufficient number of customers so as to render any such contemplated price increase unprofitable. In Anchorage, the Commission determined that the mere threat of competitive entry -- itself the recognition of the important role of potential

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competition in other, similar markets. *Triennial Review Remand Order*, 20 FCC Rcd at 2536-37 ¶ 5.

[39] AT&T Comments at 6.

[40] *Id.* at 7, *quoting, Omaha Forbearance Order*, 20 FCC Rcd at 19452 ¶ 71.

[41] *Id.*, citing, *Omaha Forbearance Order*, 20 FCC Rcd at 19425-26 ¶ 18, n. 54, 19432 ¶ 35.

competition -- would be a check on the ability of the incumbent to engage in supra-competitive pricing.[42]

In the unbundling context, the Commission has factored in potential competition in regard to its impairment determinations. In fact, in examining the issue of whether the Commission impermissibly *ignored* the importance of potential competition, the D.C. Circuit found that the *TRRO* emphasized the import of potential competition in fifteen separate instances.[43] In the *TRRO*, the Commission examined not only actual competition but also whether conditions indicated that "reasonably efficient competitive LECs are capable of duplicating the ILEC network."[44] In its Pricing Flexibility determinations, the collocation trigger is implicitly a consideration of both actual and potential competition. It demonstrates the ability of competitors to offer not only service currently but also to offer additional services in the future. As AT&T notes, "[s]uch collocation is treated as a proxy" regardless of "whether or not the collocators have already succeeded in winning substantial market shares from the ILEC."[45]

There are some commenters (one set in the Phoenix Forbearance docket) who ask that the Commission ignore its long line of precedent as well as court rulings and scholarly findings, and apply a market share test based on actual competition as opposed to potential competition.[46]

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[42] *In the Matter of Petition of ACS of Anchorage, Inc. Pursuant to Section 10 of the Communications Act of 1934, as Amended, for Forbearance from Sections 251(c)(3) and 252(d)(1) in the Anchorage Study Area*, Memorandum Opinion and Order, 22 FCC Rcd 1958, 1979 ¶ 34 (2007), *appeals dismissed for lack of standing*, *Covad Communications Group, Inc. v. FCC*, Nos. 07-70898, 07-71076 and 07-71222 (9th Cir. 2007).

[43] AT&T Comments at 9, *citing*, *Covad v. FCC*, 450 F.3d 528, 540-41, *reh'g denied* (D.C. Cir. 2006).

[44] *Id.* at 9, *quoting*, *TRRO*, 20 FCC Rcd at 2586 ¶ 87.

[45] *Id.* at 11.

[46] *See* Opposition of Integra Telecom, Inc., tw telecom inc., Cbeyond, Inc., and One Communications Corp., WC Docket No. 09-135, filed Sept. 21, 2009 at 3 ("In assessing the level competition [sic] within the relevant market, the FCC should presume that potential competitive

These commenters do not want to the market to determine their market share; they would prefer to have the Commission mandate that their market share be preserved.

For instance, the CLECs offer a new test for determining if forbearance should be granted. In general, the CLECs recommend that forbearance only be granted if there are at least two full facilities-based *wireline* competitors in the *relevant market*, with near ubiquitous coverage. They also define the relevant market narrowly, excluding wireless, VoIP-based services and other non-wireline substitutes from the analysis, and proposing a separate analysis for wholesale and retail, as well as residence and business markets. The *Integra CLECs* propose that either the Commission apply the FTC's *Horizontal Merger Guidelines* as a market power test, or that the following conditions be met before a forbearance application may be granted:

> (1) at least two facilities-based non-ILEC wireline competitors in the wholesale loop market, each of which has actually deployed end-user connections to 75 percent of end-user locations, each of which has deployed wholesale operations support systems sufficient to support the wholesale demand in the relevant product market, and each of which has garnered at least 15 percent of wholesale loop market share in the relevant product market ("Wholesale Test")[47]
>
> or
>
> (2) at least 75 percent of end-user locations are served by two or more facilities-based non-ILEC wireline competitors that offer retail service in the relevant downstream product market to the locations in question via loops that the competitors have actually deployed, and there are at least two facilities-based competitors to the ILEC that have each garnered at least 15 percent of retail market share in the relevant product market ("Retail test")[48]

There is no basis to require the presence of *two* full facilities-based wireline competitors with *near ubiquitous* coverage in a MSA in order to grant forbearance. According to the CLECs,

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entry is irrelevant to the competition analysis because such entry is not likely to be timely or sufficient to constrain the incumbent's exercise of market power in local wireline telecommunications markets."); Initial Comments of the Arizona Corporation Commission, WC Docket No. 09-135, *et al.*, filed Sept. 21, 2009 at 1.

[47] Integra CLECs at 9.

[48] *Id.* at 10.

only full facilities-based CLECs provide real price-constraining competition for Qwest services. The CLECs would like to draw very narrow market boundaries, and pretend that intermodal options such as wireless and VoIP-based services are not price constraining substitutes for wireline service. However, as further discussed in these reply comments and in the *Weisman/Tardiff White Paper*, these intermodal services do in fact constrain wireline prices, and it is a serious economic error to define the market to exclude these clear competitive options.

In addition, it is pure folly to argue that in today's dynamic market environment, there must be two competing wireline competitors competing *ubiquitously* in the MSA in order to constrain Qwest's prices. The fact is competitors do not need to offer service to all or nearly all customers in the MSA in order for this competition to constrain Qwest's prices. If cable or wireless providers offer competing telephone customers to many -- but not all -- customers in the MSA, this provides sufficient competition to discipline Qwest's market behavior throughout the MSA. For example, Qwest markets services to all customers throughout the Phoenix MSA, and does not develop separate mass marketing plans for individual customers that do not have a Cox option. Qwest competes with Cox on an MSA-wide basis, and the fact that Cox competes with Qwest throughout most of the MSA constrains Qwest's ability to raise prices above market levels.

The CLECs have constructed their "market power" test specifically as a barrier to prevent Qwest or other ILECs from *ever* gaining forbearance, since it is very unlikely that two other full facilities-based CLEC providers (in addition to cable and wireless) will *ever* ubiquitously serve any MSA in the Untied States. To illustrate how little sense such a requirement makes, assume Qwest were to continue to lose access lines until it had only a few access lines left. According to the opposing CLECs, as long as there were not two full facilities-based CLECs offering service

throughout the MSA, one would have to conclude that Qwest still had market power. This, of course, would defy reality and represents a nonsensical conclusion. This illustrates the problem with defining a market too narrowly, and ignoring very real wireless and other intermodal options. The "15% market share" requirement for each competitor also has no basis, because it ignores the capacity of any competitors.

VII. PRINCIPLE 5: ANY DEARTH OF COMPETITION IN THE RETAIL TELECOMMUNICATIONS MARKET IS LIKELY AN ARTIFACT OF REGULATORY-RATE DISTORTIONS THAT SERVED TO SUPPRESS COMPETITION.

It is easy to forget that until 1996, the goal in regard to the local telecommunications market was not competition but keeping prices for local service low and affordable regardless of locality. The 1996 Act did not displace this goal, but instead added the goal of competition into the mix. The two goals are not exactly complementary, however, as keeping local service prices below market levels pursuant to regulatory fiat provides an obstacle to competition and substitutability between competing technological platforms. *Weisman/Tardiff White Paper* ¶ 47. As Dr. Weisman notes, in antitrust literature, this phenomenon is a manifestation of the well-known "*Cellophane Fallacy*." *Id.*[49]

The D.C. Circuit in *USTA* also took note of this phenomenon.[50] This phenomenon has significant implications for assessment of wireline-wireless substitutability in a market. As Dr. Weisman relates:

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[49] This fallacy occurs when two or more products may appear to be substitutable, or not substitutable, but such is an artifact of extant prices diverging from competitive levels. For example, the higher penetration of wireless service in Japan and Europe is explained in part by the lack of subsidies and the higher price for wireline telephony. *See* Jerry Hausman, "Mobile Telephone" in Martin Cave, Sumit Majumdar, and Ingo Vogelsang, eds. *Handbook of Telecommunications Economics*. North-Holland: Amsterdam, 2002, Chapter 13, at 564-65.

[50] The court found:

> To the extent that wireline prices have been pegged below market levels by regulatory fiat, an increase in such prices would as a matter of course result in less substitution of wireless for wireline than would be the case otherwise. In other words, there will be a natural bias that would tend to lead policymakers to conclude that wireless and wireline are not particularly close substitutes. A serious consequence of this bias is that it may lead policymakers to draw the market boundaries around wireline telephone service too narrowly -- to conclude in error that wireless is not in the same market as wireline.

Id. ¶ 49. Since market power is usually defined as the ability of a firm to profitably raise prices above competitive levels for more than a transitory period of time, and given the fact that wireline prices were not maintained at competitive levels pursuant to regulatory fiat, increases in wireline prices are not necessarily indicative of market power. *Id.* ¶ 50.

The issue of substitutability clearly needs to take into account the artificially low wireline prices. Likewise, those who claim that a duopoly will arise in the local telecommunications market without mandatory unbundling fail to address how the history of regulatory rate design has framed the market. The reality, as Dr. Weisman observes, is that:

> [i]n reality, the fiction of the duopoly in the market for local telephone service is itself an artifact of ignoring the history of telecommunications rate design. In other words, because wireline rates have been pegged at artificially low levels by regulatory fiat, market boundaries are drawn too narrowly and this leads policymakers to mistakenly conclude that wireless is not in the same product market as wireline. It is this sense that the need for regulatory oversight, inclusive of mandatory unbundling, becomes a self-fulfilling prophecy. To wit, regulators set artificially low local telephone service rates that discourage the very competitive entry that they seek as evidence that they can safely forbear from regulation.

> Competitors will presumably not be drawn to markets where customers are already charged below cost, unless either (1) the availability of UNEs priced well below the ILECs' historic cost makes such a strategy promising, or (2) provision of service may, by virtue of economies of scale and scope, enable a CLEC to sell complementary services (such as long distance and enhanced services) at prices high enough to cover incomplete recovery of costs in basic service.

United States Telecommunications Association v. FCC, 290 F.3d 415, 422 (D.C. Cir. 2002).

Id. ¶ 51. The Commission is cognizant of this problem. The Commission observed that overly broad unbundling obligations should not be used to compensate for other distortions in the regulatory regime.[51] As Dr. Weisman concludes, to the extent that regulation has pegged prices at artificially low levels, "it would not be appropriate for the Commission to mandate unbundling to remedy the dearth of competition without first establishing that facilities-based competition would not have been forthcoming in the absence of the 'distortions in the regulatory regime.'" *Id.* ¶ 52.

VIII. PRINCIPLE 6: HISTORICAL RATEMAKING POLICIES IN TELECOMMUNICATIONS THAT DIVERGE FROM THE COMPETITIVE STANDARD CAN LEAD REGULATORS ASTRAY IN APPLYING STANDARD MARKET DEFINITION GUIDELINES.

Since regulatory rate distortions can color market share determinations and limit their import, market definitions which are used to determine market share will be similarly impacted. Where market shares do not reflect economic forces, the exercise of defining a market and calculating particular market shares will likely be a futile exercise. *Weisman/Tardiff White Paper* ¶ 54. Using these market definitions in evaluating forbearance applications carries significant risk, particularly if these guidelines are applied mechanically and myopically. *Id.* ¶ 53. The emphasis placed on market definition is appropriate only insofar as there is reason to believe that the resulting market share calculation sheds some light on the ability of the incumbent provider to exercise market power. *Id.* ¶ 55.

Since the definition of the local telecommunications market is unable to rendered free of regulatory distortions and a concomitant market share be developed with confidence, the utilization of a market power approach to this deregulatory determination will not be able to be done with confidence and assuredness. *Id.* ¶ 53. "To the extent that prices were maintained

[51] *TRRO*, 20 FCC Rcd at 2546-47 ¶ 23.

below market levels under regulatory fiat, the degree of demand substitution that policymakers observe in attempting to draw market boundaries may be skewed *ala* the *Cellophane fallacy*." That is to say, there would be a natural bias to draw market boundaries too narrowly. Thus, the ILEC may be able to sustain a price increase -- not because it has market power -- but because regulators maintained prices below (competitive) market levels historically. *Id.* ¶ 57.

There are other crucial points at which horizontal merger analysis and deregulatory determinations differ. Per Dr. Weisman:

> In a typical merger proceeding, the analysis begins with a competitive market and inquires as to whether the proposed consolidation is likely to lessen rivalry in a manner that would allow for the exercise of undue market power. The market forces being examined are centripetal ("center-seeking") in nature. In the context of deregulation, markets are becoming increasingly competitive and the focus is on whether they have become sufficiently so to enable the regulator to defer to market forces for the requisite level of discipline. The market forces being examined are centrifugal ("center-fleeing") in nature.

Id. ¶ 56. As a result, market boundaries may shift rapidly rendering their use in deregulatory analysis and rendering their use in deregulatory analysis and market definition somewhat limited or even counterproductive. *Id.*

Another area of divergence between the merger analysis and deregulation analysis is found in the concept of path dependence. For example, a regulated monopolist that begins with a 100% market share and experiences increased competition that reduces its share relatively quickly to 80% is likely in a far different competitive situation than a firm with a 50% market share merging with a firm with a 30% market share, despite the fact that in both cases a single firm would have 80% of the market. Merger enforcement guidelines generally recognize the importance of changes in market concentration and/or the stability of market concentration, but it is unclear precisely how much weight is given to changes in market concentration as opposed to actual market concentration, a snapshot of the market at a particular point in time. *Id.* ¶ 58.

Finally, the precise relationship between market share and market power turns on whether the firm in question participates in multiple markets as well as the precise demand relationships between the products and services in these markets. For example, when a firm participates in two different markets and the relationship between the markets is one of complements (substitutes), the single-market share metric will tend to over (under)-state market power. *Id.* ¶ 59.[52]

IX. PRINCIPLE 7: THE COST STRUCTURE FOR WIRELINE PROVIDERS (*i.e.*, PRONOUNCED SCALE/SCOPE ECONOMIES) AND THE CORRESPONDING HIGH PRICE-COST MARGINS REQUIRED FOR FINANCIAL VIABILITY IMPLIES THAT RELATIVELY MODEST LEVELS OF COMPETITION MAY BE SUFFICIENT TO IMPOSE THE REQUISITE PRICING DISCIPLINE.

The very rationale often posited for mandatory unbundling, *i.e.,* the incumbent's economies of scale and scope, can also act to constrain the incumbent's pricing. The economies of scale and scope require relatively high price-cost margins for financial viability of the incumbent. The incumbent has to be wary that a price increase that leads to even a small reduction in demand can generate disproportionate losses in contribution to joint and common costs because the firm's revenues decline much more than the costs it can avoid. Thus, the high

[52] *Citing,* Timothy J. Tardiff and Dennis L. Weisman, "The Dominant Firm Revisited." *Journal of Competition Law & Economics*, September 2009 forthcoming. Consider, for example, a local exchange carrier that provides only basic local telephone service and has a market share of 80%. Now suppose that this same local exchange carrier expands its product line to include long-distance telephone service and vertical features -- services that are used in a complementary manner with basic local telephone service. Even though it still maintains 80% of the market for basic local exchange telephone service, the carrier will now have reduced incentives to raise price. This is the case because the loss of basic local service customers that follows a price increase means that net revenues are foregone not only on basic local service, but also on those services that are used in a complementary fashion with basic service, such as long-distance and vertical features. Hence, the 80% market share in the case of a single-product provider would tend to imply greater degree of market power than an 80% market share in the case of a multi-product provider when the relationship between the products is one of complements.

price-cost margins serve to discipline the incumbent's pricing behavior. *Weisman/Tardiff White Paper* ¶ 61.

The incumbent's cost structure underscores the importance of "competition at the margin" where it is the incumbent's marginal subscribers, *i.e.,* those willing to substitute alternative services in response to a price increase that imposes pricing discipline on the incumbent provider. *Id.* ¶ 62. Thus, incumbent wireline providers are faced with the competitive reality that a relatively small percentage of subscribers willing to discontinue or switch to alternative service providers in the face of a price increase will significantly impact their ability to recover their costs. This reality imposes the requisite competitive pricing discipline. *Id.* A relatively modest reduction in quantity demanded following a price increase are sufficient to discourage any such attempt to raise prices.[53]

The addition of complementary services to the basic local service product, such as long distance, features and broadband, will only intensify the pricing discipline for the incumbent. This is the case because the loss of a basic local service customer now entails not just the loss of net revenue from basic local service, but also the loss of net revenues from long-distance, vertical features and broadband, services used in complementary fashion with basic local service. *Weisman/Tardiff White Paper* ¶ 64.

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[53] A stylized, hypothetical example may prove instructive. Suppose that the ILEC provides only basic telephone service and that the ratio of price to avoidable cost for this service is 2. This implies that an ILEC would not have an incentive to raise the price of basic service by 5% if the corresponding reduction in quantity demanded is at least 10%. Now consider the more realistic scenario in which the ILEC provides a portfolio of complementary services consisting of basic local service, long-distance, vertical features and broadband. Under plausible conditions, it can be shown that the ILEC would not have an incentive to raise the price of basic service if the corresponding reduction in quantity demanded is at least 2.5%. This reduction in the critical market share loss from 10% to 2.5% implies that the local exchange carrier now has markedly reduced incentives to raise price as a result of adding complementary services to its product line, all other factors held constant. *Weisman/Tardiff White Paper* ¶¶ 63-64.

The higher the price-cost margins required for financial viability and the more pronounced the demand complementarities,[54] the stronger the pricing discipline imposed on the ILEC. This explains why even relatively modest levels of competition from "imperfect" substitutes may be sufficient to discourage the ILEC from raising price. As Dr. Weisman observes, "[t]his is also the basis for the claim that a little competition can go a long way in controlling market power in telecommunications markets." *Id.* ¶ 65.

X. PRINCIPLE 8: THE PURPOSE OF MANDATORY UNBUNDLING IS NOT TO CONTROL MARKET POWER PER SE, BUT RATHER TO ENABLE COMPETITION THAT WOULD NOT BE POSSIBLE OTHERWISE.

If anything, the Commission should consider altering its approach to Section 10 forbearance analysis such that it focuses less on market power (static efficiency) and focuses more on providing the correct investment incentives (dynamic efficiency). As noted above, in the local telecommunications market, dynamic efficiency should take precedence. The Commission has espoused this principle in regard to unbundling determinations pursuant to Section 251 (again while not necessarily translating it well into practice).[55] The Commission in

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[54] Per Dr. Weisman, "[t]o the extent that the digitalization/packetization of next-generation networks gives rise to decreasing ratios of variable to fixed costs, it should be expected that price-cost margins will increase, *ceteris paribus*." *Weisman/Tardiff White Paper* ¶ 64, n. 72 (emphasis in original).

[55] In the *TRRO*, the Commission stated:

> The purposes of a market power analysis are not the purposes of section 251(d)(2). While this antitrust analysis attempts to determine whether market participants would be able to exercise market power and raise prices above competitive levels if a merger were consummated, the Act requires only that network elements be unbundled if competing carriers are impaired without them, regardless of whether the incumbent LEC is exercising market power or the unbundling would eliminate this market power. A market power analysis would go to the question of whether an incumbent LEC could raise its retail prices unchecked; the impair analysis asks whether a new entrant can provide its services without the UNE. A market power analysis might be appropriate if the only goal of the Act were to drive prices to cost, but that approach disregards the

making its unbundling determinations has eschewed market power analysis to focus on whether unbundling is necessary to provide an efficient firm with the opportunity to compete in the relevant geographic market. The focus is not to create a "more effective competitor" but to enable competition that would not be possible otherwise. *Weisman/Tardiff White Paper* ¶¶ 67-68.

Yet when determining whether to forbear from these unbundling determinations, the Commission has determined it will only forbear if it will not permit the ILEC to exercise market power. As Dr. Weisman notes, this asymmetrical approach has a distorting impact and is potentially harmful to consumers because: (i) it prioritizes static efficiency over dynamic efficiency; (ii) given the broad brush with which the Commission has made some of its prior unbundling determinations, it makes it more difficult to rein in the unbundling to rectify any overreaching regulation;[56] and (iii) price regulation at the state level serves as a sufficient safety net for any market power concerns. *Id.* ¶ 71.

The Commission's application of Section 10 has the effect of placing greater weight on static efficiency *vis-à-vis* dynamic efficiency. This is problematic, not only because the Act seeks to encourage investment in facilities-based networks, but also because there is a consensus among economists on the relative importance of dynamic efficiency over static efficiency.[57] *Id.* ¶ 74. As Dr. Weisman counsels, "any static efficiency gains (measured in terms of reducing

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Act's other goals of encouraging the deployment of alternative facilities and new technologies and reducing regulation.

TRRO, 18 FCC Rcd 16978, 17051 ¶ 109 (footnote omitted).

[56] *Weisman/Tardiff White Paper* ¶¶ 71-72; *see* Glen O. Robinson and Dennis L. Weisman, *"Designing Competition Policy for Telecommunications."* The Review of Network Economics, Vol. 7(4) at 509-46 (December 2008).

[57] *See* the discussion and rationale underlying *Principle 1*, *supra*.

price-cost margins) that can be attributed to mandatory unbundling must be weighed against dynamic efficiencies foregone (measured in terms of reduced incentives for investment in innovation)." *Id.* ¶ 69. He notes that recent studies have shown that leased access has not led to a level of CLEC investment in facilities greater than that which would have been obtained otherwise. To the contrary, access dependence turns out to be economically addictive, leading to increased reliance on leased access. *Id.*[58]

The Commission's statutory obligations as well as the economics literature strongly counsel for a symmetry between unbundling and forbearance standards that is based on the relative importance of dynamic over static efficiency. In this sense, as Dr. Weisman intones, "it is critical that the Commission not confuse 'mandating the competitive outcome with fostering the competitive process.'" *Id.* ¶ 74.[59]

XI. PRINCIPLE 9: WHOLESALE MARKETS ARE RELEVANT TO THE IMPLEMENTATION OF THE 1996 TELECOMMUNICATIONS ACT ONLY INSOFAR AS THEY ARE REQUIRED FOR COMPETITION IN RETAIL MARKETS.

Certain commenters would have this Commission evaluate a forbearance application solely on the extent of wholesale competition. Of course, these contentions are then followed with claims that there is insufficient wholesale competition in a particular market. But even if we take their premise as true for the sake of developing a forbearance standard, it is unclear what the relevance of wholesale competition is to the ultimate determination. There is no statutory provision that makes wholesale competition the operative criterion in a forbearance evaluation,

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[58] For a recent review of this literature and the policy lessons to be drawn from it, see Glen O. Robinson and Dennis L. Weisman, "Designing Competition Policy for Telecommunications." *The Review of Network Economics*, Vol. 7(4), December 2008 at 509-46.

[59] *Quoting*, Dennis L. Weisman, "The (In)Efficiency of the 'Efficient-Firm' Cost Standard." *The Antitrust Bulletin*, Vol. XLV(1), Spring 2000 at 197.

much less dictates a particular level of wholesale competition. The state of wholesale competition was exhaustively reviewed in the Section 271 context, and given the sunset of the Section 272 requirements, there should be no issue as to the viability of wholesale competition.

In the Section 10 context, the wholesale market is relevant only to the extent that facilities-based providers acting alone fail to provide for the requisite level of competitive discipline. As Dr. Weisman cautions, "[s]hould the Commission's interest in the wholesale market turn on a particular CLEC business model -- regardless of the competition from facilities-based providers -- it will have violated *Principle 3 supra*." Protection of a particular CLEC business model would violate the principle of both *platform-neutrality* and *competitor-neutrality*. The Commission should be agnostic as to the particular technological platforms that are used to deliver high-value products and services to consumers. *Weisman/Tardiff White Paper* ¶ 76.

The Commission should not confuse protecting competitors with protecting the integrity of the competitive process. The Commission's task is not to mechanically count the number of competitors, but to assess whether consumers have meaningful choices at competitive prices for their telecommunications products and services. *Id.* ¶ 77.

XII. PRINCIPLE 10: POLICYMAKERS HAVE RECOGNIZED THAT (I) SUBSCRIPTION TO BOTH WIRELESS AND WIRELINE DOES NOT IMPLY THAT THE TWO SERVICES ARE COMPLEMENTS, AND (II) WIRELESS PROVIDES COMPETITIVE DISCIPLINE ON WIRELINE PRICES.

The Commission should join the emerging regulatory consensus (as well as market consensus) and determine unequivocally that wireless competition does provide competitive discipline to wireline providers and therefore that wireless subscribership should be considered as a significant factor in forbearance decisions. In Canada, ILECs may petition to be forborne from regulation in an exchange when there are two independent, facilities-based competitors to the incumbent provider, where at least one of

them is a wireline provider other than the ILEC.[60] As of June 30, 2009, throughout Canada the CRTC has forborne from regulating in exchanges that account for 77 percent of residential lines and 68 percent of business lines, representing 75% of all local revenues.[61] "The California Commission recently determined that wireless is in the same product market as wireline communications. This determination was instrumental in the California Commission's decision to forbear from regulating local telephone service on a going-forward basis." *Weisman/Tardiff White Paper* ¶¶ 79-80.[62]

In a number of other states, including Iowa and Virginia,[63] wireless providers are recognized as full-fledged facilities-based entrants in telecommunications markets that serve to impose pricing discipline on wireline providers. Decisions in a number of other

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[60] Telecom Decision CRTC 2006-15, *Forbearance from the regulation of retail local exchange* services, as varied by Order in Council, P.C. 2007-0532, April 4, 2007.

[61] Canadian Radio-television and Telecommunications Commission, Communications Monitoring Report 2009 (August 2009).

[62] California Public Utilities Commission, Decision 06-08-030, August 30, 2006, p. 119. Available at http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/59388.PDF. The CA PUC made the following telling conclusions:

> Verizon established that "wireless substitution accounts for *approximately half of ILEC primary residential wireline losses,* as wireless providers improve the reach of their networks and customers exhibit a growing willingness to *'cut the cord.'* " (footnote omitted).

We agree that the build out of wireless carriers' networks since this Commission's last major telecommunications regulatory review eighteen years ago has made wireless technologies a close substitute for landline services. This evidence is a significant factor in this decision.

Id.

[63] Virginia Acts of Assembly -- 2009 Reconvened Session, Chapter 788, *An Act to amend § 56-235.5 of the Code of Virginia, relating to telephone regulatory alternatives*, Approved April 8, 2009; State of Iowa, Department of Commerce Utilities Board, Docket No. INU-08-1, In Re: Possible Extension of Board Jurisdiction Over Single Line Flat-Rated Residential and Business Rates for Local Exchange Carriers, Final Order Issued June 27, 2008.

states concerning the competitive discipline imposed by wireless providers are pending at the time of this writing.

The latest survey results from National Health Interview Study confirm the validity of treating wireless and wireline as substitutes. As of the second half of 2008, 20.2% of American homes had only wireless telephones.[64] In addition, another 14.5% of homes received all or almost all calls on wireless phones despite having a wireline telephone in the home.[65] Hence, almost 35% of American homes were "mostly wireless" during the period of the survey.[66]

Up to this point, however, the Commission has only been willing to consider wireless service to be a substitute in the "cut the cord" context, *i.e.,* when the wireless subscriber no longer has wireline service. This approach is problematic for a number of reasons. First, as discussed in regard to Principle 6, market definition is problematic when prices have been set by regulatory fiat as opposed to market forces. Thus, if the Commission observes a price increase by a wireline provider it may mistakenly conclude

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[64] Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates from the National Health Interview Survey (NHIS), July –December 2008," Division of Health Interview Statistics, National Center for Health Statistics, May 2009, p. 1. In addition, the authors report a 2.7 percentage point increase in the number of wireless-only households in the last half of 2008. This represents the largest 6-month increase observed since NHIS began collecting data on wireless-only households in 2003.

[65] *Id.* In contrast, one year earlier, 15.8% of households had "cut the cord" and an additional 13.1% received all or most of their calls on a wireless phone. Thus, the proportion of "wireless mostly" households increased from 28.9 % to 34.6% (or 16 percent) in a single year.

[66] In it initial filing in WC Docket No. 09-135, Qwest provided a Phoenix specific study performed by Market Strategies that shows 25% cord-cutting in Phoenix. *See In the Matter of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, filed Mar. 24, 2009 (*Qwest Phoenix Forbearance*) at Exhibit 5, Understanding Wireless-Only Versus Wire-Line Penetration in the Phoenix Metropolitan Area, Market Strategies International, Final Report, Nov. 10, 2008, to the Declaration of Robert H. Brigham.

that wireless does not exert sufficient competitive discipline on wireline prices and that therefore wireless must not be in the same product market as wireline. *Weisman/Tardiff White Paper at* ¶ 84.

Dr. Weisman elaborates on the problem by noting:

> [S]uppose that the price of wireline telephone service was pegged by regulators at a price of zero. In addition, suppose that virtually all consumers subscribe to both wireless and wireline telephone service. It would be erroneous to conclude that these two services are complements based solely on the fact that most consumers choose to subscribe to both services. Nor could the regulator credibly determine that wireless exerts insufficient competitive discipline on wireline if the price of wireline were to increase upon the relaxation or removal of price regulation. This argument is valid whenever regulatory fiat has served to peg wireline prices below market levels.

Id. ¶ 85. Second, as discussed in connection with *Principle 7*, given the cost structure of wireline telephony, wireless may exert sufficient competitive discipline on wireline prices even when the two services are imperfect substitutes. This underscores the fact that not all consumers need to view wireless and wireline as close substitutes for wireless to exert sufficient competitive discipline on wireline prices. As discussed above, it is the "competition at the margin" that disciplines the firm's pricing behavior. *Id.* ¶ 86.

"Finally, recent market research is suggestive of a relatively high degree of substitutability between wireline and wireless in the lower income strata of the U.S. population.[67] This may suggest that what may appear anecdotally to be a complementary demand relationship between wireless and wireline may, in fact, be attributable to an income effect rather than a price effect." *Id.* ¶ 87. In other words, for consumers that are highly income-constrained, the

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[67] For example, among those surveyed that described their household income as "Poor, Near Poor and Not Poor," the percentage of wireless-only households is 30.9%, 23.8% and 16.0%, respectively. See Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates from the National Health Interview Survey, July –December 2008," Division of Health Interview Statistics, National Center for Health Statistics, May 2009 at 8.

substitutability between wireless and wireline is not blurred by income considerations. Moreover, if consumers must choose between wireless and wireline, they are increasingly likely to choose wireless.[68] This is further reflected in the fact that as of June 2008, there were 65% more wireless access lines than wireline access lines in the U.S.[69] *Id.*

Chairman Genachowski recently spoke as to the import of the wireless market noting:

> It's all about mobile....Today every company in America -- entertainment, commerce, news, you name it -- knows it needs to have a mobile strategy....At the FCC, we also recognize that mobile is central to our mission. No sector of the communications industry holds greater potential to enhance America's economic competitiveness, spur job creation, and improve the quality of our lives. My goals with regard to mobile are the same that define and drive all our work: fostering innovation and investment, promoting competition, empowering and protecting consumers....[70]

Not only does statement highlight the increasing prominence of wireless in the telecommunications industry, but it also raises the concern that to the extent the Commission regulates wireline against the tide of market forces, it will have the effect of retarding investment in innovation not only in wireline, but in the burgeoning wireless markets as well. On one hand, innovation and investment, the central tenets of dynamic efficiency, will be promoted in the wireless industry, and on the other hand the wireline industry will literally be rendered static. Intramodal competition without intermodal competition will limit innovation in the entire telecommunications industry and thwart one of the central goals of the Act.

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[68] *Qwest Phoenix Forbearance*, Declaration of Robert H. Brigham ¶ 16, and at its Exhibit 4, Nielsen Press Release, 9-16-08, *See*: http://telephia.com/html/press%20releases/WirelessSubstitution.html.

[69] *Local Telephone Competition: Status as of June 30, 2008*; Industry Analysis and Technology Division, Wireline Competition Bureau, July 2009, Tables 7 & 14.

[70] *See* Remarks of Chairman Julius Genachowski, Federal Communications Commission, "America's Mobile Broadband Future", International CTIA Wireless I.T. & Entertainment, San Diego, California, October 7, 2009.

XIII. CONCLUSION

The Commission should return to an approach no more stringent than that which it utilized in its *Omaha Forbearance Order* in order to craft a forbearance standard that aligns with the goals of the Act.

Respectfully submitted,

QWEST CORPORATION

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October 21, 2009

Its Attorneys

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matters of	)	
	)	
Petitions of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, New York, Philadelphia, Pittsburgh, Providence and Virginia Beach Metropolitan Statistical Areas	)	WC Docket No. 06-172
	)	
Petitions of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Metropolitan Statistical Areas	)	WC Docket No. 07-97

DECLARATION OF TIMOTHY J. TARDIFF AND DENNIS L. WEISMAN IN SUPPORT OF THE REPLY COMMENTS OF QWEST COMMUNICATIONS

I. Introduction

1. My name is Timothy J. Tardiff. My business address is 11 Morton Street, Newton, MA 02459. I am an economic consultant in private practice. I have specialized in telecommunications policy issues for over 25 years. I received a B.S. degree from the California Institute of Technology in mathematics (with honors) in 1971 and a Ph.D. in Social Science from the University of California, Irvine in 1974. My research has included studies of the demand for telephone services, such as local measured service and toll; analysis of the market potential for new telecommunications products and services; assessment of the growing competition for telecommunications services; and evaluation of regulatory frameworks consistent with the growing competitive trends. I have published articles in the regulatory economics literature, which in recent years have focused on policies for the increasingly competitive telecommunications industry

2. I participated in numerous legal and regulatory proceedings on issues of telecommunications economics and regulation. Since the passage of the Telecommunications Act of 1996, I have participated in interconnection arbitrations, unbundled element proceedings, universal service investigations, applications by incumbent local exchange carriers for authorization to provide interLATA long-distance, and implementation of the Triennial Review Order rules for unbundling network elements in over 25 states and before the Federal Communications Commission ("FCC"). My international research and consulting experience includes studies and expert reports on telecommunication competition and interconnection issues in Canada, Japan, New Zealand, Peru, Thailand, Australia, and Trinidad and Tobago. I attach a copy of my full resume as Exhibit 1.

3. My name is Dennis L. Weisman. I am employed by Kansas State University as a Professor of Economics. My business address is Department of Economics, Waters Hall, Kansas State University, Manhattan, Kansas 66506-4001. I received a B.A. in economics and mathematics from the University of Colorado; an M.A. in economics from the University of Colorado; and a Ph.D. in economics from the University of Florida with a specialization in industrial organization and regulation. I have testified in numerous regulatory proceedings to the economic and social impacts of regulatory policies and have served as an advisor to telecommunications firms, electric power companies and regulatory commissions on economic pricing principles, the design of incentive regulation plans and competition policies

4. My primary research interests are in strategic behavior and government regulation. I have authored or co-authored more than 85 articles, books and book chapters. My research has appeared in the Antitrust Bulletin, Economics Letters, the Journal of Regulatory Economics, the Yale Journal on Regulation, the Journal of Policy Analysis and Management, the Southern Economic Journal and the Federal Communications Law Journal. My research has also been cited by the U.S. Supreme Court in Verizon v. FCC, both majority and dissenting opinions. I am the co-author of Designing Incentive Regulation for The Telecommunications Industry, published by the MIT Press and the AEI Press in 1996, and The Telecommunications Act of

1996: The "Costs" of Managed Competition, published by Kluwer in 2000. I am also the author of Principles of Regulation and Competition Policy for the Telecommunications Industry - A Guide for Policymakers, published by The Center for Applied Economics at the University of Kansas, School of Business in 2006. I currently serve on the editorial boards of the Journal of Regulatory Economics, Information Economics and Policy and The Review of Network Economics. I attach a copy of my full resume as Exhibit 2.

5. The primary purpose of this declaration is to evaluate from an economic perspective the comments of the parties opposing Qwest's petition for forbearance in the Phoenix, Arizona Metropolitan Statistical Area (MSA). Because the arguments proffered by these parties are generally similar to those offered by interests opposing regulatory reforms and/or deregulation in other contexts (e.g., state regulatory proceedings considering retail price deregulation), we have developed a set of economic principles intended to inform deliberations on whether to maintain current regulatory regimes or relax and/or eliminate such regimes as competitive forces intensify, which we attach as Exhibit 3.[1] We use these principles to frame our response to the economic arguments of opposing parties, which generally advocate an excessively narrow and time-limited assessment of the strength of competitive alternatives to Qwest's services in an attempt to encourage this Commission to continue to maintain extensive unbundling obligations, despite the competition that continues to grow, both in Phoenix and throughout the U.S.

6. The remainder of this declaration is organized as follows. We summarize the major economic arguments of the opposing parties in Section II. In Section III, we draw on our economic principles to explain why these arguments are economically incorrect. Section IV provides a brief summary and conclusion.

II. Summary of Opposing Economic Arguments

[1] Dennis L. Weisman and Timothy J. Tardiff, "Principles of Competition and Regulation for the Design of Telecommunications Policy," October 2009 (Exhibit 3 to this declaration). .

7. While differing somewhat in specific details, the comments of opposing parties in this proceeding[2] and the parallel remand proceeding[3] generally address the following common themes:[4]

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[2] Opposition of Paetec Holding Corp. , Before the Federal Communications Commission, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Paetec Opposition"); Opposition of Covad Communications Company; Alpheus Communications, L.P.; U.S. Telepacific Corp. and Mpower Communications Corp., both d/b/a Telepacific Communications; First Communications, Inc.; Deltacom, Inc.; Trucom LLC d/b/a Citynet – Arizona; and TDS Metrocom, LLC , Before the Federal Communications Commission, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Covad, et al. Opposition"); Initial Comments of Broadview Networks, Inc., Nuvox, and XO Communications, LLC, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Broadview, et al. Opposition"); Cavalier Telephone, LLC Opposition to Qwest Petition for Forbearance , Before the Federal Communications Commission, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Cavalier Opposition"); Comptel's Opposition to Qwest Petition for Forbearance , Before the Federal Communications Commission, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Comptel Opposition"); and Opposition of Integra Telecom, Inc., TW Telecom, Inc., Cbeyond, Inc., and One Communications Corp., *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Phoenix, Arizona Metropolitan Statistical Area*, WC Docket No. 09-135, September 21, 2009 at 19-20 ("Integra, et al. Opposition").

[3] Comments of Paetec Holding Corp. , Before the Federal Communications Commission, *In the Matter of Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, Philadelphia, Pittsburgh, Providence, and Virginia Beach Metropolitan Statistical Areas*, WC Docket No. 06-172, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Phoenix, Arizona Metropolitan Statistical Areas*, WC Docket No. 07-97, September 21, 2009 at 19-20 ("Paetec Remand Comments") and Comment of Covad Communications Company; Alpheus Communications, L.P.; U.S. Telepacific Corp. and Mpower Communications Corp., both d/b/a Telepacific Communications; First Communications, Inc.; Deltacom, Inc.; Trucom LLC d/b/a Citynet – Arizona; and TDS Metrocom, LLC , Before the Federal Communications Commission, *In the Matter of Petition of the Verizon Telephone Companies for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Boston, Philadelphia, Pittsburgh, Providence, and Virginia Beach Metropolitan Statistical Areas*, WC Docket No. 06-172, *In the Matter of Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Denver, Minneapolis-St. Paul, Phoenix, and Seattle Phoenix, Arizona Metropolitan Statistical Areas*, WC Docket No. 07-97, September 21, 2009 ("Covad, et al. Remand Comments").

[4] Apparently, none of the opposing parties have offered expert economic analysis specific to Qwest's Phoenix petition in this docket. Instead, they have referenced documents prepared for other proceedings and/or jurisdictions. In particular, Cavalier attached the Declaration of Michael D. Pelcovits in WC Dockets 08-24 and 08-49 (Verizon's Virginia Beach and Rhode Island Forbearance proceedings), Covad, et al. cited a California study (Trevor R. Roycroft, "Why 'Competition' is Failing to Protect Consumers-Full Report," The Utility Reform Network, March 25, 2009.), and Integra cited Kent W. Mikkelsen, "Mobile Wireless Service to 'Cut the Cord' Households in FCC Analysis of Wireline Competition," which was attached to a 2008 *ex parte* in an earlier Qwest forbearance docket While our comments do not directly address these documents, we have reviewed them and note that the analyses contained therein are generally the same as those that we describe and critique in these comments.

- In considering whether there is sufficient competition for incumbent's services, the opposing parties argue the product market should be defined narrowly. In particular, they argue that "intermodal" alternatives—in particular, wireless and voice over Internet protocol (VoIP) —should not be considered as competitive alternatives to incumbent services.[5] To a large extent, this position boils down to the proposition that the only legitimate substitutes for incumbent services are technological "clones" of the incumbent's offerings.[6]

- Having artificially narrowed the range of eligible alternatives, the opposing parties conclude that the resulting market structure is a duopoly.[7] And based on observations made in other contexts (e.g., in decisions weighing the merits of mergers that would reduce the number of competitors from three to two), advocates of this conclusion claim that such a market is not sufficiently competitive to warrant forbearance from regulation.

- Regardless of the strength of competition for retail services, opponents of Qwest's petition would only grant forbearance if a vibrant market for wholesale inputs were guaranteed after forbearance were granted.[8] In support of their position, proponents forthrightly acknowledge their objective of protecting companies whose business plans depend on the availability of such wholesale markets, with Unbundled Network Elements ("UNEs") available at low TELRIC-based rates.

- In determining whether forbearance is warranted, opposing parties argue that this Commission should employ a market power analysis similar to the approach U.S. competition authorities use to analyze the efficacy of

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[5] Integra, et al. Opposition at 24-27; Paetec Opposition at 8-13; Paetec Remand Comments at 43-45; Covad, et al. Opposition at 8-13; Covad, et al. Remand Comments at 42-44; Cavalier Opposition.

[6] Such a position is similar to arguing that Toyota is a monopolist in the "market" for the Toyota Camry because no other carmaker produces that specific car. The key point here is that even though Toyota is the only maker of the Camry—just as Qwest may one of only a few providers of wired services—this does not establish the existence of market power for that particular product.

[7] Paetec Remand Comments at 6-9 and 12-19; Covad, et al. Remand Comments at 6-8 and 11-19..

[8] Comptel Opposition at 26-37; Broadview, et al. Opposition at 42-52; Covad, et al. Remand Comments at 8-11 and 41-42 ; Paetec Remand Comments at 9-12 and 42-43. .

proposed mergers.[9] In particular, this position would require a rigid and unrealistically high "market share"[10] (in an artificially narrow "market"), based primarily on *current* customer volumes,[11] rather the *potential* for serving customers that available capacities in competing networks could accommodate. The FCC has clearly articulated that the objectives and analysis used to determine whether unbundled network elements should be mandated at regulated prices (impairment) differs from a standard market power analysis.[12] Accordingly, the opposing parties' position would represent a major departure from the current objectives and processes for establishing and maintaining mandatory access to unbundled network elements.

III. Economic Evaluation of Opposing Economic Arguments

8. In this section, we apply the principles developed and discussed in Exhibit 3 to each of the major components of opposing parties' forbearance recommendations.

A. Intermodal Alternatives Should be Considered in Forbearance Determinations

9. As we observed in our discussion of Principle 10: "Policymakers have recognized that (i) subscription to both wireless and wireline does not imply that the two services are complements, and (ii) wireless provides competitive discipline on wireline prices." This growing trend in domestic and international markets (for example, under Canadian regulations, unaffiliated wireless providers have been considered in decisions to forbear from retail price regulation of incumbents' services in geographic

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[9] Paetec Remand Comments at 40-41; Covad, et al. Remand Comments at 39-41; Broadview, et al. Opposition at 17-18; Integra, et al. Opposition at 9..

[10] In particular, these parties would require two additional wireline carriers (Paetec Remand Comments at 29; Covad, et al. Remand Comments at 28; Integra, et al. Opposition at 9). Integra also proposes that each such carrier (1) be capable of serving at least 75 percent of the market and (2) that each such carrier have a current market share of at least 15 percent.

[11] Paetec Opposition at 23-25; Paetec Remand Comments at 33; Covad, et al. Opposition at 23-25; Covad, et al. Remand Comments at 32-33.

[12] Federal Communications Commission, *In the Matter of Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, WC Docket No. 04-313, CC Docket No. 01-338, Order On Remand, Released February 4, 2005 at ¶ 109 ("TRRO").

areas that account for substantial majorities of residential and business lines) is also consistent with the steady increase in the proportion of households that rely exclusively (or almost exclusively) on wireless service. Indeed, the most recent national statistics reveal a one-year increase in such households from approximately 29% to 35%.[13] When growing numbers of customers are availing themselves of such intermodal alternatives (including the services provided by traditional cable companies), continuing asymmetric regulation of incumbent providers would distort the competitive process to the detriment of dynamic efficiency gains (Principle 1: "The optimal regulatory policy should recognize the tradeoffs between static and dynamic efficiency and its implications for consumer welfare.") and ultimately consumer welfare. The Commission followed this "static" approach in transitioning to competition the long-distance markets and ultimately concluded that consumers likely paid higher prices as a result.

B. The Markets in which Incumbents such as Qwest Compete Are Not Duopolies

10. First and foremost, opponents' assertions of duopoly markets are the result of "legislating" legitimate economic substitutes out of the analysis. In short, the "duopoly" label mischaracterizes the nature of competition and any conclusions drawn from such incorrect premises are patently incorrect as a matter of logic. That is, to the extent that measures such as the number of competitors and/or market shares are used to make inferences about market power, refusing to include viable economic alternatives will result in faulty conclusions that such markets are unduly concentrated.[14]

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[13]. Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates From the National Health Interview Survey (NHIS), July –December 2008," Division of Health Interview Statistics, National Center for Health Statistics, May 2009 and Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates From the National Health Interview Survey (NHIS), July –December 2007," Division of Health Interview Statistics, National Center for Health Statistics, May 2008.

[14] In the Omaha forbearance order, this Commission rejected the characterization of the market as a duopoly, based on the continued actual and potential competition from competitors that avail themselves of inputs provided by the Telecommunications Act that are still available after forbearance is granted. Memorandum Report and Order, *Petition of Qwest Corporation for Forbearance Pursuant to 47 U.S.C. § 160(c) in the Omaha Metropolitan Statistical Area*, WC Docket No. 04-223, Memorandum Opinion and Order, Released December 2, 2005, ¶ 71 ("Omaha Forbearance Order")

11. Even if (contrary to fact) these telecommunications markets were duopolies, it does not necessarily follow that continued regulation is warranted. As we discuss under Principle 2 ("The optimal regulatory policy should balance Type I errors (regulating when market forces provide sufficient competitive discipline) and type II errors (not regulating when market forces provide insufficient competitive discipline) so as to minimize the expected social cost of error."), the fundamental issue is not whether competition is likely to approach perfection, but whether the costs of continuing regulation (primarily the attenuation of investment incentives) outweigh the costs of premature forbearance. And in making such an assessment, it is important to account for the possibility that any apparent lack of competition may be an artifact of historical regulatory distortions, rather than the fundamental competitive structure of the markets at issue (Principle 5: "Any dearth of competition in retail telecommunications markets is likely an artifact of regulatory-rate distortions that served to suppress competition.")

12. Opponents quote various regulatory and competition authorities in other contexts as support for the proposition that duopoly markets are not sufficiently competitive. Again, the critical question is not whether more competition now is better than less (everything else being the same), but whether continued regulation is superior to relaxed regulation in conferring dynamic and static efficiency benefits on consumers. Indeed, in the case of mergers, while merger authorities may be inclined to deny a merger that results in a duopoly (or require divestiture of those geographic markets that would become duopolies), it is also the case that society does not routinely impose price (or other forms of) regulation on markets that are highly concentrated by conventional standards. What this suggests is a bit of introspection on the part of the Commission into the question as to whether regulation is the solution or the problem.

13. Perhaps the most germane example was this Commission's sequence of decisions to first eliminate the requirement that incumbents share subscriber lines with competing digital subscriber line (DSL) providers in 2003 and its 2005 decision (with intervention from the Courts) to end the obligation of incumbent telecommunications

providers to share wholesale elements used in the provision of broadband services.[15] At the time of those decisions, provision of broadband access was effectively a duopoly consisting of cable modem and incumbent DSL offerings.[16] And contrary to the suggestions of the opposing parties that consumers are necessarily harmed when regulatory restrictions in duopoly markets are eased, analysis of subsequent market developments resulted in the conclusion that "[t]he evidence in U.S. broadband markets suggests that efficiency gains from deregulation."[17]

C. The Continued Existence of a Wholesale Market should not be a Prerequisite for Forbearance

14. As we describe in Exhibit 3, wholesale markets are relevant to the implementation of the 1996 Telecommunications Act only insofar as they are required for competition in retail markets (Principle 9). The fundamental reason for our conclusion lies in Principle 3: "The optimal regulatory policy should be platform-neutral and competitor-neutral in that it should serve to protect the integrity of the competitive process rather than individual competitors." In other words, as the FCC's impairment standard[18] (and competition law and sound economics, in general) recognizes, telecommunications policies should facilitate competition on the merits among efficient competitors, and not favor or handicap particular firms employing specific technologies and business models.

15. The corollary to these principles is that if efficient retail competition is possible without particular (or any) wholesale elements, then mandating the unbundling of such elements at regulatory prescribed rates would be counterproductive to the competitive process. Indeed, in its decisions not to require incumbents to provide (1)

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[15] Federal Communications Commission, *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338, Report and Order and Order On Remand and Further Notice of Proposed Rulemaking ("TRO"), Released August 21, 2003, ¶ 199. Federal Communications Commission, *In the Matter of Appropriate Framework for Broadband Access to Internet over Wireline Facilities*, CC Docket No. 02-33, Report and Order and Notice of Proposed Rulemaking, Released September 23, 2005

[16] Subsequently, wireless broadband services have achieved substantial shares of customers, so that the market structure is generally no longer a duopoly.

[17] Thomas W. Hazlett and Anil Caliskan, "Natural Experiments in U.S. Broadband Regulation," *Review of Network Economics*, Vol. 7, Issue 4, December 2008, pp. 460-480.

[18] TRRO, ¶ 21-22.

unbundled network elements at regulated prices to wireless and long-distance companies; or (2) unbundled local switching at regulated rates, the Commission recognized that retail competition had proceeded (or was likely to proceed) absent heavy-handed regulation of certain parts of wholesale "markets."[19] There is no credible evidence on the record to suggest that the Commission's decisions in this regard were in error.

D. Standard Market Power Analyses are not a Proper Basis for Determining whether Forbearance is Warranted

16. Opposing parties' recommendation of standard market power analyses to determine whether forbearance is warranted is fundamentally flawed for a number of reasons. First, despite the fact that facilities-based competition has strengthened considerably in recent years, thus rendering dynamic efficiency relatively more important, a market power focus would tilt the balance away from a proper weighing of dynamic versus static efficiency (Principle 1). In particular, this Commission recently reported that between mid-2005 and mid-2008, while incumbents' subscriber lines in Arizona have decreased by over 16%, facilities-based wireline competitors' lines (CLEC-owned) increased by about 51% . And over the same time period, the number of wireless subscribers in Arizona increased by 39 percent. Indeed, the number of Arizona wireless subscribers now exceeds the number of wired lines (incumbents and competitors) by 61 percent.[20] Paradoxically, the more consumers demonstrate through their consumption behavior that wireless and wireline are substitutes, the louder the pronouncements of the opposing parties that they are not.

17. Significantly, in establishing its impairment standard, this Commission clearly distinguished between an impairment analysis (a policy to facilitate competition by efficient providers) and a market power analysis (whether competition is sufficient to

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[19] TRO, ¶ 34.

[20] *Local Telephone Competition: Status as of June 30, 2008*; Industry Analysis and Technology Division, Wireline Competition Bureau, July 2009, Tables 9, 10. 11, and 14 and *Local Telephone Competition: Status as of June 30, 2005*; Industry Analysis and Technology Division, Wireline Competition Bureau, April 2006, Table 11. Nationally, from mid-2005 to mid-2008, incumbent subscriber lines decreased by 13 percent, facilities-based CLEC lines increased by 44 percent, and wireless subscribers increased by 33 percent—to a point where wireless subscribers exceed the number of wired lines by 65 percent.

ensure just and reasonable rates). The Commission's previous determination is summarized in Principle 8: "The purpose of mandatory unbundling is not to control market power *per se*, but rather to enable competition that would not be possible otherwise." An impairment standard based on this rationale is economically sensible primarily because given the technological, competitive, and economic characteristics of the industry, it strikes a better balance between dynamic and static efficiency than would a market power standard.[21] In particular, while "passing" a standard market power assessment would be sufficient to conclude that efficient competition can proceed without mandatory unbundling, it is hardly necessary for such a stringent standard to be met before it is safe to conclude that efficient competition is feasible.

18. Of course, the opposing parties' recommendation that "intermodal" alternatives not be considered would put a finger on the static efficiency side of the scale to an even greater extent. Further, even if all economically relevant competitors were included in a standard market power analysis, there are several reasons why such an analysis would be overly restrictive when applied to the telecommunications industry. In particular, conventional market share and concentration metrics for determining market power can be especially misleading when (1) the industry was pervasively regulated prior to the onset of competition, (2) regulation served to peg certain prices to sub-competitive levels, and (3) the industry has a cost structure with a high proportion of fixed and/or sunk costs. For example, the *Merger Guidelines'* standard discussed by some opposing parties[22] that a market with fewer than five equal-sized competitors is "highly concentrated" would almost inevitably lead to erroneous conclusions about market power and whether deregulatory measures such as forbearance were justified. Indeed, as we describe in Exhibit3 (pp. 23-24), this Commission acknowledged the shortcomings of such standards when it evaluated competition in wireless markets.

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[21] While the Commission's impairment standard is based on sound theoretical reasoning, its implementation (based on counts of incumbent's business lines and collocations) may not accurately measure the amount of actual or potential competition arising from facilities-based providers.

[22] See, for example, Covad, et al. Remand Comments at 30.

19. When industries have been regulated, the consideration of market shares (and associated concentration measures, such as Herfindahl-Hirschman Indices (HHI)), which are essentially static and backward looking, can lead to erroneous conclusions about market power. (Principle 4: "Market share tests are inherently problematic in regulated industries and the Commission should not rely upon them to draw inferences about market power"). As one of the classic articles on market power long ago observed:

> In view of the growing importance of antitrust enforcement in regulated industries, we shall note briefly the significant limitations of our formal analysis when applied to a market in which rates are regulated by a government agency. To the extent that regulation is effective, its effect is to sever market power from market share and thus render our analysis inapplicable…
>
> For example, in many regulated industries firms are compelled to charge uniform prices in different product or geographical markets despite the different costs of serving the markets. As a result, price may be above marginal cost in some markets and below marginal cost in others. In the latter group of markets, the regulated firm is apt to have 100% market share. The reason is not that it has market power but that the market is so unattractive to other sellers that the only firm that will serve it is one that is either forbidden by regulatory fiat to leave the market or that is induced to remain in it by the opportunity to recoup its losses in other markets, where the policy of uniform pricing yields revenues in excess of costs. In these circumstances, a 100% market share is a symptom of a lack, rather than the possession, of market power. (footnotes omitted) [23]

20. Landes and Posner's cogent analysis also informs our closely related Principle 6: "Historical ratemaking polices in telecommunications that diverge from the competitive standard can lead regulators astray in applying standard market definition guidelines." In short, standard market share and concentration measures may reveal little or nothing about the competitiveness of a regulated industry, in general, and telecommunications, in particular. This observation notwithstanding, we note that to the extent that a market share measure is used to infer market power, Landes and Posner's analysis recommends the use of capacities, rather than current customer

[23] William W. Landes and Richard A. Posner, "Market Power in Antitrust Cases." *Harvard Law Review*, Volume 94, Number 5, March 1981, p. 975- 976.

volumes in calculating such shares. Consider, for example, a particular market in which the ILEC and a cable company compete. Suppose the cable company quickly garners 5 percent of the customers and the ILEC files for deregulation. There may be a tendency to conclude that the ILEC continues to maintain market power since it has 95 percent of the customers. And yet, if capacity is truly the relevant measure of market share, and both the ILEC and the cable company are able to address 100 percent of the customers, the ILEC's market share is actually only 48.72 percent (95/(95 + 100)).

21. As this hypothetical example demonstrates, a capacity measure reflects the ability of competitors to expand and take on greater volume if a rival attempted unilaterally to increase prices above a competitive level, e.g., it is indicative of relatively high supply elasticity. As such, capacity measures the *potential* volume rivals are capable of serving, rather than their current actual volume. Thus, sound economic analysis supports the weight that this Commission has given to potential competition in earlier forbearance determinations.[24]

22. Finally, more recent economic analysis has demonstrated that the cost characteristics of facilities-based telecommunications firms can serve to constrain prices, even at conventionally high levels of market share and market concentration. And this tendency is reinforced when competing firms offer an increasing array of complementary services as is the case in telecommunications. The reasoning is straightforward. When a firm's cost structure has high levels of costs that do not vary with volume, the prices it charges must be well above incremental (marginal) cost in order to recover all of its costs. Therefore, even a modest loss in sales can result in sufficient erosion of profits to make an attempted price increase uneconomic. And if revenues from complementary high-margin services are also lost when a customer chooses another provider (for example, revenues from services such as calling features and voice mail), the loss of even fewer customers as a result of an attempted

[24] For example, in its 1995 decision to classify legacy AT&T as nondominant in the provision of long-distance services, this Commission examined the capacity of competing carriers to expand in its analysis of supply elasticity. In the Matter of Motion of AT&T to be Reclassified as a Non-Dominant Carrier, FCC 95-427, *Order*, October 23, 1995. Similarly, in its Omaha forbearance order, the Commission considered actual and potential competition from both Cox and other providers. Omaha Forbearance Order. ¶ 62.

price increase would render that decision uneconomic. , Thus, the cost structure characteristic of facilities-based telecommunications firms result in the general proposition that a little competition can go a long way. These observations are the basis for Principle 7: "The cost structure for wireline providers (i.e., pronounced scale/scope economies) and the corresponding high price-cost margins required for financial viability implies that relatively modest levels of competition may be sufficient to impose the requisite pricing discipline." In other words, the phrase that "competition occurs at the margin" means that it is the marginal customers, those willing to substitute alternative services in the face of a price increase, that serve to impose pricing discipline on the market provider.[25] This observation has special significance for wireline providers because it implies that a relatively small percentage of customers (the "marginal customers") willing to discontinue service or switch to alternative service providers in the face of a price increase are sufficient to provide the requisite competitive discipline.

23. Therefore, to the extent that static measures such as market share/concentration are considered in forbearance determinations, particular benchmarks that might inform other decisions, are not likely to provide credible information about the competiveness of telecommunications markets. For example, our analysis supports the [Canadian] government's determination that a large proportion of Canadian retail services no longer require price regulation, even though incumbents maintained market shares on the order of 80 percent when such determinations were made. On the other hand, in other industries, blocking a merger that would increase the share of the largest firm to 80 percent may also make economic sense because the industry's cost structure may not be conducive to the same price-constraining pressures that are present in the telecommunications industry. Furthermore, dynamic efficiency considerations must, of necessity, be given primacy in the Commission's deliberations even though such weight may not be appropriate in typical merger cases.

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[25] See, for example, Jerry A. Hausman., "Regulated Costs and Prices in Telecommunications," in Gary Madden (ed.), *International Handbook of Telecommunications Economics, Volume 2: Emerging Telecommunications Networks*, 2003, p. 226.

IV. Conclusion

24. The opposing parties in this proceeding engage in a number of tactics that are specifically designed to understate the degree of competition for telecommunications services in Phoenix and other market areas throughout the United States. These tactics include, but are not limited to, (1) strategic use of market definition guidelines to narrowly define the market for the purpose of overstating market power; (2) creating the fiction of a duopoly by ignoring the facts and simply declaring that wireless is not in the same product market as wireline; (3) supporting protectionist regulatory policies that confuse protecting the integrity of the competitive process the with protection of individual competitors; and (4) conflating the objective of fostering competition in the 1996 Telecommunications Act with a separate objective of fostering competition in wholesale markets.

25. We have relied upon our economic principles to rebut the positions of these opposing parties and expose the fallacies in their arguments. In addition, historical experience in transitioning telecommunications markets towards competition is also noteworthy in two respects. First, the opposing parties advocate the same type of protectionist policies that accompanied the transition to competition in long distance markets. The overwhelming weight of the evidence is that those policies, which relied heavily on asymmetric regulation of the incumbent provider, AT&T, did not serve consumers well. The high social costs of those policies include not only prices that were higher than would otherwise have been the case, but also products and services that did not find their way to market, but would have otherwise. Second, the opposing parties in this proceeding advocate a rigid interpretation of actual market share and market concentration metrics that this Commission has previously rejected (e.g., in evaluating the competiveness of wireless markets)[26] in situations in which they did not serve to credibly inform the record.

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[26] See, for example, In the Matter of Applications of AT&T Wireless, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations, etc, WT Docket Nos. 04-70, 04-254, and 04-323, *Memorandum Opinion and Order*, October 26, 2004, ¶ 148.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 20, 2009

Dr. Dennis L. Weisman, Declarant

Dr. Timothy J. Tardiff, Declarant

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 20, 2009

Dr. Timothy J. Tardiff, Declarant

PRINCIPLES OF COMPETITION AND REGULATION FOR THE DESIGN OF TELECOMMUNICATIONS POLICY

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October 21, 2009

I. QUALIFICATIONS AND PROFESSIONAL BACKGROUND

1. My name is Dennis L. Weisman. I am employed by Kansas State University as a Professor of Economics. My business address is Department of Economics, Waters Hall, Kansas State University, Manhattan, Kansas 66506-4001. I received a B.A. in economics and mathematics from the University of Colorado; an M.A. in economics from the University of Colorado; and a Ph.D. in economics from the University of Florida with a specialization in industrial organization and regulation. I have testified in numerous regulatory proceedings to the economic and social impacts of regulatory policies and have served as an advisor to telecommunications firms, electric power companies and regulatory commissions on economic pricing principles, the design of incentive regulation plans and competition policies.

2. My primary research interests are in strategic behavior and government regulation. I have authored or co-authored more than 85 articles, books and book chapters. My research has appeared in the Antitrust Bulletin, Economics Letters, the Journal of Regulatory Economics, the Yale Journal on Regulation, the Journal of Policy Analysis and Management, the Southern Economic Journal and the Federal Communications Law Journal. My research has also been cited by the U.S. Supreme Court in Verizon v. FCC, both majority and dissenting opinions. I am the co-author of Designing Incentive Regulation for The Telecommunications Industry, published by the MIT Press and the AEI Press in 1996, and The Telecommunications Act of 1996: The "Costs" of Managed Competition, published by Kluwer in 2000. I am also the author of Principles of Regulation and Competition Policy for the Telecommunications Industry - A Guide for Policymakers, published by The Center for Applied Economics at the University of Kansas, School of Business in 2006. I currently serve on the editorial boards of the Journal of Regulatory Economics, Information Economics and Policy and The Review of Network Economics.

3. My name is Timothy J. Tardiff. My business address is 11 Morton Street, Newton, MA 02459. I am an economic consultant in private practice. I have specialized in telecommunications policy issues for over 25 years. I received a B.S. degree from the California Institute of Technology in mathematics (with honors) in 1971 and a Ph.D. in Social Science from the University of California, Irvine in 1974. My research has included studies of the demand for telephone services, such as local measured service and toll; analysis of the market potential for new

telecommunications products and services; assessment of the growing competition for telecommunications services; and evaluation of regulatory frameworks consistent with the growing competitive trends. I have published articles in the regulatory economics literature, which in recent years have focused on policies for the increasingly competitive telecommunications industry.

4. I participated in numerous legal and regulatory proceedings on issues of telecommunications economics and regulation. Since the passage of the Telecommunications Act of 1996, I have participated in interconnection arbitrations, unbundled element proceedings, universal service investigations, applications by incumbent local exchange carriers for authorization to provide interLATA long-distance, and implementation of the Triennial Review Order rules for unbundling network elements in over 25 states and before the Federal Communications Commission ("FCC"). My international research and consulting experience includes studies and expert reports on telecommunications competition and interconnection issues in Canada, Japan, New Zealand, Peru, Thailand, Australia, and Trinidad and Tobago.

II. PURPOSE AND ORGANIZATION OF PAPER

5. This paper has four primary objectives. The first objective is to develop a clear understanding of the metamorphosis that has taken place in telecommunications markets and its implications for the scope of regulatory oversight. The second objective is to develop a set of high-level competition and regulation principles that may be used constructively to inform the Commission's future decision-making on a broad range of issues, including forbearance from unbundling obligations, price

regulation of special access, perceived market failures in the provision of broadband and the need for network-neutrality mandates. The third objective is to reconcile the objectives of the 1996 Telecommunications Act with the Commission's regulatory decisions and the rationale put forth by the Commission to explain those decisions. The final objective is to identify some of the pitfalls that encumbered the transition to competition in long-distance markets so as to avoid similar problems in transitioning to competition in local telephone service markets.

6. The outline for the remainder of this paper is as follows. The complete set of competitive and regulatory principles is provided as a reference for the reader in Section III. Section IV provides a set of macro themes that characterize the paradigm shift in telecommunications markets—recognizing the interplay between technological and market forces and its implications for the scope of economic regulation. A set of fundamental competition and regulation principles grounded in the law and economics literature is developed in Section V. Section VI provides a brief summary and concludes.

III. THE PRINCIPLES

7. The competition and regulatory principles developed in this paper are reproduced immediately below to serve as both a convenient reference for the reader and also to foreshadow the key concepts employed in the analysis.

THE PRINCIPLES

Principle 1. The optimal regulatory policy should recognize the tradeoffs between static and dynamic efficiency and its implications for consumer welfare.

Principle 2. The optimal regulatory policy should balance Type I errors (regulating when market forces provide sufficient competitive discipline) and type II errors (not regulating when market forces provide insufficient competitive discipline) so as to minimize the expected social cost of error.

Principle 3. The optimal regulatory policy should be platform-neutral and competitor-neutral in that it should serve to protect the integrity of the competitive process rather than individual competitors.

Principle 4. Market share tests are inherently problematic in regulated industries and the Commission should not rely upon them to draw inferences about market power.

Principle 5 Any dearth of competition in retail telecommunications markets is likely an artifact of regulatory-rate distortions that served to suppress competition.

Principle 6. Historical ratemaking polices in telecommunications that diverge from the competitive standard can lead regulators astray in applying standard market definition guidelines.

Principle 7. The cost structure for wireline providers (i.e., pronounced scale/scope economies) and the corresponding high price-cost margins required for financial viability implies that relatively modest levels of competition may be sufficient to impose the requisite pricing discipline.

Principle 8. The purpose of mandatory unbundling is not to control market power *per se*, but rather to enable competition that would not be possible otherwise.

Principle 9. Wholesale markets are relevant to the implementation of the 1996 Telecommunications Act only insofar as they are required for competition in retail markets.

Principle 10. Policymakers have recognized that (i) subscription to both wireless and wireline does not imply that the two services are complements, and (ii) wireless provides competitive discipline on wireline prices.

IV. THE PARADIGM SHIFT IN TELECOMMUNICATIONS MARKETS

8. The primary objective of this section is to develop a set of general themes that characterize the paradigm shift in telecommunications markets—recognizing the interplay between technological and market forces and its implications for the scope of economic regulation on a going forward basis. The paramount question to be addressed concerns how the metamorphosis in the telecommunications marketplace, including issues of technological convergence, endogenously changes the scope, methods and objectives of the regulatory authority on a going-forward basis.

9. Some twenty-five years ago, Professor Alfred Kahn wrote an article entitled *The Uneasy Marriage of Regulation and Competition.* In this article, Professor Kahn observed that there is "no rational half-way house between thorough regulation and free competition."[1] In an important sense, the positions of the opposing parties appearing before the Commission on matters of regulation, competition policy and forbearance metrics underscore the wisdom inherent in Professor Kahn's observation.

10. Proponents of additional regulation would have the Commission look backward to the policies it instituted immediately upon passage of the 1996 Telecommunications Act when facilities-based competition was barely visible on the horizon and pervasive unbundling was the policy default. These parties argue that there is a dearth of real competition, that barriers to entry are too high and their

[1] Alfred E. Kahn, "The Uneasy Marriage of Regulation and Competition." *Telematics*, Vol. 1, Number 5, 1984, p. 8.

success in the marketplace depends on the Commission maintaining "accommodative entry" policies through pervasive, mandatory unbundling.

11. We believe that it is essential for the Commission to look forward and recognize the market forces that have been unleashed through competing technological platforms. The competitive dynamics that are irreversibly reshaping the industry are not measured by a snapshot of the marketplace at a given point in time, but rather through a comprehensive understanding of industry trends, technological innovations and changes in market share over time. Hence, in many ways, the Commission stands at the half-way house of which Professor Kahn spoke. Telecommunications is no longer the regulated monopoly of yesteryear, but perhaps, in the view of some parties, not vigorously competitive in all markets either. To look forward – or to look back, that is the question. The seminal theme developed in the discussion that follows is that sound public policy requires the Commission to take a forward-looking perspective in designing optimal policies for the telecommunications marketplace.

12. Professor Kahn followed his above observation with another no less poignant one - "Between regulated monopoly and unregulated competition, regulated competition represents the worst of both possible worlds."[2] On this point, it should not be forgotten that this Commission has previously recognized that network

[2] Id., p. 2.

"unbundling is one of the most intrusive forms of economic regulation – and one of the most difficult to administer . . ."[3]

13. Consider the fact that at any given point in time across the economy there will likely exist opportunities in which forced sharing would serve to place downward pressure on current prices. Nonetheless, as a matter of competition policy, we do not observe pervasive forced sharing obligations and for good reason. In practice, the consumer-welfare gains expected from forced sharing are likely to pale in comparison with the consumer-welfare losses due to dampened incentives to invest in research and innovation that gives rise to new products and services.

14. The rapid rate of technological change in the telecommunications industry over the last decade has fundamentally transformed the industry's market structure. The multiplicity of competitive platforms, including broadband and wireless, represents a metamorphosis of seemingly unprecedented proportion.[4] This paradigm shift necessarily calls for a reexamination and recalibration of the industry's regulatory institutions (and forms of governance) to conform to the changes in market structure that the emergence of these technologies has wrought.

15. For example, how should the scope of network unbundling change in response to these market developments? How does pervasive network unbundling affect the speed and types of facilities-based competition that emerge? Does pervasive network unbundling create a problem of path-dependence in which

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[3] See Federal Communications Commission, *In the Matter of Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, CC Docket No. 01-338, Report and Order and Order On Remand and Further Notice of Proposed Rulemaking ("TRO"), Released August 21, 2003, ¶ 141.

[4] See, for example, Jonathan E. Neuchterlein and Philip J. Weiser, *Digital Crossroads, American Telecommunications Policy in the Internet Age*. Cambridge MA: The MIT Press, 2005.

"accommodative entry" policies become self-fulfilling prophecies? Finally, should these changes in market structure change the regulatory default from one that currently favors a policy of pervasive, mandatory unbundling to one that dutifully recognizes that "unbundling is one of the most intrusive forms of economic regulation." Hence, the use of unbundling should be exceptional in nature—a policy instrument reserved for market conditions in which competition is infeasible any other way.[5]

16. The term "regulator" probably describes fairly accurately what was traditionally asked of public utility commissioners.[6] The primary objective was to "keep the trains running on time" — to ensure that consumers had reliable access to public services (e.g., electric power, natural gas, telephone and water) of acceptable quality at reasonable prices. The centripetal model of command-and-control regulation of yesteryear that put in place strict rules to elicit a uniformity of market outcomes is increasingly at odds with what is likely now required: a centrifugal model of regulation in which the regulator becomes less of a controller and more of an enabler.

17. The regulatory challenge is to facilitate competing technological platforms that are increasingly capable of providing the requisite discipline from within — competitive discipline of the real kind rather than a surrogate fashioned at the hand

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[5] An expert on cross-country comparisons of regulatory regimes testified in a recent Canadian proceeding that the Europeans have "cable envy" with respect to North America. The point being that the more liberal use of unbundling in Europe should be viewed as a default policy driven, in large part, by the absence of a robust cable industry. See Testimony of Peter Waters, Transcripts of Proceedings Before the Canadian Radio-Television and Telecommunications Commission, Review of Regulatory Framework for Wholesale Services and Definition of Essential Service, CRTC 2006-14, October 12, 2007, Volume 4, pp. 1144-46.

[6] This discussion borrows from Dennis L. Weisman and Glen O. Robinson. "Lessons for Modern Regulators from Hippocrates, Schumpeter and Kahn," In NEW DIRECTIONS IN COMMUNICATIONS POLICY., ed. by Randolph J. May, Durham, NC: Carolina Academic Press, 2009, pp. 3-37.

of the regulator.[7, 8] This entails a corresponding shift in regulatory oversight from one of controlling market power (static efficiency) to one of unleashing the power of markets (dynamic efficiency).[9]

V. KEY COMPETITION AND REGULATION PRINCIPLES

18. In this section, we develop a set of key competition and regulation principles designed to assist the Commissions with its decision-making on a wide range of policy questions. These policy questions include, but are not limited to, the following. What criteria should determine whether forbearance from unbundling obligations is warranted? Is there a need to reinstitute price regulation for special access? Are there market failures in the provision of broadband that necessitate a change in policy? Should network-neutrality principles be imposed on network providers as a matter of regulatory decree, or can the market be expected to provide the requisite discipline?

Principle 1. The optimal regulatory policy should recognize the tradeoffs between static and dynamic efficiency and its implications for consumer welfare.

19. Static efficiency entails both allocative and productive (technical) efficiency. Allocative efficiency refers to the relationship between the price of the service and the underlying marginal (incremental) cost of the service at any given point in

[7] Professor Kahn observes that "the single most widely accepted rule for the governance of the regulated industries is regulate them in such a way as to produce the same results as would be produced by effective competition, if it were feasible." Alfred E. Kahn, *The Economics of Regulation: Principles and Institutions.* Vol. I, New York: John Wiley and Sons, 1970, p. 17.

[8] Professor Bonbright observes that "Regulation, then, as I conceive it, is indeed a substitute for competition; and it is even a partly imitative substitute." James C. Bonbright, *Principles of Public Utility Rates.* New York: Columbia University Press, 1961, p. 107.

[9] See Dennis L. Weisman, "On Market Power and the Power of Markets: A Schumpeterian View of Dynamic Industries." The Free State Foundation, *Perspectives from FSF Scholars*, February 26, 2008, Vol. 3(5). http://www.freestatefoundation.org/images/Power_of_Markets.pdf.

time. Productive (technical) efficiency is concerned with production at the lowest possible cost.[10] Dynamic efficiency is concerned with the optimal investment over time in capital formation, cost-reducing innovation and product innovation. Dynamic efficiency is particularly critical in infrastructure industries that serve as key drivers of economic growth. Professor James Bonbright, a leading authority in the field of public utility regulation, explains the relationship between these various efficiency measures in the following passage.

> Under unregulated competition, the price system is supposed to function in two ways with respect to the relationship between the price of the product and the cost of production. In the first place, the rate of output of any commodity will so adjust itself to the demand that the market price will tend to come into accord with production costs. But in the second place, competition will impel rival producers to strive to reduce their own production costs in order to maximize profits and even in order to survive in the struggle for markets. This latter, dynamic effect of competition has been regarded by modern economists as far more important and far more beneficent than any tendency of "atomistic" forms of competition to bring costs and prices into close alignment at any given point of time.[11]

20. Writing more than 60 years ago Professor Joseph Schumpeter struck a similar chord in rebuking what he termed the "*modus operandi* of competition" in which economists focused almost exclusively on price competition or static efficiency. He argued that, in reality, "the competition that matters arises not from additional shops of the same type . . ."[12] and that

> [I]n capitalist reality as distinguished from its textbook picture, it is not that kind of competition which counts, but the competition from the new commodity, the new technology, the new source of supply, the new type of organization . . . competition which commands a decisive cost or quality

[10] A firm is technically efficient if it (i) uses the minimum possible amount of inputs to produce its output; or, equivalently, (ii) produces the maximum possible amount of output from any given quantity of inputs.
[11] James C. Bonbright, *Principles of Public Utility Rates.* Columbia University Press: New York, 1961, p. 53.
[12] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy*. New York: Harper Torchbooks, 1975 (originally published in 1942), p. 85.

> advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives.[13]

21. In enacting the 1996 Telecommunications Act, the government indicated that express purpose of the Act was:

> 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.[14]

22. Given the objectives of the Act as articulated in the above passage, it is clear that the Congress harbored both dynamic efficiency and static efficiency objectives. A key question concerns the policy prescription required to realize these sometimes conflicting objectives. Two observations are instructive. First, as Professor Bonbright indicates in the above passage, there is a general consensus among economists that dynamic efficiency trumps static efficiency in terms of consumer welfare.[15] Second, recognition of the operative trade-offs between these various measures of efficiency is particularly critical in technologically-dynamic industries. To wit, the capital-intensive nature of these industries is such that relatively high price-cost margins may be necessary, not only for cost recovery, but also to provide the requisite incentives for investment in innovation.[16] These observations suggest

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[13] *Id.*, p. 84.

[14] Preamble, 1996 Telecommunications Act of 1996. Pub. L. No. 104-104, 110 Stat. 56 (codified as amended in scattered sections of 47 U.S.C.)

[15] As Professor Kahn observes:

> Second, wherever mandatory sharing, for the sake of jump-starting the entry of competitors, would interfere with the more creative and dynamic investment in facilities-based competitive entry and innovation by incumbents and challengers alike, it is the latter that must take primacy.

Alfred E. Kahn, *Whom the Gods Would Destroy, or How Not to Deregulate*, Washington D.C.: AEI-Brookings Joint Center for Regulatory Studies, 2001, p. 22.

[16] See Antitrust Modernization Commission, Report and Recommendations, Washington D.C. 2007. pp. 40-41. ("For these reasons, firms with low marginal costs but large fixed costs, for research and development and other innovative activity, for instance, often need to price significantly above marginal costs simply to earn a competitive return in the long run.")

that more light-handed regulation with respect to static efficiency may be expected to spur both product and process innovation and hence promote dynamic efficiency.[17]

23. It is in this sense that competition policies, in the form of forced sharing, that focus exclusively on the elimination of barriers to entry and reducing market power necessarily entail trade-offs between imitation and innovation (respectively, between static and dynamic efficiency). To wit, forcing incumbents to share non-essential network elements with rivals, particularly at unduly favorable prices,[18] invites those new entrants to become *de facto* clones of the incumbent provider.[19] This policy prescription sacrifices innovation for imitation in the sense that artificially encouraging entry via the reseller model may have the effect of "crowding out" facilities-based entry.[20] Policies that reward imitation rather than

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[17] See, for example, James E. Prieger and Daniel Heil, "The Rules of the Road or Roadblocks on the Information Highway: Regulation and Innovation in Telecommunications, Working Paper 08-15, AEI Center for Regulatory and Market Studies, April 2008.

[18] Whereas the relationship between innovation and competition is complex and not yet settled in the economics literature, there is evidence to suggest that higher market concentration leads to higher rates of innovation when the ability of the firm to appropriate the returns from its investments is weak, which would be the case for mandatory unbundling at regulatory-prescribed prices.

> Economic theory is ambiguous on the relationship between competition and innovation. Competition can reduce innovation incentives, particularly in markets where property rights are weak and it is difficult for firms to appropriate the value of their innovations. ... There is also some empirical support for the theoretical result that competition can reduce innovation incentives in markets with weak appropriation.

Richard J. Gilbert, "New Antitrust Laws for the 'New Economy'?, Testimony Before the Antitrust Modernization Commission, Washington D.C., November 8, 2005, p. 8.

[19] See, for example, Alfred E. Kahn, Timothy J. Tardiff and Dennis L. Weisman, "The 1996 Telecommunications Act At Three Years: An Economic Evaluation of Its Implementation by The FCC." *Information Economics and Policy*, Vol. 11, No. 4, December 1999, pp. 319-365; and Dennis L. Weisman, "The (In)Efficiency of the 'Efficient-Firm' Cost Standard." *The Antitrust Bulletin*, Vol. XLV(1), Spring 2000, pp. 195-211.

[20] A recent study concludes that the share price of both the ILECs and telecommunications equipment manufacturers declined upon announcement of the FCC's decision to liberalize unbundling rules.

> Second, both leading suppliers of narrowband (voice) infrastructure, Nortel and Lucent, exhibit a pattern of returns similar to the ILECs. This suggests that enhanced UNE-P rules are not only a negative for incumbent carriers but also for equipment manufacturers supplying switches and

innovation will attract those market entrants adept at imitation, predominantly arbitragers, while driving away genuine innovators.[21]

24. That consumers may realize greater benefits from a policy design that places primacy on dynamic efficiency does not imply that policymakers necessarily have the requisite incentives to put in place such policies. Regulators tend to emphasize performance metrics that are measureable to their constituencies. As a result, a regulator is more likely to be held accountable for the behavior of prices than for innovation foregone even when the latter is more important for consumer welfare. In addition, the short tenure of most regulators would naturally lead them to stress short-run price performance over advances in innovation that may only materialize over the longer run.[22]

Principle 2. The optimal regulatory policy should balance Type I errors (regulating when market forces provide sufficient competitive discipline) and type II errors (not regulating when market forces provide insufficient competitive discipline) so as to minimize the expected social cost of error.

25. In deciding upon the appropriate balance of Type I and Type II errors, the Commission should consider whether one type of error is more amenable to self-

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> other network infrastructure. This evidence is consistent either with the theory that generous UNE-P opportunities lead incumbent and competitive carriers to substitute out of network infrastructure, or the rent-seeking explanation of resale competition developed above, or both. It is inconsistent, however, with the view that UNE-P helps facilitate competitive entry that will result in increased network investment.

Thomas W. Hazlett and Arthur M. Havenner, "The Arbitrage Mirage: Regulated Access Prices with Free Entry in Local Telecommunications Markets." *The Review of Network Economics*, Volume 2(4) December 2003, p. 447.

[21] Michael Powell, the former chairman of the FCC, commented on the boom and bust in telecommunications markets and the regulators' culpability in it. He noted, in particular, that regulators attempted to drive the price of entry close to zero in telecommunications markets and, as a result, succeeded in attracting primarily arbitrageurs rather than genuine innovators. See *Telecommunications Reports*, "Powell Recommends Simplicity in New Law for IP Services." April 1, 2005.

[22] See Glen O. Robinson and Dennis L. Weisman, "Designing Competition Policy for Telecommunications." *The Review of Network Economics*, Vol. 7(4), December 2008, pp. 509-46.

correction by market forces than the other type of error. For example, prices that are above competitive levels will tend to be self-correcting, whereas prices pegged below market levels will tend to discourage competition (and investment) in a manner that is not easily reconciled with the goals and objectives for the telecommunications sector as set forth in the 1996 Act.[23]

26. Similar reasoning should serve to guide the scope of mandatory unbundling. For example, the Commission may be uncertain as to the benefits/costs of mandatory unbundling of local loops in a particular market area. That decision should be duly informed by (i) the effect of mandatory unbundling on the ubiquity and intensity of facilities-based competition; (ii) the fact that retail regulation at the state level serves as a check on ILEC market power; and (iii) the risk that unbundling policies that are overly expansive in scope become a self-fulfilling prophecy. In other words, mandatory unbundling will crowd out facilities-based competition and thereby serve to ensure that pervasive, mandatory unbundling is required for retail competition in perpetuity. What is of particular concern is a "bad equilibrium" in which the ILECs do not invest because they cannot earn the required (market) returns and the CLECs do not invest because it is less costly to lease.

27. The Commission has long expressed a preference for facilities-based entry as opposed to entry on the basis of resale or unbundled network elements.[24, 25] The

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[23] Robert W. Crandall and Leonard Waverman, "The Failure of Competitive Entry Into Fixed-Line Telecommunications: Who Is At Fault?," *Journal of Competition Law and Economics* 2(1): 113-148, 2006; Jerry A. Hausman, and Gregory J. Sidak, "Did Mandatory Unbundling Achieve Its Purpose? Empirical Evidence From Five Countries," *Journal of Competition Law & Economics*, 1: 173-245, 2003; Thomas W. Hazlett, (2006) "Rivalrous Telecommunications Networks With and Without Network Sharing," *Federal Communications Law Journal*, 58(3): 477-509, 2006.

[24] See Federal Communications Commission, *In the Matter of Unbundled Access to Network Elements, Review of the Section 251 Unbundling Obligations of Incumbent Local Exchange Carriers*, WC Docket No. 04-313, CC

former not only offers the prospect of more robust innovation and a wider range of choices for consumers, but also potentially obviates the need for costly and distortionary regulatory intervention in the marketplace. Hence, to the extent that mandatory unbundling discourages facilities-based entry, the Commission should adopt a policy that mandatory unbundling is presumptively unnecessary absent credible evidence to the contrary. This is a policy that explicitly recognizes that the social costs of unbundling when it is unnecessary are potentially larger than the social costs of not unbundling when it is necessary. This is particularly likely to be the case when state level price regulation is in place to control any undue exercise of market power on the part of the incumbent providers.

Principle 3. The optimal regulatory policy should be platform-neutral and competitor-neutral in that it should serve to protect the integrity of the competitive process rather than individual competitors.

28. The goals and objectives of the 1996 Telecommunications Act include reduced regulation, lower prices and incentives for investment in technology and infrastructure. There is no requirement in the Act that calls for retail competition to be achieved through mandatory unbundling policies. To the contrary, the goal of

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Docket No. 01-338, Order On Remand, Released February 4, 2005 (hereafter Triennial Review Order on Remand or "TRRO"), ¶ 2, ¶ 33, ¶ 218 and note 594,. Important goals of the Act include the deployment of advanced technology and infrastructure. The FCC used this authority to reject calls for unbundling of fiber-to-the-home and packet switching.

[25] Canadian regulators had previously reached the very same conclusion. In Telecom Decision CRTC 97-8 at ¶ the73, the Commission observed that :

> The Commission is of the view that efficient and effective competition will best be achieved through facilities-based competitive service providers; otherwise competiton will only develop at the retail level, with the ILECs retaining monopoly control of wholesale level distribution.

reduced regulation portends a preference for facilities-based competition over competition based on resale or mandatory network unbundling.[26]

29. The above observations are significant because there is no provision in the Act that requires the Commission to artificially sustain a particular CLEC or set of CLECs that rely upon a business model based on resale and mandatory network unbundling provided that facilities-based platforms are present and contributing toward vigorous competition in the retail market. In other words, the Commission should be agnostic with respect to the particular technological platform employed to bring about vigorous competition in retail markets. The Commission should therefore seek to foster *competition on the merits* without regard to any particular carrier, technological platform or business model.[27]

30. The practice of asymmetric regulation undermines the competitive process to the detriment of consumers. It is accepted doctrine that regulation and competition policy should serve to protect the integrity of the competitive process rather than the financial viability of individual competitors.[28] Unfortunately, the reality is often quite different. As Professor Alfred Kahn has observed:

> The regulator tends as a matter of constitutional preference ... to convert the maintaining of the "level playing fields" into an interference with the contest itself. Regulators move from trying to assure a fair and equal start

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[26] See, for example, Alfred E. Kahn, Timothy J. Tardiff and Dennis L. Weisman, "The 1996 Telecommunications Act At Three Years: An Economic Evaluation of Its Implementation by The FCC," *Information Economics and Policy*, Vol. 11, No. 4, December 1999, pp. 319-365.

[27] The term "competition on the merits" refers to the basic idea that the returns that a firm enjoys should reflect its superior efficiency and business acumen in the marketplace *vis-à-vis* its relatively less proficient rivals. In United States v. Aluminum Co. of Am., 148 F.2d 416, 430 (2d Cir. 1945), Judge Learned Hand observed that "A single producer may be the survivor out of a group of active competitors, merely by virtue of his superior skill, foresight and industry." For a more recent discussion of the term "competition on the merits" and its role in differentiating between competitive and exclusionary behavior in antitrust, see Antitrust Modernization Commission, Report and Recommendations, Washington D.C. 2007.

[28] Richard A. Posner, *Antitrust Law*, Chicago: University of Chicago Press, 2001.

> to ensuring an equal finish; to preserve whatever the regulator conceives to be the proper market shares of the various competitors.[29]

31. In a similar context, The Honorable Stephen Breyer, Associate Justice of the U.S. Supreme Court, has warned of the dangers associated with just such misdirected protections:

> A second special policy risk of deregulation is that government policymakers will protect competitors instead of protecting competition. This is a problem familiar to students of antitrust. It arises when regulators or antitrust enforcers confuse means with ends by thinking that the object of the law is to protect individual firms from business risks rather than to bring consumers the price and production benefits that typically arise from the competitive process. Where deregulation is at issue, the consequence of misdirecting protection is to threaten to deprive the consumer of the very benefits deregulation seeks."[30]

32. The recent report of the Antitrust Modernization Commission likewise admonished against mistaking the protection of competitors with the protection of the competitive process. The following passage in instructive.

> Economic research found precompetitive reasons to explain highly concentrated markets—that is, that the most efficient firms were winning the competitive struggle and thereby achieving high market shares. ... In response to this and other advances in economic understanding, the Supreme Court in 1977 stated without caveat that "the antitrust laws ... were enacted for the 'protection of competition, not competitors.'" ...There is now a better understanding that trade-offs exist between the goals of consumer welfare and protecting small firms. To protect small firms can mean a less efficient economy in which consumers must pay higher prices.[31] (footnotes omitted)

33. Competition policies that mistake protecting competitors with protecting the integrity of the competitive process give rise to a problem of "moral hazard" in

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[29] Alfred E. Kahn, "The Uneasy Marriage of Regulation and Competition." *Telematics*, Vol. 1, Number 5, 1984, p. 9.

[30] Stephen Breyer, Anticipating Antitrust's Centennial: Antitrust, Deregulation, and the Newly Liberated Marketplace, *California Law Review*, Volume 75, 1987 at 1018.

[31] Antitrust Modernization Commission, Report and Recommendations, Washington D.C. 2007. p. 34.

which new entrants and/or incumbents develop an unnatural dependence on the regulatory process for their very survival.[32] For example, market providers may have limited incentives to operate efficiently or to bear the risks associated with facilities-based entry if they know that they can always appeal to regulators for relief. They do so because they understand that regulatory agencies do not want to see competitive experiments fail.[33] As a former chief economist of the FCC observed in the context of long distance competition in the United States:

> A firm does not have to possess a large market share to exercise economic power. The OCCs [other common carriers] do not possess large market shares, but they can certainly exercise power by threatening to make government officials who have inflicted huge costs on consumers to promote competition look bad. They can do this by threatening to fail. A small market share and low profits can be assets in such an extortion campaign. They can make the threat of failure more compelling and thus make it more likely that government officials will yield to extortionate demands. And as is always the case with extortionists, giving in merely encourages additional blackmail attempts.[34]

34. The truth of the matter is that this Commission has at times confused protecting competitors with protecting the integrity of the competitive process. For example, the history of the Commission's actions with respect to the transition to competition in the long-distance marketplace strongly suggests that some of its policies—particularly as they relate to asymmetric regulation—may well have

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[32] A moral hazard is a particular incentive problem that arises when the economic agent does not bear the full costs of a loss and, as a result, fails to put forth the efficient level of effort (which cannot be observed directly) to avoid that loss. For example, an individual may not take adequate precautions in locking the doors on his rental car or parking the rental car so as to avoid parking lot damage because he does not pay the full cost in the event of theft or damage. The moral hazard problem explains why most insurance policies require co-payments or deductibles.

[33] For an overview of the literature, see David E. M. Sappington and Dennis L. Weisman, *Designing Incentive Regulation for the Telecommunications Industry*. Cambridge: MIT Press and Washington D.C.: AEI Press, 1996, Chapter 8; and John R. Haring , "Implications of Asymmetric Regulation for Competition Policy Analysis," Working Paper No. 14, 1984.

[34] John R. Haring, "The FCC, the OCCs and the Exploitation of Affection," Working Paper No. 17, Federal Communications Commission, Office of Plans and Policy, June 1985.

resulted in consumers paying higher prices than would otherwise have been necessary. The following quotation from an article penned by the former chairman and other high-ranking Commission administrators is instructive on this point.

> It can be argued, for instance, that some of the Commission's regulatory actions in the interexchange market that were designed to promote competition during transition, such as . . . restrictions on competitive pricing responses by AT&T, will have resulted in substantial, unnecessary costs for society that never would have been incurred in a truly competitive marketplace. Moreover, this approach will have directly increased consumer costs by requiring regulated firms to charge higher prices to protect competitors during the transition.[35]

35. On this score, we believe it important for the Commission to practice *intelligent failure*—learning from its previous policy failures in a manner that dutifully informs the design of optimal policies going forward.[36] That is to say, the Commission has an opportunity to learn from its experience in overseeing the transition to competition in the long-distance market and apply those important lessons to the local exchange marketplace. Unfortunately, there is a dearth of evidence to suggest that this is what is taking place. Mr. Raymond Gifford, a past chairman of the Colorado Public Utilities Commission, has opined on the incentives that regulators have to encourage entry, albeit artificially, in local

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[35] Mark S. Fowler, Albert Halprin, and James D. Schlichting. "'Back To the Future': A Model For Telecommunications." *Federal Communications Law Journal*, Volume 38, Number 2, 1986, pp. 193-194. [At the time this article was written, the authors were, respectively Chairman, Chief, Common Carrier Bureau, and Special Counsel, Common Carrier Bureau, Federal Communications Commission.]

[36] The term "intelligent failure" was coined by the great inventor and philanthropist, Charles Franklin Kettering, Among Kettering's numerous inventions was the individual ringing function for party line telephone service, the solution to a problem that he encountered while working on a telephone line crew in rural areas. Stuart W. Leslie, *Boss Kettering*, New York: Columbia University Press, 1983; and See also T. A. Boyd, PROPHET OF PROGRESS – SELECTIONS FROM THE SPEECHES OF CHARLES F. KETTERING, New York: E. P. Dutton and Co. Inc., 1961, pp. 108-09.

telephone service markets by creating profitable opportunities for prospective market entrants.

> While this incentive to create a margin may not be "real competition", the behavior comports with the regulators' incentives and abilities. A short time horizon, political pressure to show gains in competitive entry, and a plastic rate methodology – all this gives the regulator ample room to furnish the aesthetics of competition.[37]

Principle 4. Market share tests are inherently problematic in regulated industries and the Commission should not rely upon them to draw inferences about market power.

36. The Commission should not rely exclusively or even predominantly on market share to draw inferences about market power in telecommunications markets that have historically been subject to regulatory fiat. Indeed, the standard relationship between market share and market power is likely to be particularly misleading in a regulated setting. This is necessarily the case because the various market shares are not the outcome of a market process, but rather the outcome of a regulatory ("command and control") process. The following passage from one of the classic articles on the relationship between market power and market share is instructive on this important point.

> In view of the growing importance of antitrust enforcement in regulated industries, we shall note briefly the significant limitations of our formal analysis when applied to a market in which rates are regulated by a government agency. To the extent that regulation is effective, its effect is to sever market power from market share and thus render our analysis inapplicable.[38]

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[37] Raymond L. Gifford, "Regulatory Impressionism: What Regulators Can and Cannot Do," *The Review of Network Economics*, Volume 2(4) December 2003, p. 475.
[38] William W. Landes and Richard A. Posner, "Market Power in Antitrust Cases," *Harvard Law Review*, Volume 94, Number 5, March 1981, p. 975.

37. It is quite possible, even likely, that the incumbent provider's high market share may actually reflect the absence of rather than the presence of market power.

> For example, in many regulated industries firms are compelled to charge uniform prices in different product or geographical markets despite the different costs of serving the markets. As a result, price may be above marginal cost in some markets and below marginal cost in others. In the latter group of markets, the regulated firm is apt to have 100% market share. The reason is not that it has market power but that the market is so unattractive to other sellers that the only firm that will serve it is one that is either forbidden by regulatory fiat to leave the market or that is induced to remain in it by the opportunity to recoup its losses in other markets, where the policy of uniform pricing yields revenues in excess of costs. In these circumstances, a 100% market share is a symptom of a lack, rather than the possession, of market power. (footnotes omitted) [39]

38. The limitations of drawing inferences about market power from market share are well documented in the literature.[40] Such metrics are necessarily backward looking in their approach and therefore quite limited in predictive value in markets that exhibit "fragility" due to their technologically-dynamic character, [41] such as telecommunications.[42] Market share measurement is inherently static in nature. In addition, the theoretical relationship between market share and market power predicted by some economic models does not necessarily hold up empirically.

> Although several economic models of firm behavior predict that larger market shares are associated with higher prices, the relationship has been difficult to detect empirically. First, market share data are hard to obtain in many cases. In addition, it is likely that the relationship between market shares and market performance (e.g., profitability) is industry-specific. . . . Accordingly, scholars disagree on whether there is a "critical market share"

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[39] Id., p. 976.

[40] See, for example, Dennis L. Weisman, PRINCIPLES OF REGULATION AND COMPETITION POLICY FOR THE TELECOMMUNICATIONS INDUSTRYU - A GUIDE FOR POLICYMAKERS. The Center for Applied Economics, KU School of Business, Technical Report 06-0525, 2006, Section 3.5.2.

[41] See Richard Schmalensee, "Antitrust Issues in Schumpeterian Industries," *American Economic Review*, Vol. 90, No. 2, May 2000, pp. 192-194.

[42] See Section 1.521 U.S. Department of Justice and the Federal Trade Commission. *Horizontal Merger Guidelines*, 1992 [Inclusive of April 8, 1997 Revisions]. This section of the guidelines indicates that market share measures can be misleading in terms of competitive significance when market conditions are changing.

where a firm becomes sufficiently dominant that it can exercise unilateral market power."[43] (footnotes omitted)

39. The above observations notwithstanding, should the Commission determine that some market share metric is necessary to inform the record, one based on capacity rather than actual sales is likely to be superior.[44] Indeed, as Judge Richard Posner, a leading law and economics scholar, has observed:

> Competition is not a matter of many sellers or low prices or frequent changes in prices or market shares. It is properly regarded as the state in which resources are deployed with maximum efficiency, and it is not so much the existence of actual rivalry, let alone any specific market structure or behavior, as the potential for rivalry, that assures competition.[45]

40. Landes and Posner also suggest that a superior measure of market share in drawing inferences about market power would be based on the capacity rather than the current output of the competitive fringe:

> If *i*'s market share is 80%, consumers cannot easily substitute other goods, and producers of other goods cannot easily switch to the production of this good, *i* may still lack substantial market power. Suppose the output of competing producers of the good is highly responsive to changes in the price. . . . Market share alone would be a poor measure of market power in such a case, at least in the long run. . . . The excess capacity of the fringe firm would limit *i*'s efforts to raise price above marginal cost. To reflect this factor, one could redefine *i*'s market share as its current output divided by the sum of *i*'s output and the fringe firm's capacity (*i.e.,* by their potential rather than current, output). This adjustment would reduce *i*'s market share . . . and thereby provide a better measure of *i*'s market power.[46]

41. Consider, for example, a particular market in which the ILEC and a cable company compete. Suppose the cable company quickly garners 5 percent of the customers and the ILEC files for deregulation. There may be a tendency to conclude that the

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[43] ABA Section of Antitrust Law, Antitrust Market Power Handbook (2005), pp. 82-83.
[44] Landes and Posner, Op. Cit., pp. 974-975.
[45] Richard A. Posner, "The Effects of Deregulation on Competition," *Fordham International Law Journal*, Volume 23, 2000, p. 18.
[46] Landes and Posner, Op. Cit., pp. 948 - 949.

ILEC continues to maintain market power since it has 95 percent of the customers. And yet, if capacity is truly the relevant measure of market share, and both the ILEC and the cable company are able to address 100 percent of the customers, the ILEC's market share is actually only 48.72 percent (95/(95 + 100)).

42. Hence, how market share is measured is critically important for evaluating the existence of market power. In fact, the Competition Bureau in Canada came to this very conclusion in a recent forbearance proceeding. The following passages are instructive.

> Market shares should be defined in a manner that reflects the potential for the ILEC to exercise market power if there is forbearance. . . . Therefore, the mere presence of the competitor has a larger impact on ILEC behaviour than its actual market share.[47]
>
> For example, in geographic markets where there are two independent facilities-based service providers with sunk costs, that are not capacity constrained, and are equally capable of offering the relevant product, the capacity market share of the ILEC and the new entrant will each be 50%.[48]

43. In fact, in evaluating proposed mergers in the wireless industry and the significance of Hirschman-Herfindahl (HHI) measures,[49] the Commission has itself recognized the limitations of market share/concentration measures based on actual sales.

> For many markets where the facts of a high subscriber-based HHI and a high change in HHI might seem to suggest a potential competitive problem, there is in fact little likelihood of harm. We find that the presence and capacity of other firms matter more for future competitive conditions than do current subscriber-based market shares. In particular, current

[47] Canadian Radio-Television and Telecommunications Commission (CRTC), Telecom Public Notice CRTC 2005-2, *Forbearance from Regulation of Telecommunications Services*, Argument of The Commissioner of Competition, September 15, 2005, ¶ 61.
[48] *Id.*, ¶ 62.
[49] The HHI is computed as the sum of the squared market shares of each firm in the market. The HHI ranges from effectively 0 in the case of atomistic competition to 10,000 in the case of a monopoly.

> market shares understate the likely future competitive importance of Verizon Wireless, Sprint, T-Mobile, and Nextel. These firms all compete fiercely for customers; all are investing substantially in capacity and new services in this sector; and Verizon Wireless, T-Mobile, and Nextel have been gaining nationwide market share over recent quarters.[50]

44. Furthermore, in order to reduce the costs of regulation and discourage rent-seeking behavior,[51] it should not be necessary for an incumbent provider to demonstrate that the conditions for regulatory forbearance have been met in Market B if these conditions have previously been met in Market A and the two markets are comparable in terms of the relevant economic characteristics. That is to say, the Commission should take advantage of every opportunity to streamline the forbearance process by, in part, drawing inferences across markets that share common characteristics. Notably, the Commission employed a similar approach in determining whether there was impairment with respect to particular network elements.[52]

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[50] FCC, *In the Matter of Applications of AT&T Wireless, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations*, etc, WT Docket Nos. 04-70, 04-254, and 04-323, Memorandum Opinion and Order, October 26, 2004, ¶ 148.

[51] Economic rent is defined as the difference between the amount that firms are willing to pay for an input and the minimum amount necessary to obtain that input. Economic rent is essentially a return that the firm earns on a scarce input to production. This input may consist of a reputation, creative/entrepreneurial talent, a franchise, or a natural resource. The expenditure of resources to attain (sustain) a monopoly is called rent-seeking (defending) because firms will compete to earn a "rent" on the source of the monopoly. These costs represent socially-unproductive expenditures on securing market outcomes that are privately beneficial but socially detrimental. These social costs can take numerous forms that include: (1) A diversion of resources from the marketplace to the hearing room; (2) Compliance costs; (3) Strategic use of the regulatory process that may serve to delay the introduction of new services or establish artificially high price floors for the incumbent provider; and (4) Competitors developing a dependence on the regulatory process for their very survival. See, for example, Fred S. McChesney. *Money for Nothing: Politicians, Rent Extraction, and Political Extortion.* Cambridge MA: Harvard University Press, 1997.

[52] The FCC specifically observes that

> [I]n applying our impairment test, we draw reasonable inferences regarding the prospects for competition in one geographic market based on the state of competition in other, similar markets (TRRO, ¶ 5).

45. The Commission, of course, has previous experience with market share tests, and that experience should serve to inform the record here. Whether explicit or otherwise, the Commission signaled AT&T that it would not be declared non-dominant until its market share for switched long-distance serves declined to a predetermined level. The "magic number" was never disclosed publicly, but some have suggested that it was somewhere in the neighborhood of 60%.[53] The Commission also adopted a number of asymmetrical regulatory policies that had the effect of ceding market share to AT&T's rivals in a manner that did not reflect competition on the merits.[54]

46. The policy lessons to be learned from the experience in the long-distance marketplace are two-fold. First, competitive handicapping policies that artificially restrain certain providers so that other providers may flourish impede the competitive process to the detriment of consumers. Second, consumers are harmed when regulatory rules render it more profitable for competitors to do battle in the hearing room—in a quest for regulatory favoritism and protection—than deploy innovative, high-value services in the marketplace.

Principle 5. Any dearth of competition in retail telecommunications markets is likely an artifact of regulatory-rate distortions that served to suppress competition.

47. The perceived need for continued regulatory oversight, including mandatory network unbundling, may well be an artifact of the economically inefficient rate-

[53] Peter W. Huber, "Telephones, Competition and the Candice-Coated Monopoly, Regulation, 1993, Number 2, p. 36.

[54] See, for example, Dennis L. Weisman, "Asymmetrical Regulation," *Telecommunications Policy*, Vol. 18(7), October 1994, pp. 499-505; and John R. Haring, "Implications of Asymmetric Regulation for Competition Policy Analysis. Working Paper 14, Office of Plans and Policy, Federal Communications Commission, 1984.

design policies of the past that likely served to curb the intensity of competition. If regulation has served to peg prices at artificially low levels in the market for local telephone service—a claim that cannot credibly be contested, at least historically—regulators would, as a matter of course, observe less competition and hence less substitutability between competing technological platforms than would otherwise be present.[55] In the antitrust literature, this phenomenon is a manifestation of the well-known *Cellophane Fallacy*.[56] This fallacy occurs when two or more products may appear to be substitutable, or not substitutable, but such is an artifact of extant prices diverging from competitive levels.[57]

48. The D.C. Circuit's *USTA Decision* spoke to this very issue concerning the implementation of the 1996 Telecommunications Act:

> Competitors will presumably not be drawn to markets where customers are already charged below cost, unless either (1) the availability of UNEs priced well below the ILECs' historic cost makes such a strategy promising, or (2) provision of service may, by virtue of economies of scale and scope, enable a CLEC to sell complementary services (such as long distance and enhanced services) at prices high enough to cover incomplete recovery of costs in basic service.[58]

49. This observation may well have special significance for the issue of wireless-wireline substitutability. To the extent that wireline prices have been pegged below

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[55] This is presumably what former FCC Chairman Michael Powell meant when he observed that "retail rates are not an irrelevant part of an economic market, and regulators may have to make a choice between 'sustainable businesses' and low prices to end users." "Powell: Subsidies Can Be Market Barriers," Quote attributed to Mr. Powell by *Telecommunications Reports*, 5 March 2001, p. 10.

[56] *United States v. E.I. dupont de Nemours and Co., 351 U.S. 377 (1956).* See also Dennis W. Carlton, "Does Antitrust Need to be Modernized?" *Journal of Economic Perspectives*, Volume 21, Number 3, Summer 2007, pp. 160-62.

[57] For example, the higher penetration of wireless service in Japan and Europe is explained in part by the lack of subsidies and the higher price for wireline telephony. See Jerry Hausman, "Mobile Telephone" in Martin Cave, Sumit Majumdar, and Ingo Vogelsang, eds. *Handbook of Telecommunications Economics*. North-Holland: Amsterdam, 2002, Chapter 13, pp. 564-565.

[58] *United States Telecommunications Association v. FCC,* 290 F.3d at 422.

market levels by regulatory fiat, an increase in such prices would as a matter of course result in less substitution of wireless for wireline than would be the case otherwise. In other words, there will be a natural bias that would tend to lead policymakers to conclude that wireless and wireline are not particularly close substitutes. A serious consequence of this bias is that it may lead policymakers to draw the market boundaries around wireline telephone service too narrowly—to conclude in error that wireless is not in the same market as wireline.

50. To see how this can occur, note that market power is typically defined as the ability of a firm to profitable raise prices above *competitive* levels for more than a transitory period of time.[59] Recognize that the definition does not reference merely the ability to raise prices, but rather the ability to raise prices above competitive levels.[60] As there can be no credible claim that wireline prices were necessarily maintained at competitive levels under regulatory fiat, increases in such prices are not necessarily indicative of market power.

51. These problems have already surfaced in the protracted debate over forbearance applications. For example, parties that have a vested interest in having the various forbearance applications rejected conjecture that the market for telephone service would be a duopoly, consisting of an ILEC and a cable company, absent mandated unbundling at regulatory prescribed prices. In reality, the fiction of the duopoly in the market for local telephone service is itself an artifact of ignoring the history of

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[59] *Horizontal Merger Guidelines*, *op. cit.*, Section 0.1. (A firm possesses market power when it has "the ability profitably to maintain prices above competitive levels for a significant period of time.")

[60] See Dennis W. Carlton, "Market Definition: Use and Abuse," *Competition Policy International*, Volume 3, No. 1, Spring 2007, pp. 1-27. (Carlton argues, in part, that the benchmark price for the analysis is that which would have prevailed in the absence of the "bad act" or market distortion. To the extent that regulation has served to "distort" the current price—an issue on which there could be little serious debate—it is not the proper price to be used as a benchmark for the analysis.)

telecommunications rate design. In other words, because wireline rates have been pegged at artificially low levels by regulatory fiat, market boundaries are drawn too narrowly and this leads policymakers to mistakenly conclude that wireless is not in the same product market as wireline. It is in this sense that the need for regulatory oversight, inclusive of mandatory unbundling, becomes a self-fulfilling prophecy. To wit, regulators set artificially low local telephone service rates that discourage the very competitive entry that they seek as evidence that they can safely forbear from regulation.

52. Ironically, the Commission has previously recognized this very problem. In the TRRO, the Commission observed that overly broad unbundling obligations should not be used to compensate for other distortions in the regulatory regime.[61] Hence, to the extent that regulation has pegged prices at artificially low levels, it would not be appropriate for the Commission to mandate unbundling to remedy the dearth of competition without first establishing that facilities-based competition would not have been forthcoming in the absence of the "distortions in the regulatory regime."

Principle 6. Historical ratemaking polices in telecommunications that diverge from the competitive standard can lead regulators astray in applying standard market definition guidelines.

53. The seemingly renewed interest in applying market definition guidelines to inform forbearance applications carries significant risk, particularly when some parties may have strong incentives to apply these guidelines mechanically and myopically. Whereas, the evaluation of a horizontal merger and deregulation decisions may

[61] TRRO, ¶ 23.

share a common concern, that of the exercise of market power, there are important differences between the evaluation of a merger and deregulation that should be duly noted for purposes of a careful policy analysis.

54. The primary purpose of defining the relevant market is that of calculating market shares. To the extent that market share measurement, for whatever reason, is of limited value for the exercise at hand, so, by implication, must be the definition of the relevant market.

> The boundaries of the relevant market in antitrust economics normally cannot be determined with absolute precision. Nor do real world markets always array themselves in binary fashion, where products are clearly inside or outside the market. . . . At base, what matters more than defining a market perfectly is identifying the economic forces that constrain a firm's pricing. The exercise of defining a market and calculating market shares is useful to the extent that it accurately reflects these economic forces.[62] (footnotes omitted)

The contra-positive of this statement implies that when market shares are not reflective of economic forces, defining a market and calculating market shares may be of little, if any, real value.

55. What this implies is that the emphasis placed on market definition is appropriate only insofar as there is reason to believe that the resulting market share calculation sheds some light on the ability of the incumbent provider to exercise market power.

> A loose economic definition of a market is that it comprises all those products whose presence constrains the price of a particular product to a particular level. For economists, drawing bright line boundaries around products in a market often makes no sense. Indeed, if antitrust law did not commonly require defining a market, economists would probably spend much less time discussing what the denominator of a market share should include.[63]

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[62] ABA Section of Antitrust Law, Antitrust Market Power Handbook (2005), p. 70.

[63] Dennis W. Carlton, "Does Antitrust Need to be Modernized?" *Journal of Economic Perspectives*, Volume 21, Number 3, Summer 2007, pp. 161.

56. In a typical merger proceeding, the analysis begins with a competitive market and inquires as to whether the proposed consolidation is likely to lessen rivalry in a manner that would allow for the exercise of undue market power. The market forces being examined are centripetal ("center-seeking") in nature. In the context of deregulation, markets are becoming increasingly competitive and the focus is on whether they have become sufficiently so to enable the regulator to defer to market forces for the requisite level of discipline. The market forces being examined are centrifugal ("center-fleeing") in nature. This distinction looms large in the context of market definition for purposes of forbearance because the market boundaries may be shifting rapidly.

57. To the extent that prices were maintained below market levels under regulatory fiat, the degree of demand substitution that policymakers observe in attempting to draw market boundaries may be skewed *ala* the *Cellophane fallacy*. That is to say, there would be a natural bias to draw market boundaries too narrowly. To wit, the ILEC may be able to sustain a price increase—not because it has market power—but because regulators maintained prices below (competitive) market levels historically.[64]

58. Another important difference between a merger and forbearance analyses concerns the important role of *path dependence*. For example, a regulated monopolist that begins with a 100% market share and experiences increased competition that reduces its share relatively quickly to 80% is likely in a far different competitive situation than a firm with a 50% market share merging with a firm with a 30%

[64] This is precisely why the definition of market power turns not on the ability to merely raise prices, but on the ability to raise prices above *competitive* levels. See note 59 *supra*.

market share, despite the fact that in both cases a single firm would have 80% of the market. Merger enforcement guidelines generally recognize the importance of changes in market concentration and/or the stability of market concentration, but it is unclear precisely how much weight is given to changes in market concentration as opposed to actual market concentration based on a snapshot of the market at a particular point in time.[65]

59. Finally, the precise relationship between market share and market power turns on whether the firm in question participates in multiple markets as well as the precise demand relationships between the products and services in these markets. For example, when a firm participates in two different markets and the relationship between the markets is one of complements (substitutes), the single-market share metric will tend to over (under)-state market power.[66]

60. Consider, for example, a local exchange carrier that provides only basic local telephone service and has a market share of 80%. Now suppose that this same local exchange carrier expands its product line to include long-distance telephone service and vertical features—services that are used in a complementary manner with basic local telephone service. Even though it still maintains 80% of the market for basic local exchange telephone service, the carrier will now have reduced incentives to raise price. This is the case because the loss of basic local service customers that follows a price increase means that net revenues are

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[65] See, for example, Section 1.5 of the U.S. Department of Justice and Federal Trade Commission *Horizontal Merger* Guidelines, 1992 [Inclusive of April 8, 1997 Revisions] and Section 4.17 of *the Merger Enforcement Guidelines* of the Competition Bureau, Canada, September 2004.

[66] Timothy J. Tardiff and Dennis L. Weisman, "The Dominant Firm Revisited." *Journal of Competition Law & Economics*, Volume 5, Number 3, September 2009, pp. 517-536.

foregone not only on basic local service, but also on those services that are used in a complementary fashion with basic service, such as long-distance and vertical features. Hence, the 80% market share in the case of a single-product provider would tend to imply greater degree of market power than an 80% market share in the case of a multi-product provider when the relationship between the products is one of complements.

Principle 7. The cost structure for wireline providers (i.e., pronounced scale/scope economies) and the corresponding high price-cost margins required for financial viability implies that relatively modest levels of competition may be sufficient to impose the requisite pricing discipline.

61. It important to recognize that the technical conditions of supply (scale/scope economies) that constitute the central economic argument for regulation can, under certain conditions, actually be relied upon to constrain the market power of the wire line provider. To see this, recognize that regulated firms typically operate with high price-cost margins due to pronounced scale and scope economies. Hence, price increases that produce even small reductions in demand can generate large losses in contribution to joint and common costs because the firm's revenues decline much more than the costs it can avoid.[67] It is in this manner that high price-cost margins can serve to discipline the deregulated firm's pricing behavior.

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[67] As Mitchell and Vogelsang observe:

> In telecommunications networks, production facilities have well-determined capacities, and the costs of operation are nearly independent of the flow of services through those facilities . . . Consequently, . . . variable costs are very small.

Bridger M. Mitchell and Ingo Vogelsang, *Telecommunications Pricing: Theory and Evidence.* New York: Cambridge University Press, 1991, p. 9.

62. The phrase that "competition occurs at the margin" means that it is the marginal customers, those willing to substitute alternative services in the face of a price increase, that serve to impose pricing discipline on the market provider.[68] This observation has special significance for wireline providers because it implies that a relatively small percentage of customers (the "marginal customers") willing to discontinue service or switch to alternative service providers in the face of a price increase is sufficient to provide the requisite competitive discipline.

63. A stylized, hypothetical example may prove instructive. Suppose that the ILEC provides only basic telephone service and that the ratio of price to avoidable cost for this service is 2. This implies that an ILEC would not have an incentive to raise the price of basic service by 5% if the corresponding reduction in quantity demanded is at least 10%.[69, 70] Now consider the more realistic scenario in which the ILEC provides a portfolio of complementary services consisting of basic local service, long-distance, vertical features and broadband. Under plausible conditions, it can be shown that the ILEC would not have an incentive to raise the price of basic service if the corresponding reduction in quantity demanded is at least 2.5%.[71] That is to say, relatively modest reductions in quantity demanded

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[68] See, for example, Jerry A. Hausman., "Regulated Costs and Prices in Telecommunications," in Gary Madden (ed.), *International Handbook of Telecommunications Economics, Volume 2: Emerging Telecommunications Networks*, 2003, p. 226.

[69] Let r denote the ratio of price to avoidable cost. It is straightforward to show the critical percentage reduction in quantity demanded is given by $c^*=[r/(r-1)]\times 5\% = [2/(2-1)]\times 5\%=10\%$. See, for example, Dennis L. Weisman, "When Can Regulation Defer to Competition for Constraining Market Power?: Complements and Critical Elasticities." *Journal of Competition Law & Economics*, March 2006, pp. 1-12

[70] The higher the ratio of price to avoidable cost, the smaller is the critical reduction in quantity demanded necessary to render a contemplated price increase unprofitable, ceteris paribus. For example, if the ratio of price to avoidable cost is 5, the ILEC would not have an incentive to raise price if the expected decrease in quantity demanded is $c^*=[5/5-1)]\times 5\% = 6.25\%$.

[71] See Timothy J. Tardiff and Dennis L. Weisman, "The Dominant Firm Revisited," *Journal of Competition Law & Economics*, Volume 5, Number 3, September 2009, pp. 517-536.

following a price increase are sufficient to discourage any attempt to raise such prices.

64. This reduction in the critical market share loss from 10% to 2.5% implies that the local exchange carrier now has markedly reduced incentives to raise price as a result of adding complementary services to its product line, all other factors held constant. This is the case because the loss of a basic local service customer now entails not just the loss of net revenue from basic local service, but also the loss of net revenues from long-distance, vertical features and broadband, services used in complementary fashion with basic local service.

65. To summarize, the higher the price-cost margins required for financial viability and the more pronounced the demand complementarities,[72] the stronger the pricing discipline imposed on the ILEC. This explains why even relatively modest levels of competition from "imperfect" substitutes may be sufficient to discourage the ILEC from raising price. This is also the basis for the claim that a little competition can go a long way in controlling market power in telecommunications markets.

Principle 8. The purpose of mandatory unbundling is not to control market power *per se*, but rather to enable competition that would not be possible otherwise.

66. In its TRRO, the FCC explicitly rejects the idea that a decision to unbundle a particular network element should turn on the presence of market power. The FCC notes, in particular, that the decision should turn on whether the requesting carrier

[72] To the extent that the digitalization/packetization of next-generation networks gives rise to decreasing ratios of variable to fixed costs, it should be expected that price-cost margins will increase, *ceteris paribus*.

is impaired without access to that element and not on whether market power is present in either the downstream or the upstream market.

> The purposes of a market power analysis are not the purposes of section 251(d)(2). While this antitrust analysis attempts to determine whether market participants would be able to exercise market power and raise prices above competitive levels if a merger were consummated, the Act requires only that network elements be unbundled if competing carriers are impaired without them, regardless of whether the incumbent LEC is exercising market power or the unbundling would eliminate this market power. A market power analysis would go to the question of whether an incumbent LEC could raise its retail prices unchecked; the impair analysis asks whether a new entrant can provide its services without the UNE. A market power analysis might be appropriate if the only goal of the Act were to drive prices to cost, but that approach disregards the Act's other goals of encouraging the deployment of alternative facilities and new technologies and reducing regulation.[73] (footnotes omitted)

67. This discussion serves to underscore the important principle that network unbundling is not a regulatory-ratemaking function, but rather a "competition-enabling" function. That is, the determination as to whether to unbundle a particular facility does not turn on the control of market power or dominance, but rather on the basis of whether unbundling is necessary to provide an efficient firm with the opportunity to compete in the relevant geographic market. This determination does not turn on the intensity of the competition that is present in the market, but rather on whether competition is present at all.

68. Moreover, it is not the purpose of unbundling to render a rival a "more effective" competitor, it is to enable competition that would not have been possible otherwise. This viewpoint was articulated by Michael Powell, the former Chairman of the FCC, when he characterized the revised set of FCC unbundling rules as a

[73] TRRO, ¶ 109.

"workable set of rules that preserves access to the incumbent's network where there is, or likely will be no other viable way to compete."[74]

69. Moreover, any static efficiency gains (measured in terms of reducing price-cost margins) that can be attributed to mandatory unbundling must be weighed against dynamic efficiencies foregone (measured in terms of reduced incentives for investment in innovation). Indeed, recent studies have shown that leased access has not led to a level of CLEC investment in facilities greater than that which would have obtained otherwise. To the contrary, access dependence turns out to be economically addictive, leading to increased reliance on leased access.[75]

70. The Commission has adopted a different standard under §10 than under §251 of the 1996 Act for conditions under which it may forbear from requiring an ILEC to provide unbundled network elements to rivals at regulatory-prescribed rates. In addition to the familiar public interest considerations, the Commission has interpreted §10 in a manner that permits it to forbear from imposing unbundling requirements on the ILEC only when doing so will not permit the ILEC to exercise market power (i.e., when regulation is not necessary to ensure "just and reasonable" rates). Hence, the standard for mandatory unbundling under §251, which, at least in theory does not turn on market power considerations, differs from the standard for forbearance from mandatory unbundling under §10, which by Commission decree does turn on market power considerations.

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[74] TRRO (Concurring Statement of Chairman Powell), p. 179.

[75] For a recent review of this literature and the policy lessons to be drawn from it, see Glen O. Robinson and Dennis L. Weisman, "Designing Competition Policy for Telecommunications," *The Review of Network Economics*, Vol. 7(4), December 2008, pp. 509-546.

71. This asymmetry between the §10 and §251 standards is distortionary and potentially harmful to consumers. This is the case for three primary reasons. First, the Commission has recognized that market power considerations (static efficiency) must defer to investment considerations (dynamic efficiency) in determining the merits of unbundling under §251. And yet, under §10, the Commission has essentially reversed the priority of the various considerations in determining that market power is paramount. Second, given the Commission's historical tendencies to overreach in the scope of network unbundling,[76] the divergence between the §10 and §251 standards means that the Commission has made it more difficult for it to "correct errors on the field of play." That is to say, because the Commission has set stringent standards for relieving an ILEC of its unbundling obligation once that obligation is in place, there is a greater risk of excessive unbundling with all of the market distortions and social costs that attach thereto.[77] Third, price regulation exists as a "safety net" at the state level should the ILEC continue to have the ability to exercise significant market power in the absence of network unbundling obligations.

72. We hasten to point out the need to clearly distinguish between the theory underlying §251 as espoused in the TRRO and the way in which the impairment determination has been conducted in practice. We support the basic premise that (i) the impairment determination should not turn on market power considerations; (ii) potential competition based, in part, on capacity-based market share measures,

[76] Id., pp. 512-514.

[77] This is the case because, at least in theory, the Commission considers factors other than static efficiency (i.e., market power considerations) in deciding whether to mandate unbundling, but appears to require the absence of market power before relieving an ILEC of that very same unbundling obligation.

should be given considerable weight by the Commission; and (iii) dynamic efficiency should be accorded greater weight than static efficiency in the design of the optimal policy.

73. It is unfortunate that this emphasis is not reflected in the way in which the Commission has actually applied the theory espoused in the TRRO. In practice, the Commission uses counts of ILEC business lines and collocations to determine whether CLECs are not impaired without access to DS1 and DS3 loops and transport in a particular wire center. However, this metric does not measure potential (or existing) competition in a market. For example, the business line measure counts Qwest business lines and Qwest wholesale lines, but then excludes all competitors' facilities-based lines. Hence, when Qwest loses business lines to facilities-based providers, either cable or wireless, the inference drawn is that potential competition is somehow reduced. In other words, the Commission's measure indicates impairment precisely under those market conditions when impairment does not exist.

74. In summary, the fact that the Commission has adopted different standards under §10 and §251 of the Act has the effect of placing greater weight on static efficiency *vis-à-vis* dynamic efficiency. This is problematic, not only because the Act seeks to encourage investment in facilities-based networks, but also because there is a consensus among economists on the relative importance of dynamic efficiency over static efficiency.[78] Hence, the Commission's statutory obligations as well as the economics literature strongly suggest a symmetry between unbundling and

[78] See the discussion and rationale underlying *Principle 1 supra*.

forbearance standards that is based on the relative importance of dynamic over static efficiency. In this sense, it is critical that the Commission not confuse "mandating the competitive outcome with fostering the competitive process."[79]

Principle 9. Wholesale markets are relevant to the implementation of the 1996 Telecommunications Act only insofar as they are required for competition in retail markets.

75. The Commission has from time to time in myriad venues discussed the importance of vigorous competition in the wholesale market to inform its forbearance decisions.[80] And yet, it unclear as to the statutory authority upon which the Commission relies for such guidance. The wholesale market is relevant only to the extent that facilities-based providers acting alone fail to provide for the requisite level of competitive discipline.

76. Should the Commission's interest in the wholesale market turn on a particular CLEC business model—regardless of the competition from facilities-based providers—it will have violated *Principle 3 supra*. That is to say, it will have violated the principle of both *platform-neutrality* and *competitor-neutrality*. The Commission should be agnostic as to the particular technological platforms that are used to deliver high-value products and services to consumers.

77. To the extent the Commission disavows these principles, it will have confused protecting competitors with protecting the integrity of the competitive process. Notably, this is precisely what occurred when the Commission presided over the

[79] Dennis L. Weisman, "The (In)Efficiency of the 'Efficient-Firm' Cost Standard." *The Antitrust Bulletin*, Vol. XLV(1), Spring 2000, pp. 197.
[80] See, for example, the *Qwest 4* MSA Order.

transition to competition in the long-distance market. To wit, it will have spent far too much time mechanically counting the number of competitors, and far too little time assessing whether consumers have meaningful choices at competitive prices for their telecommunications products and services.

Principle 10. Policymakers have recognized that (i) subscription to both wireless and wireline does not imply that the two services are complements, and (ii) wireless provides competitive discipline on wireline prices.

78. There is increasing recognition on the part of regulators and policymakers in the telecommunications industry that wireless provides competitive discipline on wireline pricing. This is evident from the fact that recent regulatory decisions throughout North America cite ubiquitous wireless competition as a factor in forbearance and deregulation of telecommunications services.

79. In Canada, ILECs may petition to be forborne from regulation in an exchange when there are two independent, facilities-based competitors to the incumbent provider, where at least one of them is a wireline provider other than the ILEC.[81] As of June 30, 2009, throughout Canada the CRTC has forborne from regulating in exchanges that account for 77 percent of residential lines and 68 percent of business lines, representing 75% of all local revenues.[82]

80. The California Commission recently determined that wireless is in the same product market as wireline communications. This determination was instrumental

[81] Telecom Decision CRTC 2006-15, *Forbearance from the regulation of retail local exchange* services, as varied by Order in Council, P.C. 2007-0532, April 4, 2007.
[82] Canadian Radio-television and Telecommunications Commission, Communications Monitoring Report 2009 (August 2009).

in the California Commission's decision to forbear from regulating local telephone service on a going-forward basis. The following passages are instructive.

> Verizon established that "wireless substitution accounts for *approximately half of ILEC primary residential wireline losses,* as wireless providers improve the reach of their networks and customers exhibit a growing willingness to *'cut the cord.'* " (footnote omitted) [83]
>
> We agree that the build out of wireless carriers' networks since this Commission's last major telecommunications regulatory review eighteen years ago has made wireless technologies a close substitute for landline services. This evidence is a significant factor in this decision.[84]

81. Finally, in a number of other states, including Iowa and Virginia,[85] wireless providers are recognized as full-fledged facilities-based entrants in telecommunications markets that serve to impose pricing discipline on wireline providers. Decisions in a number of other states concerning the competitive discipline imposed by wireless providers are pending at the time of this writing.

82. The latest survey results from National Health Interview Study confirm the validity of treating wireless and wireline as substitutes. As of the second half of 2008, 20.2% of American homes had only wireless telephones.[86] In addition, another 14.5% of homes received all or almost all calls on wireless phones despite having a

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[83] California Public Utilities Commission, Decision 06-08-030, August 30, 2006, p. 119. Available at http://www.cpuc.ca.gov/WORD_PDF/FINAL_DECISION/59388.PDF.

[84] Id., p. 120.

[85] Virginia Acts of Assembly — 2009 Reconvened Session, Chapter 788, *An Act to amend § 56-235.5 of the Code of Virginia, relating to telephone regulatory alternatives*, Approved April 8. 2009; State of Iowa, Department of Commerce Utilities Board, Docket No. INU-08-1, In Re: Possible Extension of Board Jurisdiction Over Single Line Flat-Rated Residential and Business Rates for Local Exchange Carriers, Final Order Issued June 27, 2008.

[86] Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates From the National Health Interview Survey (NHIS), July –December 2008," Division of Health Interview Statistics, National Center for Health Statistics, May 2009, p. 1. In addition, the authors report a 2.7 percentage point increase in the number of wireless-only households in the last half of 2008. This represents the largest 6-month increase observed since NHIS began collecting data on wireless-only households in 2003.

wireline telephone in the home.[87] Hence, almost 35% of American homes were "mostly wireless" during the period of the survey.[88]

83. In the *Verizon 6* and *Qwest 4* MSA Orders, the Commission treated wireless as a substitute for wireline only in the case of "cord cutting"—that is, when the consumer no longer subscribes to wireline service.[89] While it is proper for the Commission to consider wireless competition, the specific approach utilized understates the impact of wireless competition, and is problematic for three primary reasons, each of which is discussed in turn.

84. First, as discussed in connection with *Principle 6*, market definition is problematic when prices have been set by regulatory fiat rather than market forces. Hence, if the Commission observes an increase in wireline prices, it may be inclined to conclude that wireless does not exert sufficient competitive discipline on wireline prices and therefore wireless must not be in the same product market as wireline.

85. To further illustrate the nature of this problem, suppose that the price of wireline telephone service was pegged by regulators at a price of zero. In addition, suppose that virtually all consumers subscribe to both wireless and wireline telephone service. It would be erroneous to conclude that these two services are complements based solely on the fact that most consumers choose to subscribe to both services. Nor could the regulator credibly determine that wireless exerts insufficient competitive discipline on wireline if the price of wireline were to increase upon the

[87] Id. In contrast, one year earlier, 15.8% of households had "cut the cord" and an additional 13.1% received all or most of their calls on a wireless phone. Thus, the proportion of "wireless mostly" households increased from 28.9 % to 34.6% (or 16 percent) in a single year.
[88] In it initial filing in this proceeding, Qwest provided a Phoenix specific study performed by Market Strategies that shows 25% cord-cutting in Phoenix.
[89] See paragraphs 19 and 20 of the *Qwest 4 MSA* Order.

relaxation or removal of price regulation. This argument is valid whenever regulatory fiat has served to peg wireline prices below market levels.

86. Second, as discussed in connection with *Principle 7*, given the cost structure of wireline telephony, wireless may exert sufficient competitive discipline on wireline prices even when the two services are imperfect substitutes. This underscores the fact that not all consumers need to view wireless and wireline as close substitutes for wireless to exert sufficient competitive discipline on wireline prices. As discussed above, it is the "competition at the margin" that disciplines the firm's pricing behavior.

87. Finally, recent market research is suggestive of a relatively high degree of substitutability between wireline and wireless in the lower income strata of the U.S. population.[90] This may suggest that what may appear anecdotally to be a complementary demand relationship between wireless and wireline may, in fact, be attributable to an income effect rather than a price effect. That is to say, consumers that are less income-constrained may well subscribe to both wireline and wireless, not because they are complements but simply because they can afford to do so.[91] Moreover, if consumers must choose between wireless and wireline, they are increasingly likely to choose wireless.[92] This is further reflected in the fact that as of June 2008, there were 65% more wireless access lines than wireline access lines

[90] For example, among those surveyed that described their household income as "Poor, Near Poor and Not Poor," the percentage of wireless-only households is 30.9%, 23.8% and 16.0%, respectively. See Stephen J. Blumberg and Julian V. Luke, "Early Release of Estimates from the National Health Interview Survey, July – December 2008," Division of Health Interview Statistics, National Center for Health Statistics, May 2009, p. 8.
[91] In a similar vein, we would not conclude that the Toyota Camry and the Honda Accord are complements merely because some households own both models simultaneously.
[92] See notes 88 and 90 *supra*.

in the U.S.[93]

VI. SUMMARY AND CONCLUSION

88. This primary objective of this paper is to inform the Commission's deliberations on the proper scope of regulatory oversight in the rapidly evolving telecommunications marketplace. Given the technologically dynamic nature of the industry and the emergence of facilities-based platforms, the social costs of regulatory intervention, whether through mandatory unbundling policies, stringent price regulation or mandated network management practices, are far more pronounced today than they were just a few years ago.

89. The principles articulated in this paper along with the economic and public policy rationale underlying their development suggest two overarching policy recommendations. First, the Commission should reverse the traditional presumption regarding economic regulation in telecommunications markets; regulation should be the exception rather than the rule. Second, the Commission previously concluded that unbundling is among the most intrusive of all forms of regulation. This implies that the use of mandatory sharing should be exceptional in nature, a policy instrument of last resort to be used by the Commission only under conditions in which competition is not possible any other way.

[93] *Local Telephone Competition: Status as of June 30, 2008*; Industry Analysis and Technology Division, Wireline Competition Bureau, July 2009, Tables 7 & 14.

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Curriculum Vitae

Dr. Tardiff has more than 30 years of academic and consulting experience. He has participated in numerous legal and regulatory proceedings regarding telecommunications, economics, anti-trust, and regulation issues. His research consulting, and expert witness experience in telecommunications has addressed pricing and costing issues involving increasingly competitive services, such as wireless and traditional wireline services. This experience has also included extensive examination and economic evaluation of all facets of the costing methodologies used to establish prices in rate-regulated industries. His work has included the telecommunications, transportation, energy, and public utility industries, and he has published extensively in economics, telecommunications, and transportation journals. Dr. Tardiff holds a Ph.D. in Social Science from the University of California, Irvine and a B.S. in mathematics from the California Institute of Technology.

Professional experience

Dr. Tardiff is an economic consultant with clients in the telecommunications and regulated utilities industries. From 2006 to 2009, he was a Managing Director at Huron Consulting Group. Prior to joining Huron, Dr. Tardiff served as a vice president in the telecommunication practice at NERA Economic Consulting. During his career, he has served as the director of Marketing Research and senior member of the transportation practice at Charles River Associates, Inc. and assistant professor in the Department of Civil Engineering and Division of Environmental Studies at the University of California, Davis.

His research has addressed the demand, cost, and competitive aspects of converging technologies, including wireless and broadband. He has evaluated pricing policies for increasingly competitive telecommunications markets, including appropriate mechanisms for pricing access services to competitors and studied actual and potential competition for services provided by incumbent telephone operating companies. Most recently, he has analyzed the effects of convergence and growing intermodal competition on whether incumbent firms should be considered dominant in the provision of certain services and the regulatory and antitrust implication of such determinations.

Since the passage of the United States Telecommunications Act, he has participated in interconnection arbitrations, unbundled element proceedings, universal service investigation, applications by incumbent local exchange carriers for authorization to provide interLATA long-distance, and implementation of the Triennial Review Order rules for unbundling network elements in over 25 states and before the United States Federal Communications Commission. His international research and consulting experience includes studies and expert reports on telecommunication competition issues in Canada, Japan, New Zealand, Peru, Australia, and Trinidad and Tobago, where he was an economic expert in an interconnection arbitration between two wireless carriers.

Dr. Tardiff has also participated in class action litigation in regulated (or partially regulated) industries. This experience includes analysis of the communality of proposed class members in an antitrust claim that a regional telephone operator failed to implement the provision of the 1996 Telecommunications Act as well as evaluation of the damage claims of plaintiffs in securities actions involving providers of telecommunications network services.

He has recently provided expert reports and testimonies on the reasonableness from an economic perspective of increases in the rates international carriers at Los Angeles International Airport pay for use of terminal space.

Testimony experience

- Deposition Testimony, Florida Power Corporation d/b/a Progress Energy Florida, Inc., Plaintiff v. Verizon Florida LLC, Defendant, Case No: 08-013358, Circuit Court in and for Hillsborough County, Florida Civil Division, August 27, 2009.
- Expert Rebuttal Report, Florida Power Corporation d/b/a Progress Energy Florida, Inc., Plaintiff v. Verizon Florida LLC, Defendant, Case No: 08-013358, Circuit Court in and for Hillsborough County, Florida Civil Division, August 4, 2009 (with Matthew G. Medlin).
- Expert Report, Florida Power Corporation d/b/a Progress Energy Florida, Inc., Plaintiff v. Verizon Florida LLC, Defendant, Case No: 08-013358, Circuit Court in and for Hillsborough County, Florida Civil Division, July 21, 2009.
- Declaration of Timothy J. Tardiff on the economics of whether traffic stimulation arrangements violate the prohibition in Section 254(k) of the 1996 Telecommunications Act against noncompetitive services subsidizing competitive services, *ex parte* filing with the Federal Communications Commission on behalf of Qwest Communications International, WC Docket No. 07-135, January 6, 2009.
- Direct Testimony on pole attachment rates prepared for filing on with the West Virginia Public Service Commission on behalf of Verizon, West Virginia, Inc., Case No. 07-1279-E-C (panel testimony), June 4, 2008.
- Counterstatement of Timothy Tardiff and Harold Ware on deregulation of single line retail telephone services, prepared for filing with the Iowa Utilities Board on behalf Iowa Telecom, Docket No. INU-08-1, April 28, 2008.
- Statement of Timothy Tardiff and Harold Ware on deregulation of single line retail telephone services, prepared for filing with the Iowa Utilities Board on behalf Iowa Telecom, Docket No. INU-08-1, March 17, 2008.
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Education

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Professional associations

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- First Place, Dissertation Contest of the Transportation Science Section of the Operations Research Society of America.
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PROFESSIONAL EXPERIENCE:

1993 - Present Kansas State University:

Professor of Economics (2000 – Present)
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1989 - 1993 SBC Communications Inc. (now AT&T):

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1982 - 1989 Southwestern Bell Telephone Company – Demand Analysis:

District Manager
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OTHER POSITIONS HELD:

2008 – Present Board of Academic Advisors, The Free State Foundation.

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OTHER POSITIONS HELD (CONTINUED):

2005 – Present	Regulatory Framework Working Group, Digital Age Communications Act (DACA) Project, Progress and Freedom Foundation.
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2003 – Present	Advisory Board, The Institute for Regulatory Law and Economics.
2003 – Present	Executive Committee, Global Communications Strategy Forum.
2002 – 2003	Guest Editor, Symposium on Incentive Regulation, *The Review of Network Economics*, Vol. 2(4), December 2003.
2000 - 2003	Dean's Advisory Council On Tenure and Promotion in Arts and Sciences.
1998 - 2005	Associated Faculty Member, Center For Research In Regulated Industries, Rutgers University.
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"Access Charges For Private Networks Interconnecting With Public Systems," In Private Networks Public Objectives, ed. by Eli Noam and Áine NíShúilleabháin, Amsterdam: Elsevier Science Publishers, 1996, pp. 209-227, (with D. Lehman).

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"The Impact of Telecommunications Regulation On The Economics of Private Network Deployment," Proceedings of the National Communications Forum, Vol. 42(1), 1988, pp. 558-571.

BOOK REVIEWS:

Review of Blackmon's Incentive Regulation and the Regulation of Incentives, *Review of Industrial Organization*, Vol. 11, No. 4, August 1996, pp. 563-566.

OTHER PUBLICATIONS:

"Guest Editor's Foreword." Symposium Commemorating the Contributions of Alfred E. Kahn. *The Review of Network Economics*, Vol. 7(4), December 2008, pp. 448-459 (with T. Tardiff).

"On Market Power and the Power of Markets: A Schumpeterian View of Dynamic Industries." The Free State Foundation, *Perspectives from FSF Scholars*, February 26, 2008, Vol. 3(5). http://www.freestatefoundation.org/images/Power_of_Markets.pdf.

"Guest Editor's Foreword." Symposium on Incentive Regulation. *The Review of Network Economics*, Vol. 2(4), December 2003, pp. 287-288.

WORK IN PROGRESS:

"Subsidy-Free Prices and Scope Economies."

"Why Retaining Racial Preferences in College Admissions May Yield a More-Able Student Body." (with D. Li).

"Good-Kid, Bad-Kid Equilibria with Parental Concave Utility."

WORK IN PROGRESS (CONTINUED):

"Predatory Inference in Markets with Demand Complementarities."

"Productivity Growth and Merger Efficiencies in the U.S. Telecommunications Industry." (with Y. Gao, D. Seo and A. Featherstone).

"Effective Market Shares and Antitrust."

"An Essay On The Art and Science of Teaching."

"Market Power and the Power of Markets for U.S. Broadband Services." (with T. Hazlett)

"Microeconomics for Business and Public Policy."

TESTIMONY AND AFFIDAVITS:

Arkansas Public Service Commission

California Public Utilities Commission

Canadian Radio-Television and Telecommunications Commission

Colorado Public Utilities Commission

Federal Communications Commission

Kansas Corporation Commission

Kansas State Legislature (Commerce Committee)

Missouri Public Service Commission

Texas Public Utilities Commission

United States Court of Appeals for the District of Columbia

United States Supreme Court (Research Citation)

INVITED PRESENTATIONS:

"Properly Structured Incentive Plans." Missouri Public Service Commission, Electric Roundtable Discussion Group. Jefferson City, Missouri, December 2001.

"Regulatory Moral Hazard: Price Caps and Endogenous Entry Under the 1996 Telecommunications Act." Competitive Entry In Regulated Industries. Center For Research In Regulated Industries, Rutgers University, Newark, New Jersey, May 2000.

"The Telecommunications Act of 1996: The 'Costs' of Managed Competition." American Enterprise Institute, Washington D.C., September 1999 (with D. Lehman).

"Vertical Integration and Exclusionary Behavior in Network Industries." The Rutgers University 12th Annual Western Conference of the Advanced Workshop In Regulation and Competition, San Diego, California, July 1999.

"The Political Economy of Price Cap Regulation." The Rutgers University 11th Annual Western Conference of the Advanced Workshop In Regulation and Competition, Monterey, California, July 1998.

"Regulation and Common Costs: Estimation versus Allocation – A Discussion." Pricing and Costing A Competitive Local Telecommunications Network. American Enterprise Institute, Washington D.C., November 1997.

"Does Tighter Price Cap Regulation Increase Consumer Welfare?" The Rutgers University 10th Annual Western Conference of the Advanced Workshop In Regulation and Public Utility Economics, San Diego, California, July 1997.

"Competition, Incentive Regulation, and Strategic Behavior Under The 1996 Telecommunications Act." Utility Regulation And Strategy: The Basics Revisited. Conference sponsored by the Public Utility Research Center at the University of Florida, Gainesville, Florida, February 1997.

"Competitive Incentives of Vertically Integrated Local Exchange Carriers." Twenty-Third Annual Telecommunications Policy Research Conference. Solomons, Maryland, October 1995; and The Rutgers University 9th Annual Western Conference of the Advanced Workshop In Regulation and Public Utility Economics, San Diego, California, July 1996.

"Seven Myths About Incentive Regulation." Pricing and Regulatory Innovations Under Increasing Competition. Conference sponsored by the Center for Research in Regulated Industries, Rutgers University, Newark, New Jersey, October 1995.

INVITED PRESENTATIONS (CONTINUED):

"Strategic Behavior of the Vertically Integrated Firm: The Case of RBOC Entry Into InterLATA Long Distance." The Rutgers University 8th Annual Western Conference of the Advanced Workshop In Regulation and Public Utility Economics, San Diego, California, July 1995.

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"Designing Incentive Regulation For The Telecommunications Industry." American Enterprise Institute, Washington D.C., March 1995 (with D. Sappington).

British Broadcasting Corporation (BBC) Radio Interview with Dan Corry of the Institute For Public Policy Research, London, England. Documentary. "Analysis: The Regulatory State?" October 23, 1994.

"Designing Carrier of Last Resort Obligations." The Rutgers University 7th Annual Western Conference of the Advanced Workshop in Regulation and Public Utility Economics, San Diego, California, July 1994.

"Incentive Regulation: Lessons From Telecommunications." Innovative Incentive Rate Regulation for a Competitive Electric Utility Industry. Conference co-sponsored by the Center for Regulatory Studies and the Institute of Government and Public Affairs. Chicago, Illinois, April 1994.

"Why Less May Be More Under Price Cap Regulation." Twenty-First Annual Telecommunications Policy Research Conference. Solomons, Maryland, October 1993; and The Rutgers University 12th Annual Eastern Conference of the Advanced Workshop in Regulation and Public Utility Economics, Brewster, Cape Cod, Massachusetts, May 1993.

"Managed Competition In Telecommunications." Regulation and Planning In A Market Economy. Conference sponsored by the Public Utility Research Center, University of Florida. Gainesville, Florida, April 1993.

INVITED PRESENTATIONS (CONTINUED):

"Cross-Subsidization and Price Predation in Public Enterprise;" and "Incentive Regulation: Theory and Practice." Southeastern Regional Business and Economics Utilities Conference, Atlanta, Georgia, September 1991.

"Post-Divestiture Pricing Trends In The Telecommunications Industry." Divestiture: Five Years Later. Conference sponsored by the Center for Telecommunications and Information Studies at Columbia University, Washington, D.C., March 1989.

"The Impact of Telecommunications Regulation On The Economic Incentives of Private Network Deployment." National Communications Forum, Chicago, Illinois, October 1988.

"Protecting The Right To Be Served By Regulated Utilities Subject To Competition: A Critical Assessment." 11th World Engineering Congress, Atlanta, Georgia, October 1988.

"Default Capacity Tariffs: Smoothing The Transitional Regulatory Asymmetries In The Telecommunications Marketplace." Fifteenth Annual Telecommunications Policy Research Conference, Airlie, Virginia, November 1987.

"Traffic Sensitive Costs, Bypass and Pricing For Carrier of Last Resort." Bell Communications Research Conference on Traffic Sensitive Cost Recovery. Seattle, Washington, July 1986.

"Forecasting Bypass Adoption In Telecommunications." National Forecasting Conference, Denver, Colorado, June 1985.

"A General Theory of Point-to-Point Long Distance Demand." Bell Communications Research Business Research Conference, Durango, Colorado, October 1984.

HONORS, AWARDS, AND GRANTS:

2008	MBA Student's Professor of the Semester (First Time Award Presented to a Faculty Member Outside the College of Business Administration)
2004 – 2005	Center for Applied Economics Grant (Principal Investigator)
2004	Edgar S. Bagley Research Award
2001	Edgar S. Bagley Research Award

HONORS, AWARDS, AND GRANTS (CONTINUED):

1999 – 2000	American Enterprise Institute Grant (Co-Principal Investigator)
1996	William L. Stamey Teaching Award
1995	Edgar S. Bagley Research Award
1993	First-Place In Graduate Student Paper Competition, Twenty-First Annual Telecommunications Policy Research Conference
1990 – 1993	Florida Public Service Commission Grant to the Public Utility Research Center at the University of Florida (Co-Principal Investigator)
1984 – 1993	Designated Very High Potential Manager, SBC Communications
1991	First-Place In Paper Competition sponsored by Public Utilities Reports, Inc., Southeastern Business and Economics Utilities Conference (with S. Berg)
1991	University of Florida Research Fellowship
1989	Management Stock Award, Southwestern Bell Corporation
1979	B.A. Conferred with High Honors
1971	Eagle Scout Award

EDITORIAL BOARDS:

2003 – Present	The Review of Network Economics
1997 – Present	Journal of Regulatory Economics
1996 – Present	Information Economics and Policy

REFEREE/REVIEWER FOR:

Addison-Wesley
American Economic Review
Applied Stochastic Models in Business and Industry
Cambridge University Press
Contemporary Economic Policy
Eastern Economic Journal
Economic Inquiry
Economics Letters
Edward Elgar Publishing
Empirical Economics
Encyclopedia of Energy Engineering and Technology
Energy Studies Review
Information Economics and Policy
International Economics and Economic Policy
International Journal of Industrial Organization
International Tax and Public Finance
Journal of Competition Law & Economics
Journal of Economic Behavior and Organization
Journal of Economic Education
Journal of Economics
Journal of Economics and Business
Journal of Industrial Economics
Journal of Public Economics
Journal of Industry, Competition and Trade
Journal of Productivity Analysis
Journal of Regulatory Economics
Kluwer Academic Publishers
McGraw-Hill
MIT Press
Oxford Economic Papers
Review of Industrial Organization
Southern Economic Journal
Springer Science + Business Media LLC
Telecommunications Policy
Telecommunications Systems
The Antitrust Bulletin
The Energy Journal
The Journal of Law, Economics, & Organization
The Review of Economics and Statistics
The Review of Network Economics
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CERTIFICATE OF SERVICE

I, Richard Grozier, do hereby certify that I have caused the foregoing **REPLY COMMENTS OF QWEST CORPORATION** to be: 1) filed with the FCC via its Electronic Comment Filing System in WC Docket Nos. 06-172 and 07-97; 2) served via e-mail on the Competition Policy Division, Wireline Competition Bureau, Federal Communications Commission at CPDcopies@fcc.gov; 3) served via e-mail on the FCC's duplicating contractor Best Copy and Printing, Inc. at fcc@bcpiweb.com; and 4) served via First Class United States mail, postage prepaid, on the parties listed on the attached service list.

/s/Richard Grozier

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