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**Before the  
Federal Communications Commission  
Washington, DC 20554**

In the Matter of )  
)  
Implementation of Section 6002(b) of the ) WT Docket No. 09-66  
Omnibus Budget Reconciliation Act of 1993 )  
)  
Annual Report and Analysis of Competitive )  
Market Conditions With Respect to Mobile )  
Wireless Including Commercial Mobile )  
Services )

To: The Commission

**COMMENTS OF VERIZON WIRELESS**

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## SUMMARY

As the Commission embarks upon a new assessment of the mobile wireless services market, it has expressed a welcome preference for facts and data over rhetoric. The lodestar of its analysis must be the American consumer – and the facts and data show that the wireless ecosystem is delivering unprecedented benefits and choices to American consumers at an ever-accelerating pace. Wireless competition has accelerated during the past few years, fueled by massive innovation and investment in networks, devices, and applications which have not slowed despite the most adverse economic climate in decades. Most recently, remarkable technological innovations have come to market as carriers have gained additional scale and scope. As these comments verify, the oft-repeated, yet unsupported, claim that wireless competition is somehow “dwindling” fails to comport with the consumer experience.

As discussed in Part I of these comments, the American people enjoy a multidimensional array of competing choices regarding providers, prices, service plans, devices, coverage, reliability, customer service, applications, and content. These choices are getting better, and less expensive, as carriers compete ferociously to win and retain customers.

Part II explains why, in considering whether the mobile wireless market is “effectively competitive,” the Commission should retain the “structure-conduct-performance” framework used in prior CMRS *Competition Reports*. This highly rigorous approach is fully grounded in well-accepted principles of economic analysis, and it best enables the Commission to consider all aspects of the marketplace. New developments in the mobile wireless space may warrant the consideration of data not previously addressed, but that data can and should be evaluated within the contours of the existing framework. The Commission should reject claims urging reliance on simplistic litmus tests based on market concentration, pricing above marginal cost, or accounting

profits, as well as efforts to disaggregate the mobile wireless market by analyzing voice and data services separately.

Part III of these comments demonstrates the vibrant competition across the wireless ecosystem. Application of the “structure-conduct-performance” framework reveals that the market is shaped by many players occupying different market niches, vying to win and retain customers by reducing prices, innovating, and improving quality of service and the consumer experience. The market is defined by a wealth of diverse providers, including the four “nationwide” providers (plus the emerging Clearwire) and a combination of large regional players, a host of smaller terrestrial carriers, a growing set of emerging providers (including satellite operators and major cable companies), resellers/Mobile Virtual Network Operators (“MVNOs”), mobile voice over Internet protocol (“VoIP”) providers, and even intermodal competitors offering attractive “fixed” services. The vast majority of Americans can choose among three, four, or more mobile providers, and are on the cusp of even more choices.

The market’s competitiveness is also evidenced by the ability of new providers to enter. Recent expansion in the availability of licensed spectrum is increasing competition. The AWS and 700 MHz auctions resulted in substantial new spectrum holdings by emerging and incumbent service providers beyond the four nationwide carriers. Likewise, the significant secondary market for spectrum has facilitated competitive entry and expansion, providing opportunities for large and small providers alike and ensuring that spectrum is put to its most efficient use. The Commission’s roaming policies, too, have promoted network deployment and innovation while facilitating commercial agreements that expand the geographic reach of nascent providers. As new players enter the market, customers are freer than ever to migrate between providers. Consumers enjoy a huge range of easily accessed information regarding the breadth of choices among mobile wireless plans and service providers. The availability and increasing

ease of intra- and intermodal number portability also facilitates customer migration between and among providers.

The mobile wireless market in 2009 also reveals extensive and aggressive competition. As providers compete fiercely on price, rates have dropped dramatically. In the fast-growing prepaid segment, prices have fallen more than 50% since last year. Postpaid providers have also lowered prices, and analysts predict still further price-cutting over the coming months. Pricing for wireless data plans has also dropped, with the price per megabyte falling drastically while speeds rise. And, contrary to critics' assertions, prices for text and media messaging are also falling: The average price per message traveling on Verizon Wireless's network is just *one cent*. Finally, the bundling of service offerings has reduced prices still further, permitting consumers to capitalize on providers' economies of scope and scale.

While price certainly is a major factor, customers also select a carrier based on a combination of other factors, such as its coverage, network quality, device offerings, customer service, unique content, or available applications. Thus, competition has driven substantial efforts to improve the customer experience along all of these vectors. For example, to compete based on network coverage and service quality, mobile wireless providers have made an average combined investment of more than \$22.8 billion *per year* since 2001 to upgrade their networks. In 2009, despite the recession, carriers have continued to invest billions in building out and upgrading their networks, including Verizon Wireless's industry-leading investment in deploying a new network based on 4G Long Term Evolution ("LTE") technology.

Carriers also compete to offer their customers the best selection of devices, content and applications, as well as the very best in customer care. The mobile wireless market is producing high levels of consumer satisfaction as well. Indeed, the U.S. wireless industry leads the world in overall customer satisfaction. The American Customer Satisfaction Index, *Consumer Reports*,

and the Government Accountability Office (“GAO”) have reported that the wireless industry enjoys high consumer satisfaction. For example, according to a recent survey conducted by the GAO, approximately “84 percent of adult wireless phone users are very or somewhat satisfied with their wireless phone service.” Further, wireless complaints registered by the FCC are miniscule in relation to the total number of wireless subscribers.

Part IV of these comments demonstrates that the input and edge market segments are also extremely competitive. For example, the market segment for backhaul is competitive and growing. Backhaul services are available from multiple providers, and this competition has resulted in declining prices. There is also healthy competition in the infrastructure market. Ownership of tower sites is scattered among numerous companies, none of whom has more than a fraction of sites. On the spectrum front, the AWS-1 and 700 MHz auctions, as well as the BRS/EBS modernization, are bringing hundreds of megahertz of spectrum into the mobile wireless market, along with new providers. Moreover, U.S. providers continue to drive significant efficiencies in spectrum use. The market for wireless devices (including handsets, smartphones, netbooks, and modem/aircards) is vibrantly competitive. American consumers have access to hundreds of different wireless handsets and devices, produced by dozens of manufacturers, none of which is a wireless carrier, and none of which has sufficient market power in its respective market to control the wholesale or retail distribution chain or prevent a handset manufacturer from working with its wireless carrier competitors. Moreover, the plethora of wireless application and content choices for consumers in 2009 alone confirms that robust competition exists. Today there are thousands upon thousands of applications available to wireless consumers from dozens of app stores and directly from the Internet. This number increases every day, and is expected to rise into the millions soon. Likewise, carriers compete to create or acquire popular content that will drive consumer choice, as the mobile device

increasingly serves as a significant source for video programming and Internet content for many Americans.

Part V explains why, particularly in light of the facts and data provided herein, the Commission should reject calls for new wireless regulation. Congress has mandated a market-based approach to wireless services and the Internet. The Commission has adhered to this Congressional mandate through both Democratic and Republican administrations, has recognized the risks of over-regulation, and has consistently found that a market-based regulatory approach promotes competition and innovation. New regulation, in contrast, would risk stifling that competition and innovation. Given the market-oriented nature of the Commission's historic approach to wireless, new regulation would also face high legal hurdles, as the Administrative Procedure Act requires an agency to justify departures from its previous policies. Given that competition has accelerated under the oversight of the Commission's market-based policies, there would be no justification for changing course.

As discussed in Part VI of these comments, the Commission can nevertheless take a number of steps to support competition and continued wireless innovation. Specifically, Verizon Wireless urges the Commission to work to identify spectrum suitable for wireless broadband services; work with Congress to enact a national framework for wireless consumers; help to streamline tower siting; support Congressional efforts to eliminate unnecessary taxes and fees; address remaining questions affecting the use of the 700 MHz spectrum; and commit to expediting the review process for applications.

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To: The Commission

**COMMENTS OF VERIZON WIRELESS**

**INTRODUCTION**

Verizon Wireless hereby submits these comments in response to the Notice of Inquiry in the above-captioned proceeding.<sup>1</sup> The Commission has expressed a welcome preference for facts and data over rhetoric. The facts and data discussed in these comments destroy the oft-repeated yet unsupported rhetorical charge that competition is somehow “dwindling” in the wireless industry. Instead, the wireless communications sector has only become more competitive and more innovative over the past decade. Moreover, the nature of wireless competition – and the pace of that competition – has accelerated during the past five years due to incredible technological innovation and the Commission’s approval of a series of consolidations that strengthened the industry’s competitive dynamic. No facts or data support the view that the Commission erred in blessing these transactions; the evidence overwhelmingly shows consumers

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<sup>1</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless including Commercial Mobile Services, *Notice of Inquiry*, FCC 09-67 (rel. Aug. 27, 2009) (“*NOP*”).

would be worse off if the clock were turned back to the days when their needs were served by a small patchwork of regional carriers offering higher-priced and less innovative service.

As the Commission embarks on a new assessment of the mobile wireless services market, the lodestar of its analysis must continue to be the consumer. The 13 previous *Competition Reports* – released over the tenures of four FCC Chairmen – show that Congress’s and the Commission’s wireless policies, focused on open market structures and limited regulation, have allowed the wireless ecosystem to deliver unprecedented competition and benefits to American consumers at an ever-accelerating pace. Every day, along every value vector, the American people – more than wireless customers anywhere else in the world – enjoy a multidimensional and ever-increasing array of choices regarding prices, service plans, devices, coverage, reliability, customer service, applications, and content. Those choices, moreover, are getting better and better, not to mention less and less expensive, as carriers compete ferociously along every dimension cited above to win and retain customers.

This highly dynamic, constantly evolving, consumer-focused marketplace is best evaluated through the flexible “structure-conduct-performance” assessment tool currently in place. This analytical framework is well grounded in Commission precedent and sound economics. Of course, the dynamism of the market requires that the FCC look at a variety of constantly evolving market conditions in assessing each of these components, but the key elements upon which the Commission has relied to obtain an accurate portrayal of the state of competition should remain the core of the Commission’s analytical framework.

The facts and data, viewed in light of that framework, tell a compelling story – that of a robust, dynamic, and rapidly evolving wireless marketplace with providers vying to win and retain customers every day by best serving consumers’ needs. That data-driven story should

form the basis of the Commission's approach to this proceeding and its future approach to the mobile wireless market.

## **DISCUSSION**

### **I. THE MOBILE WIRELESS MARKET: DYNAMISM, DIVERSITY, AND DIFFERENTIATION**

For those who prefer facts over rhetoric, these are truly the “best of times” for wireless consumers. This market – robustly competitive – is a story of dynamism, diversity, and differentiation. Driven by rapidly advancing technology in devices, applications, and networks, as well as fast-changing consumer needs and wants, a vast array of providers have worked at an ever-increasing pace to bring better and better mobile wireless services to the American public. These entities include not only network service providers of all shapes and sizes, but also such central players as handset manufacturers, applications programmers, tower companies, and content providers, among others. Prices have dropped at an astonishing rate, and the pace of those reductions has only accelerated in recent years. First-generation networks have given way to second-, third-, and now fourth-generation offerings, with the time interval decreasing between each change. The large and cumbersome single-use mobile phones of yesteryear are a faint memory, as consumers use increasingly sophisticated smartphone devices and netbook computers with ever-increasing battery lives and capabilities that would have seemed unthinkable just several years ago. Gone too are the days of one-size-fits-all telephone service; today's users can download the applications and content they value, whether from applications and content stores offered by a service provider or directly from the Internet.

The wireless story is a story of providers responding to broadly diverse demands. The communications needs of an 80-year old grandmother satisfied with over-the-air broadcast television and an analog voice telephone are vastly different from those of her 20-year-old

grandson relying on his mobile device for music, messaging, video, gaming, web browsing, and, of course, voice communication. And these users' preferences may be vastly different from those of their other relatives, not to mention those held by others with wildly different backgrounds and needs – those from different ethnic groups, those with disabilities, those in different economic strata, and those more or less comfortable with new technologies. Today's wireless consumers have more choices than ever. At all price points, multiple providers offer combinations of services, devices, speeds, and access to applications to ensure that consumers can acquire the right value proposition for their needs.

But some struggle to tell a very different story. Their “worst of times” narrative is a story of “consolidation” and “concentration,” of customer choice foreclosed and innovation forestalled. Their filings to the Commission highlight transactions in recent years in which wireless providers merged to create new operating efficiencies – efficiencies that the Commission relied upon in finding that the transactions in fact promoted the public interest. To the critics, these efficiencies matter little, if at all. In their telling, “consolidation” is the *sine qua non* – the beginning *and* the end – of the competition analysis. In other words, they presume that because these transactions have occurred, the consumer experience *must* be lacking and can be improved if only there were more providers.

This second story is deeply misguided, and belied by the overwhelming data to the contrary set forth below. Contrary to the claims of critics, the constantly changing, highly dynamic wireless industry has indisputably and substantially *promoted* competition, innovation, and customer welfare. First, in virtually all parts of the country, consumers can choose among three, four, five, or more wireless providers. The competitive landscape include the four “nationwide” providers (plus the emerging Clearwire) and a combination of large regional players (whose footprints are large and often growing), a host of smaller terrestrial carriers, a

growing set of nascent providers (including Open Range, satellite operators, and major cable companies), resellers/Mobile Virtual Network Operators (“MVNOs”) and related new entrants such as Skype and Google Voice, and even intermodal competitors offering attractive “fixed” services.

Recent years have also seen a dizzying and ever-increasing proliferation of service plans and options. Consumers can choose between voice and data services or select both. They can select unlimited prepaid and postpaid plans, or “buckets” consisting of a wide range of voice minutes, as well as multiple data tiers, at lower-than-ever prices. Increasingly, wireless consumers rely on mobile service for text and multi-media messaging, electronic mail, broadband Internet access, and streaming media content. In all these cases, users can choose among providers on the basis of price, coverage, call quality, and other factors.

Just as the diversity of *plans* has skyrocketed, so too has the diversity of *devices* offered by more than 30 separate manufacturers. Over 630 devices are now available in the United States, coming in varying shapes, sizes, colors, and sleekness, with capabilities from the most basic to the state-of-the-art. Long gone are the days of the bulky and brick-like “cell phones”; today’s handsets come equipped with as much as *hundreds of times* as much computing power as the Apollo 11 Moon Lander, and they put that power to good use.<sup>2</sup>

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<sup>2</sup> For example, the BlackBerry Curve family, widely available from many carriers, uses processors ranging in speed from 225 MHz to 512 MHz. See Lisa Gade, BlackBerry Curve 8320 for T-Mobile, MOBILE TECH REVIEW, Oct. 3, 2007 (noting that the BlackBerry Curve models 8320 and 8300 use a 312 MHz processor), <http://www.mobiletechreview.com/phones/BlackBerry-Curve-8320.htm>; Tong Zhang, BlackBerry 8330 Curve for Sprint and Verizon, MOBILE TECH REVIEW, May 27, 2008 (noting that the BlackBerry 8330 Curve has a 225 MHz processor), <http://www.mobiletechreview.com/phones/BlackBerry-Curve-8330.htm>; Lisa Gade, BlackBerry Curve 8900, MOBILE TECH REVIEW, Feb. 6, 2009 (noting that the BlackBerry Curve 8900 has a 512 MHz processor), <http://www.mobiletechreview.com/phones/BlackBerry-Curve-8900.htm>. In contrast, the Apollo Guidance Computer had a 1.024 MHz processor, approximately 225 times slower than the slowest BlackBerry Curve model. Grant Robertson, How powerful was the Apollo 11 computer?, <http://www.downloadsquad.com/2009/07/20/how-powerful-was-the-> (continued on next page)

Using these devices, wireless consumers can access a staggering range of applications and content. In just the past two years, an abundance of different mobile applications have become available through multiple “app stores,” and the rate at which new apps are brought to market is accelerating dramatically, with several new stores and thousands of apps expected to launch this year alone. And, of course, customers can also reach beyond app stores to procure content and applications not affiliated with any provider directly from the source, over open Internet platforms such as that offered by Verizon Wireless.

Finally, the data show that consumer satisfaction with the combinations of services, devices, speeds, and applications is *growing*, not declining. Indeed, *Consumer Reports* noted a “surge” in consumer satisfaction in its most recent annual survey, finding that 60% of Americans are “completely or very satisfied with their service.” Likewise, the Government Accountability Office (“GAO”) recently found that an overwhelming 84% of adult American wireless consumers are “very or somewhat satisfied” with their wireless service. Significantly, this upswing in consumer satisfaction has occurred after recent wireless industry mergers, which critics have suggested harm the consumer experience.

The ultimate question in this proceeding, then, is which of the two stories reflects the reality of the mobile wireless market. Is the market, as a whole, producing offerings that meet the needs of grandmother and grandson alike? Of the young, single professional and the large family? Of the high-bandwidth gamer and the low-bandwidth web surfer? Are these offerings being made available at prices reflecting competition among market rivals? Are providers responding to competitive pressure by constantly innovating and improving their services? And

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[apollo-11-computer/](#) (last visited Sept. 28, 2009) (describing the Apollo Guidance Computer as having a 1.024 MHz processor).

are the efficiencies generated by the market's evolution serving to promote such innovation and price-cutting? All these questions are answered – resoundingly – in the affirmative. Customers have enormously different needs, and the market has met those needs, at an ever-accelerating pace, maximizing benefits to the consumer and the public interest. In assessing the competitiveness of the mobile wireless market, these facts are more important than any others.

## **II. THE COMMISSION SHOULD MAINTAIN ITS EXISTING FRAMEWORK FOR EVALUATING COMPETITION**

The task before the Commission is to determine “whether or not there is effective competition” in the mobile wireless market.<sup>3</sup> Former FCC Chief Economist Michael Katz has explained that “[e]ffective competition’ is not equivalent to ‘perfect competition,’ and it would not promote consumer welfare for the Commission to regulate a market simply because it was not perfectly competitive.”<sup>4</sup> As detailed at length in these comments, the mobile wireless services market and its adjacent markets are, by any measure, “effectively competitive.”<sup>5</sup> This essential fact is highlighted by the application of the highly rigorous “structure-conduct-

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<sup>3</sup> 47 U.S.C. § 332(c)(1)(C); *see also NOI* ¶ 1 n.1 (quoting statute).

<sup>4</sup> MICHAEL L. KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 5 (July 13, 2009), attached as Exhibit A to Reply Comments of AT&T, WT Docket No. 09-66 (filed July 13, 2009); *see also id.* (“Although markets are rarely perfectly competitive, they often are sufficiently competitive to render unnecessary extensive government intervention. Moreover, even in imperfectly competitive markets, governmental intervention may engender more consumer harm than consumer benefit. This is so because regulation imposes administrative costs on public and private entities and inevitably has unintended adverse consequences.”).

<sup>5</sup> The *Fourteenth Competition Report Public Notice* sought comment on whether the Commission should further define the term “effective competition.” *See* Wireless Competition Bureau Seeks Comments on Commercial Radio Services Market Competition, *Public Notice*, 24 FCC Rcd 5618, 5619-21 (2009) (“*Fourteenth Competition Report PN*”). As Verizon Wireless and others explained in comments responding to that PN, there is no reason to do so. *See, e.g.*, Comments of Verizon Wireless, WT Docket No. 09-66, i (filed June 15, 2009); Comments of AT&T, WT Docket No. 09-66, 5-6 (filed June 15, 2009). As described at length herein, there are many providers in the mobile wireless market, and more on the way. Prices are declining quickly while innovation and investment grow. Customers enjoy access to a huge and growing range of devices, applications, and content. Consumer satisfaction is higher than ever. Under these circumstances, the Commission need not expend resources resolving academic disputes over what constitutes “effective competition,” *see Fourteenth Competition Report PN*, 24 FCC Rcd at 5619-21 (discussing differing approaches), because the mobile wireless market is effectively competitive by any permissible definition of that term.

performance” framework used to evaluate the market in prior *Competition Reports*. That framework is fully grounded in well-accepted principles of economic analysis, and will best enable the Commission to evaluate the dynamic wireless market in all of its ever-changing particulars. New developments in the mobile wireless space may warrant the consideration of data not previously addressed, but those data can and should be evaluated within the contours of the existing framework.<sup>6</sup>

Since the *Ninth Report*, issued in 2004,<sup>7</sup> “the Commission has reviewed competitive market conditions using a framework that groups indicators into four categories: (1) market structure; (2) provider conduct; (3) consumer behavior; and (4) market performance.”<sup>8</sup> On adopting this approach (often referred to as the “structure-conduct-performance” framework), the Commission explained that it would “enhance [its] analysis” and “provid[e] a systematic approach to addressing” factors it was obliged to consider.<sup>9</sup> The factors considered by the current approach “are well-accepted among economists as highly pertinent to an assessment of competition.”<sup>10</sup> As Katz has previously emphasized, “sound economics mandates an analytical approach that is consistent with the Commission’s current methodology — an examination of whether competition among service providers has succeeded in advancing consumer welfare

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<sup>6</sup> No basis exists to discard this framework in favor of other approaches that may drive a pre-determined policy outcome but do not fairly, accurately, and objectively portray the state of competition in the wireless market.

<sup>7</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless Including Commercial Mobile Services, *Ninth Report*, 19 FCC Rcd 20597 (2004) (“*Ninth Report*”).

<sup>8</sup> *NOI* ¶ 8.

<sup>9</sup> *Ninth Report*, 19 FCC Rcd at 20602-03 ¶ 8.

<sup>10</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 29.

through the expansion of service offerings, the development and promotion of innovative technologies, and lower prices.”<sup>11</sup>

**A. The Current Analytical Framework Most Accurately Portrays the State of Competition**

*Market Structure.* It is beyond question that the first prong of the current analytic framework – market structure – is a key element that must be included in any evaluation of competition in the mobile wireless market.<sup>12</sup> Most critically, “[a] complete competitive analysis must look beyond market share data and measures of concentration to examine additional structural characteristics (e.g., the conditions of entry).”<sup>13</sup> As Areeda and Hovenkamp observe, even a high market share will not necessarily denote market power.<sup>14</sup>

Furthermore, this analysis must account not only for existing competitors, but also for potential competitors – entities that do not currently serve a market but could take on new customers and customers wishing to terminate service with their existing providers.<sup>15</sup> Such competitors may be traditional mobile wireless providers, new entrants, or intermodal competitors offering functionally similar services that appeal to particular customers’ needs. All

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<sup>11</sup> *Id.* ¶ 23.

<sup>12</sup> *See e.g.*, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless including Commercial Mobile Services, *Report and Order*, 24 FCC Rcd 6185, 6197 ¶ 5 (2009) (“*Thirteenth Report*”); *see also* 47 U.S.C. § 332(c)(1).

<sup>13</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 28.

<sup>14</sup> *See, e.g.*, PHILLIP E. AREEDA AND HERBERT HOVENKAMP, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION § 506d (2007) (“Substantial market power can persist only when there are significant and continuing barriers to expansion and entry.”); *id.* § 506a (“[T]he degree of market power depends on the response of buyers to price changes. Greater responsiveness (greater ‘elasticity’ of demand) minimizes market power.”).

<sup>15</sup> *See Thirteenth Report*, 24 FCC Rcd at 6219 ¶ 63 (“[M]arket concentration is necessary, but not sufficient, for unilateral or coordinated anticompetitive behavior to occur. If entry into a market is easy, then entry or the threat of entry may prevent incumbent operators from exercising market power, either collectively or unilaterally, even in highly concentrated markets.”). The major cable companies will soon be major players in the wireless marketplace. *See* Section III(A)(1) below regarding the cable companies’ considerable AWS spectrum license holdings.

these entities place competitive pressure on existing providers, ensuring that prices remain low and quality high.

***Provider Conduct and Consumer Behavior.*** As economist Michael Topper confirms in the attached declaration, “market structure indicators such as the number of competitors, market shares, or concentration ratios should only be a first step in a competition inquiry. The next step is to understand the conduct of providers and consumers in the market.”<sup>16</sup>

This focus on producer and consumer conduct is well grounded in competition economics. As Topper states:

Even in highly concentrated markets, producer rivalry can lead to competitive outcomes.... Thus, an assessment of effective competition must account for price and non-price rivalry between providers, the ability of consumers to switch providers in response to better prices or service, and the potential for innovation by firms inside and outside the industry to change the competitive landscape.<sup>17</sup>

The range of factors to be considered in addressing the conduct of providers and consumers is necessarily broad, and should include the full panoply of ways in which consumers and producers behave in the market. As Katz has explained:

As a general matter, suppliers rarely compete along one dimension. Instead, competition is typically multidimensional (*e.g.*, taking place in terms of both price and product quality). CMRS providers exemplify this fact. Service providers compete in terms of price levels, price structures, customer service, and the signal quality,

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<sup>16</sup> DECLARATION OF MICHAEL D. TOPPER, ASSESSING THE COMPETITIVENESS OF MOBILE WIRELESS: AN ECONOMIC ANALYSIS 16 (Sept. 30, 2009) (“TOPPER”) (Exhibit A); *see also* Declaration of Robert W. Hahn, Robert E. Litan and Hal J. Singer ¶ 17 (Apr. 2008) attached as Exhibit A to Reply Comments of CTIA – The Wireless Association® (“CTIA”), WT Docket No. 08-27 (filed Apr. 10, 2008); GREGORY L. ROSSTON AND MICHAEL D. TOPPER, AN ANTITRUST ANALYSIS OF THE CASE FOR WIRELESS NETWORK NEUTRALITY 21 (Stanford Institute for Econ. Policy Research Discussion Paper 08-040, Aug. 2009) (“ROSSTON-TOPPER”) (“While structural measures such as HHIs provide a starting place, industry structure is just a first step in an antitrust analysis assessing the competitiveness of the wireless market. The next step is to assess the actual performance of the industry, as measured by prices and quantities consumed.”).

<sup>17</sup> TOPPER at 7.

coverage, speed, and reliability of their networks. They also compete along other dimensions, including the handsets, operating systems, applications, and features that they offer and promote. Moreover, wireless operators typically compete by offering a range of different products and services.<sup>18</sup>

In short, the Commission's analysis must include questions such as the following: Are providers taking steps that would not be sensible if they held market power? Are consumers exhibiting signs of being trapped in a market without options? Are new entrants and intermodal competitors having a more pronounced competitive effect on the mobile wireless space?

**Market Performance.** Finally, the significance of the last prong of the current analytic framework – market performance – cannot be overstated. “Courts, antitrust agencies, and economists all emphasize the importance of consumer welfare as the hallmark of competition policy.... [T]he best indicators of competition are measures of market performance that directly impact consumers – prices, quantities, quality, consumer experience, and new services – rather than measures of the business success of particular competitors.”<sup>19</sup>

Again, the range of factors to be considered in evaluating market performance is necessarily broad and must be focused on the state of “competition” in the market, not the fate of individual providers in the market. The Commission has held that its duty under the public interest standard is “to protect efficient competition, not competitors.”<sup>20</sup> The courts have

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<sup>18</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 4.

<sup>19</sup> TOPPER at 5-6 (footnote omitted).

<sup>20</sup> Bell Atlantic Mobile Systems and NYNEX Mobile Communications Co., *Memorandum Opinion and Order*, 12 FCC Rcd 22280, 22288 ¶ 16 (1997) (“*Bell Atlantic NYNEX Mobile*”).

similarly made clear that “equalizing competition among competitors” is *not* what the public interest standard requires.<sup>21</sup>

More broadly, courts and commentators have long understood:

*There is a critical distinction between harm to competition and harm to competitors. It is often the case that, when a supplier takes actions that benefit consumers, the result will be to reduce the profitability of rival suppliers, which now face a stronger competitive threat. It is widely recognized that the proper concern of competition policy is with harm to competition, not harm to the economic welfare of specific competitors.*<sup>22</sup>

## **B. Proposed Alternative Frameworks are Contrary to the Public Interest**

The Commission should firmly reject efforts to replace its economically sound framework with more simplistic litmus tests. Market analysis is necessarily fact-specific, multidimensional, and dynamic. The simple proxies suggested by some critics of the Commission’s approach – in particular the Consumer Federation of America and its coalition of like-minded advocates<sup>23</sup> – are premised on unsound economics and would result in bad outcomes for American consumers.

**Concentration.** To begin with, the Commission should repudiate any suggestion that it rely more definitively on the concentration of the market, as measured by the Herfindahl-

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<sup>21</sup> *SBC Commc’ns, Inc. v. FCC*, 56 F.3d 1484 (D.C. Cir. 1995) (quoting *Hawaiian Tel. Co. v. FCC*, 498 F.2d 771, 776 (D.C. Cir. 1974)) (cited in *Bell Atlantic NYNEX Mobile*, 12 FCC Rcd at 22288 n.48).

<sup>22</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 4 (emphasis in original). The Supreme Court set out this principle in its 1952 *Brown Shoe* decision: “Taken as a whole, the legislative history [of the antitrust laws] illuminates congressional concern with the protection of *competition*, not *competitors*, and its desire to restrain mergers only to the extent that such combinations may tend to lessen competition.” *Brown Shoe Co. v. United States*, 370 U.S. 294, 320 (1962) (emphasis in original). The Court has reiterated the *Brown Shoe* principle many times since. See, e.g., *Leegin Creative Leather Prods. v. PSKS, Inc.*, 551 U.S. 877, 906 (2007) (citing *Atlantic Richfield Co. v. USA Petroleum Co.*, 495 U.S. 328, 338 (1990)); *Brooke Group v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 224 (1993) (citing *Brown Shoe*).

<sup>23</sup> See, e.g., Comments of Consumer Federation of America *et al.*, WT Docket No. 09-66, ii-iii (filed June 15, 2009) (“CFA Comments”); Reply Comments of Consumer Federation of America *et al.*, WT Docket No. 09-66, 4-6 (filed July 13, 2009) (“CFA Reply Comments”).

Hirschman Index (“HHI”) or otherwise.<sup>24</sup> While HHI figures are a relevant tool in evaluating market structure and competition more generally, exclusive resort to HHI figures in evaluating competition would be inappropriate for several reasons.

First, slavish reliance on the HHI would be inconsistent with the Commission’s practice with regard to evaluating wireless mergers. In determining whether a transaction is in the public interest, the FCC does not limit itself to spectrum aggregation issues and changes in concentration (HHI), but instead applies a “multi-factor, market-specific analysis” drawing “conclusions based on the totality of the circumstances present in a given market...”<sup>25</sup> These circumstances *can* include “market shares, carrier launch and coverage information, spectrum holdings, and any unique characteristics of the market of concern.”<sup>26</sup>

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<sup>24</sup> See CFA Comments at 4-5; CFA Reply Comments at 27-28 (“[T]he Commission should expect effective competition to produce a ‘target’ average HHI of 1800. Until this level is reached, the Commission should not declare that the CMRS market is effectively competitive, and should continue to examine whether any regulatory changes are needed to improve the state of competition.”).

<sup>25</sup> Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings, *Memorandum Opinion and Order and Declaratory Ruling*, 23 FCC Rcd 17444, 17489 ¶ 94 (2008) (“*Verizon Wireless-Alltel Order*”); Applications of Cellco Partnership d/b/a Verizon Wireless and Rural Cellular Corp., *Memorandum Opinion and Order and Declaratory Ruling*, 23 FCC Rcd 12463, 12497 ¶ 70 (2008) (“*Verizon-Rural Order*”) (The Commission’s merger review involves consideration of numerous variables and analyses deemed important for “predicting the incentive and ability of service providers to successfully restrict competition on price or non-price terms through coordinated interaction, and the incentive and ability of the merged entity unilaterally to elevate prices or suppress output.”) (internal citation omitted); Applications of AT&T Wireless Services and Cingular Wireless Corp., *Memorandum Opinion and Order*, 19 FCC Rcd 21522, 21557 ¶ 69 (2004) (“HHI data provide only the beginning of the analysis. The Commission then examines other market factors that pertain to competitive effects, including the incentive and ability of other firms to react and of new firms to enter the market. Ultimately, the Commission must assess whether it is likely that the merged firm could exercise market power in any particular market”) (“*AT&T-Cingular Order*”); Applications of NYNEX Corp. and Bell Atlantic Corp., *Memorandum Opinion and Order*, 12 FCC Rcd 19985, 19987 ¶ 2 (1997) (“*NYNEX-Bell Atlantic Order*”) (“Our examination of a proposed merger under the public interest standard ... extends beyond the traditional parameters of review under the antitrust laws.”).

<sup>26</sup> IT&E Overseas and PTI Pacifica, *Memorandum Opinion and Order and Declaratory Ruling*, 24 FCC Rcd 5466, 5486 ¶ 47 (IB, WCB, WTB 2009); *Verizon-Rural Order*, 23 FCC Rcd at 12497 ¶ 70 (considering “the total number of rival service providers; the number of rival firms that can offer competitive nationwide service plans; the coverage of the firms’ respective networks; the rival firms’ market shares; the merged entity’s post-transaction market share and how that share changes as a result of the transaction; the amount of spectrum suitable for the provision of mobile telephony services controlled by the combined entity; and the spectrum holdings of each of the rival service providers”); *NYNEX-Bell Atlantic Order*, 12 FCC Rcd at 20009 ¶ 37 (“We also consider whether the proposed transaction will result in merger-specific efficiencies such as cost reductions, productivity enhancements, (continued on next page)

Second, exclusive reliance on HHI would ignore critical issues related to the specific nature of the mobile wireless market – in particular, the role played by relatively high fixed costs:

It is well recognized in economics that the number of competitors that can efficiently serve a market depends on the size of the market relative to the minimum efficient scale (MES) of production and distribution. In industries like wireless with substantial fixed costs, it will be inefficient and not commercially viable for a very large number of firms to operate in the same geographic area.<sup>27</sup>

Thus, “it would be a mistake to ignore the competitive realities of the market, including a provider’s minimum efficient scale of operation, and simply assume, based upon a concentration measure, that a more efficient structure is feasible.”<sup>28</sup> Congress recognized as much, directing the Commission to assess “whether or not there is effective competition” in the mobile wireless market.<sup>29</sup> The Commission’s inquiry must reflect this principle as well.<sup>30</sup>

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or improved incentives for innovation, and whether the merger will support the general policies of market-opening and barrier-lowering that underlie the 1996 Act.”) (internal citation omitted).

<sup>27</sup> TOPPER at 10 (footnote omitted). See also KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 11 (“In the presence of economies of scale and density, it is economically inefficient and unlikely to be commercially viable to have a large number of suppliers, each operating at a small scale or low density. In such markets, it is a mistake to seek or expect to have a large number of suppliers and/or to have suppliers set prices equal to marginal costs (as would perfect competitors).”).

<sup>28</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 23; see also MARK A. JAMISON, PH.D., COST CONCEPTS FOR UTILITY REGULATORS 15 (Oct. 19, 2006), [http://www.cba.ufl.edu/purc/purcdocs/papers/0638\\_Jamison\\_Cost\\_Concepts\\_for.pdf](http://www.cba.ufl.edu/purc/purcdocs/papers/0638_Jamison_Cost_Concepts_for.pdf). Oddly, CFA *et al.* argued that “[t]he number of competitors should be *at least* as large as scale economies permit.” CFA Reply Comments at 27 (emphasis added). The use of the term “at least” reflects a deep misunderstanding of scale economies, for the presence of *more* firms than scale economies permit would, by definition, be bad for an industry, for all competitors in the industry, *and* for customers.

<sup>29</sup> 47 U.S.C. § 332(c)(1)(C).

<sup>30</sup> Verizon Wireless also notes that HHI figures provide no information regarding potential entrants. As discussed below, a host of entities (including well-capitalized companies such as Clearwire and Cox) expect to develop a strong presence in the mobile wireless space in the near future.

**Market Segmentation.** The Commission should also reject efforts to disaggregate the mobile wireless market by analyzing the “voice” market separately from the “data” market.<sup>31</sup> Such an atomistic approach is unsupportable. “Mobile voice and mobile data are often received on the same consumer device, transmitted through the same wireless networks, and rely on much of the same infrastructure.”<sup>32</sup> As Topper states, “[a]nalyzing mobile voice and mobile data separately is inappropriate as a matter of economics, because it fails to account for consumer demand for bundled services, shared network resources that are used to provide both voice and data services, and innovation that is blurring the line between voice and data.”<sup>33</sup> The Commission should therefore rebuff arguments that it must treat mobile voice and data markets separately.

**Pricing Above Marginal Cost.** The Commission also should reject any argument that the mobile wireless market can be judged on the basis of prices that exceed marginal cost. “Marginal cost pricing is not a realistic benchmark in an industry that requires ongoing investment and has significant economies of scale and/or density – a supplier pricing at marginal cost would be unable to cover its overall costs and, consequently, would not be financially viable.”<sup>34</sup>

Even if consideration of carriers’ marginal costs were appropriate – and it is not – computation of such costs would be extremely complex:

Cost calculations are ... complicated by economies of scope and the increasing variety of wireless services beyond voice that are provided like text messaging, internet browsing, music

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<sup>31</sup> See CFA Comments at 6-7.

<sup>32</sup> TOPPER at 28.

<sup>33</sup> *Id.* at 29.

<sup>34</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 45.

downloading, etc. As the same network and investments can be used to deliver voice services along with these other services, obvious complementarities exist, and recovery of fixed costs needs to be shared across many services. In addition, use of shared network resources by one service can affect the quality and availability of network resources for other services. This makes proper estimates of marginal and average costs, and even average prices within different services complicated to estimate and interpret.<sup>35</sup>

Thus, any assertions based on the relationship of “marginal costs” to rates would be both irrelevant and necessarily speculative.

**Accounting Profits.** Finally, the Commission should reject arguments that allege that accounting profits in the wireless industry bespeak an uncompetitive market.<sup>36</sup> “It is well-recognized among economists that accounting measures of profitability are ill-suited for gauging competitive intensity. There are several well-known ways in which accounting profits diverge from economic profits. This divergence is a serious issue because economic profits are the measure relevant to the assessment of market performance.”<sup>37</sup> Moreover, even positive economic profit in the short term does not demonstrate anything, apart from the fact that a provider has taken a risk by investing capital and that risk has – for the moment – borne fruit.<sup>38</sup>

As Topper explains:

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<sup>35</sup> TOPPER at 23 (footnote omitted). At the least, evaluations based on the purported differences between prices and marginal costs would necessitate extensive collection and analysis of information that is not available or public. Mobile wireless service has not generally been subjected to extensive rate regulation, or to the heavily regulated accounting regimes prescribed for dominant landline carriers.

<sup>36</sup> See CFA Comments at 19-20.

<sup>37</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 5 (emphasis omitted).

<sup>38</sup> See *id.* ¶ 4 (“Even if it were possible to estimate economic profits accurately, the existence of positive economic profits does not indicate that competition is ineffective or that regulatory intervention is warranted. It is necessary to account for both the stochastic nature of competitive outcomes and the costs and limitation of governmental intervention. With respect to the stochastic nature of outcomes, high ex post levels of profit are consistent with low ex ante or expected levels of profit, which are what drive investment decisions.”) (emphasis omitted).

Many of the profit ratios cited in the Fourteenth Public Notice depend on the accounting treatments of net income and net profit. As is well known, the concept of accounting profits differs significantly from an economic-based concept of profits. For example, opportunity cost is virtually ignored under accounting profits, thereby neglecting the very important concept of risk and the returns to wireless providers for bearing the risk.<sup>39</sup>

Indeed, as the Commission has recognized, “[a]lthough firms operating in a competitive environment simply are attempting to maximize their profits, the various means each uses to achieve this result – innovating, enhancing efficiency, providing quality services – benefit consumers individually and society as a whole.”<sup>40</sup>

In short, the Commission should continue to apply the existing framework and reject the alternative assessments proposed above.

### **III. THE MARKET FOR MOBILE WIRELESS SERVICES IS ROBUSTLY COMPETITIVE**

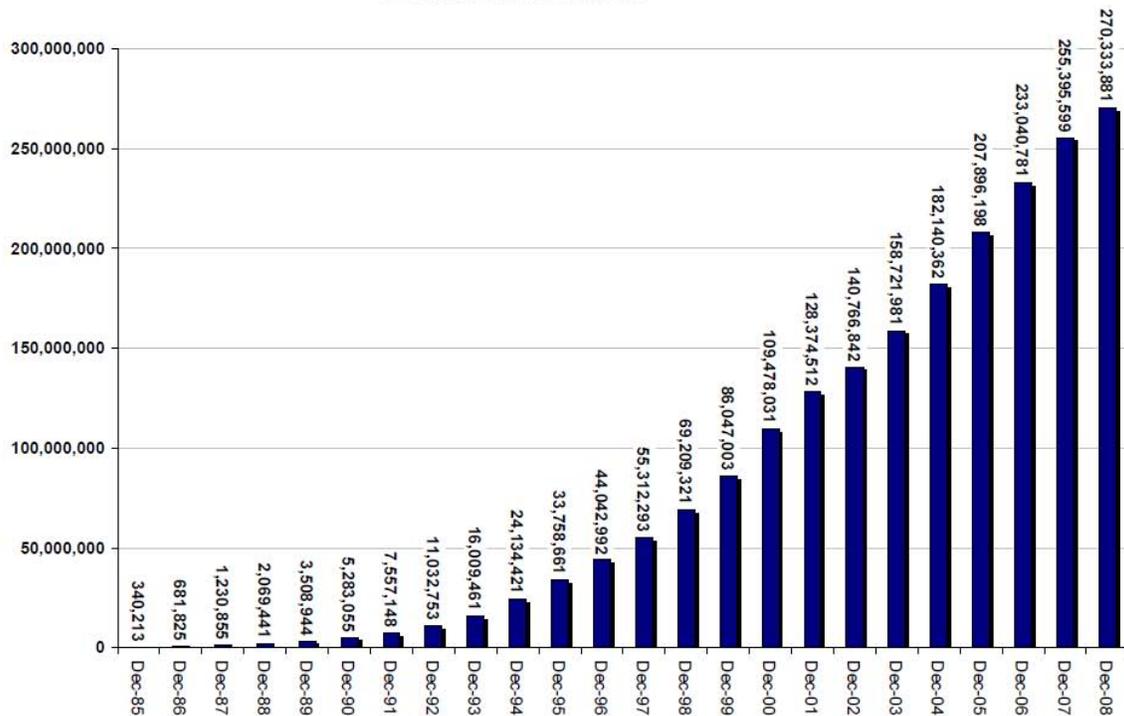
Application of the “structure-conduct-performance” framework to the market for mobile wireless services reveals an extremely competitive market, shaped by many players occupying different market niches, vying to win and retain customers by reducing prices, innovating, and improving quality of service. Moreover, the wireless industry has grown dramatically each year, as the following chart depicting subscriber expansion demonstrates, and that growth has driven both competition and investment:

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<sup>39</sup> TOPPER at 22-23 (footnote omitted); *see also id.* at 23 (The accounting treatment of assets “can be quite divorced from their economic treatment especially with regards to intangible assets like goodwill, research and development, or intellectual property.”); Franklin M. Fisher & John J. McGowan, *On the Misuse of Accounting Rates of Return to Infer Monopoly Profits*, 73 *American Economic Review* 82 (1983).

<sup>40</sup> *See* Policy and Rules Concerning Rates for Dominant Carriers, *Report and Order and Second Further Notice of Proposed Rulemaking*, 4 FCC Rcd 2873, 2886 ¶ 25 (1989).

### Estimated Subscribers



Source: CTIA<sup>41</sup>

The beneficiaries of these powerful market forces have been consumers, who now enjoy a broad menu of carrier choices and a wide range of mobile services. In its latest Report on the state of competition in the wireless industry, the Commission determined that more than 95% of the U.S. population lives in Census Blocks with at least three facilities-based mobile telephone operators providing service, and more than 60% of the population lives in Census Blocks with at least five competing operators.<sup>42</sup> In short, the *Thirteenth Report* concluded, “[n]o single

<sup>41</sup> Comments of CTIA, WT Docket No. 09-66, 42 (filed June 15, 2009) (“*CTIA CMRS Comments*”).

<sup>42</sup> *Thirteenth Report*, 24 FCC Rcd at 6189 ¶ 2.

competitor has a dominant share of the market.”<sup>43</sup> Nothing has occurred which would alter that conclusion.

**A. The Structure of the Mobile Wireless Market Demonstrates That the Market is Competitive**

The market for wireless voice and data services is broad and diverse, revealing a wide range of participants working to attract and keep customers in the face of numerous alternative providers. These factors keep prices low and dropping, quality high and improving, and the set of options available to consumers large and growing.

**1. There Are Numerous Diverse Providers**

The market for mobile wireless service is populated by a wide range of providers offering services under a variety of business models. Although the number of providers rises and falls as one would expect in a competitive market, according to the FCC’s most recent data, the number of facilities-based mobile providers climbed from 154 to 170 from 2005 to 2008.<sup>44</sup> Below we detail the roles played by some of the key providers in this dynamic market.

***The Evolution of Nationwide Providers Has Improved Service and Intensified Competition.*** There are four “nationwide” providers – Verizon Wireless, AT&T, T-Mobile USA, and Sprint – each offering facilities-based service to the vast majority of Americans. These providers compete aggressively with one another and with others in the market, reducing

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<sup>43</sup> *Id.* National market share data reported by CTIA in recent comments confirm the existence of a marketplace with a variety of robust competitors. See *CTIA CMRS Comments* at 6-7.

<sup>44</sup> See, e.g., Industry Analysis and Technology Division, FCC, Local Telephone Competition: Status as of June 30, 2008, Table 14 (rel. July 23, 2009). Table 14 of this semi-annual report contains data on mobile wireless telephone subscribers, and provides a sum of the total number of carriers in the U.S. Table 14 in each of the previous six Local Telephone Competition reports provides similar data back to June 30, 2005. All of these reports are available at <http://www.fcc.gov/wcb/iatd/comp.html/> (last visited Sept. 28, 2009).

prices and working to provide customers with the most advanced networks, the most diverse plans, and the most sophisticated devices.

This current “nationwide provider” market segment is the result of a long period of market expansion and consolidation driven by technological and economic factors governing the wireless industry, and this progression has redounded strongly to the benefit of the consumer. The Commission’s initial cellular licensing scheme established a two-carrier duopoly structure, which ultimately resulted in a highly fragmented and inefficient marketplace populated by a small number of regional operators and hundreds of smaller, local carriers. Although not heavily “concentrated,” this market became economically wasteful, as multiple providers were forced to incur costs individually that would have been shared in the presence of greater integration.

The first broadband PCS auctions in 1995 began the transition to a far more competitive market in mobile telephony services, with diverse service plans and price competition. Subscriberhip grew dramatically, and consumers demanded expanded service coverage and lower prices. The fragmented service areas, however, resulted in toll-gating opportunities and high transaction costs. Carriers therefore worked to piece together service in large swaths of the nation through roaming and other similar arrangements.

By 1999, carriers had begun to expand their geographic coverage through various types of transactions, including mergers and acquisitions, joint ventures, contractual arrangements with smaller carriers, and spectrum sales and swaps.<sup>45</sup> The enormous expense incurred to obtain

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<sup>45</sup> See *Ninth Report*, 19 FCC Rcd at 20622-30 ¶¶ 62-79. Wireless transactions often do not result in increased market concentration. Many mergers, for example, primarily or exclusively involve situations where the acquiring carrier is seeking to expand vertically into new geographic markets in order to fill in coverage gaps. In these markets, there is no reduction in the number of competitors in a particular market and no increase in market share. In markets where the two merging companies overlap, the Department of Justice has required divestitures where it finds that the merger is likely to substantially lessen competition. Here, too, the number of competitors remains unchanged.

spectrum rights, deploy and maintain network infrastructure, acquire and retain customers, and the ongoing need for sufficient operating capital, lent itself better to large scale operations. And, early on, the Commission itself acknowledged the benefits of this new trend:

[O]perators with larger footprints can achieve certain economies of scale and increased efficiencies compared to operators with smaller footprints. Such benefits ... have permitted companies to introduce and expand innovative pricing plans such as digital one-rate (“DOR”) type plans, reducing prices to consumers.<sup>46</sup>

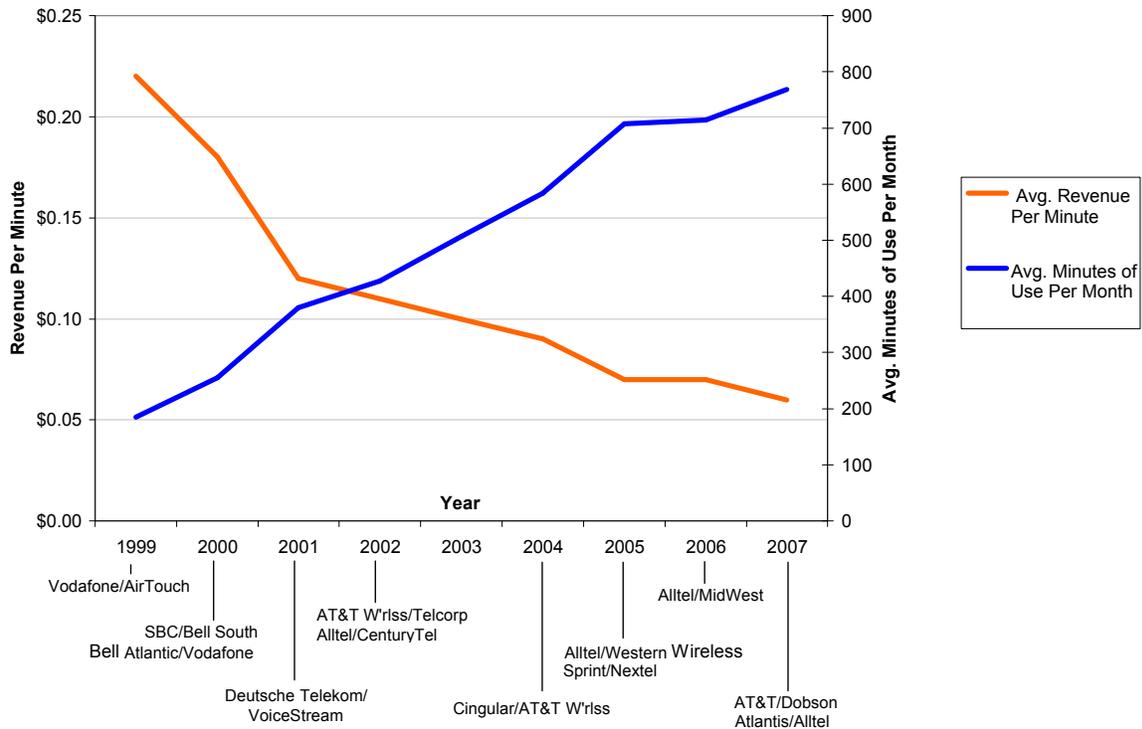
In part due to these market shifts, consumers have seen remarkable competition drive down pricing and drive up coverage, usage, and new services. As detailed in the following graph, even as the market evolved to its current structure, prices continued to fall and minutes of use (“MOUs”) continued to climb. All this occurred at a time when carriers continued to cover more and more of the population.<sup>47</sup> These incredibly pro-competitive trends have occurred in the same years when the FCC approved a number of major wireless transactions:

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<sup>46</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services, *Sixth Report*, 16 FCC Rcd 13350, 13362-63 (2001) (internal citations omitted). In 2000, the Commission staff recognized that “[a] significant percentage of mobile phone users desire nationwide access, and those users will benefit significantly from the creation of another competitor with a near-nationwide footprint. We are persuaded that new service plans, new features, and reduced charges (including charges for roaming) to consumers will result from the expansion of these two regional wireless [sic] into one national company.” Applications of SBC Communications Inc. and BellSouth Corporation, *Memorandum Opinion and Order*, 15 FCC Rcd 25459, 25480 ¶ 48 (WTB, IB 2000) (“*SBC-BellSouth Order*”).

<sup>47</sup> See generally *FCC CMRS Competition Reports 2000-2008*.

### Wireless Service: Increasing Use, Decreasing Price



Source: FCC CMRS Competition Reports 2000-2008.

The combination of spectrum and network assets also has enabled the combined entities to achieve improvements in service quality and enhancements in functionality. And aggregation of spectrum in terms of both capacity and geographic coverage has facilitated the deployment of more robust and ubiquitous wireless broadband services. In short, the state of the facilities-based “nationwide” market reflects a response to technological change, shifting economic realities, and – at bottom – consumer need.<sup>48</sup>

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<sup>48</sup> The Commission has consistently cited the public interest in approving wireless carrier mergers. *See, e.g., Verizon Wireless-Alltel Order*, 23 FCC Rcd at 17446-47 ¶ 3; *Verizon-Rural Order*, 23 FCC Rcd at 12465 ¶ 3; Applications of T-Mobile USA, Inc. and SunCom Wireless Holdings, Inc. For Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 23 FCC Rcd 2515, 2519 ¶ 10 (2008); Applications of AT&T Inc. and Dobson Communications Corp. For Consent to Transfer Control of Licenses and Authorizations, *Memorandum Opinion and Order*, 22 FCC Rcd 20295, 20296 ¶ 2 (2007); Applications of Nextel Communications, (continued on next page)

*A New Nationwide Facilities-Based Provider is Emerging.* The facilities-based market is not limited to the four “nationwide” providers. Indeed, the last year saw the creation of a “new” Clearwire, which promises to “compete head-to-head against the soon-to-be-launched 4G offerings of Verizon Wireless and AT&T.”<sup>49</sup> Significant strategic investors in Clearwire include Intel Capital, Comcast, Sprint, Google, Time Warner Cable, and Bright House Networks.<sup>50</sup>

Clearwire is “focused on expediting the deployment of the first nationwide mobile WiMAX network to provide a true mobile broadband experience for consumers, small businesses, medium and large enterprises, public safety organizations and educational institutions.”<sup>51</sup> Sprint executives assert that Clearwire has a 4G time-to-market advantage of 18-24 months over competitors and that its superior spectrum position gives it a clear advantage for offering next generation services.<sup>52</sup>

Today, Clearwire offers CLEAR-branded 4G WiMAX high-speed Internet services to consumers and businesses in 14 markets covering over 10 million people.<sup>53</sup> It also provides pre-WiMAX communications services in 40 markets across the U.S. and Europe. Clearwire intends

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Inc. and Sprint Corp., *Memorandum Opinion and Order*, 20 FCC Rcd at 13967, 13969 ¶ 3 (2005); *AT&T-Cingular Order*, 19 FCC Rcd 21525-26 ¶ 5.

<sup>49</sup> Applications of Sprint Nextel Corp., Transferor, Clearwire Corp., Transferor, and New Clearwire Corp., Transferee, for Consent to Transfer of Control of Commission Licenses and Authorizations Pursuant to Sections 214 and 310(d) of the Communications Act, Lead File No. 0003368272, Description of the Transaction and Public Interest Statement at 17 (amended Jun. 24, 2008).

<sup>50</sup> See Jeff Baumgartner, *Cable Plays Clearwire Card*, LIGHTREADING.COM, May 7, 2008, [http://www.lightreading.com/document.asp?site=cdn&doc\\_id=153154](http://www.lightreading.com/document.asp?site=cdn&doc_id=153154).

<sup>51</sup> See *Thirteenth Report*, 24 FCC Rcd at 6202-03 ¶ 22 (citing Press Release, Sprint Nextel and Clearwire to Combine WiMAX Business, Creating a New Mobile Broadband Company (May 7, 2008), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1141088&highlight=](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1141088&highlight=)).

<sup>52</sup> See Paul Kirby, *Sprint Nextel Officials Bullish on 4G Future*, TR DAILY, May 20, 2009; see also Yu-Ting Wang, *Sprint Eyes Becoming Mobile Data Leader with 4G*, COMMUNICATIONS DAILY, May 21, 2009.

<sup>53</sup> Press Release, Clearwire, Clearwire Introduces CLEAR(TM) 4G WiMAX Internet Service in 10 New Markets (Sept. 1, 2009), <http://newsroom.clearwire.com/phoenix.zhtml?c=214419&p=irol-newsArticle&ID=1326282> (“Clearwire Sept. 1 Press Release”).

to cover up to 120 million people in more than 80 markets by the end of 2010. It has indicated that it is testing VoIP in Portland, Oregon and is looking at introducing mobile voice services.<sup>54</sup>

Clearwire has significant spectrum resources in the BRS/EBS bands, and has boasted that its spectrum holdings cover “40+” billion MHz-POPs, including an “[a]verage of 80 [percent] of the 2.5 MHz/POPs in top 100 markets.”<sup>55</sup> Clearwire also estimates that it “will have more than 120 megahertz of spectrum in most of the top 100 markets and more than 100 megahertz of spectrum in markets 101 through 200 on average.”<sup>56</sup> Clearwire executives consistently refer to its significant spectrum resources as a “crucial differentiator,”<sup>57</sup> noting that it holds “many times more spectrum that is available for 4G services” than any other wireless carrier. “In our business, more spectrum means more capacity and greater speeds which equals more opportunity....”<sup>58</sup>

Clearwire offers several broadband connectivity options, which work with all WiMAX-ready products, including modems, laptops and netbooks, and mobile devices.<sup>59</sup> Service may be purchased on-line or through retail locations and authorized CLEAR dealers.<sup>60</sup>

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<sup>54</sup> See Wireless, COMMUNICATIONS DAILY, Apr. 3, 2009; Yu-Ting Wang, *Clearwire Continues Expansion, Targets Applications*, COMMUNICATIONS DAILY, Apr. 22, 2009.

<sup>55</sup> Clearwire/Sprint Presentation at 10 (May 7, 2008), <http://www.clearwireconnections.com/pr/presentations/050708.pdf>.

<sup>56</sup> Sprint Nextel/Clearwire Conference Call Transcript, Clearwire CEO Ben Wolff, (May 7, 2008), <http://www.sec.gov/Archives/edgar/data/101830/000119312508106229/d425.htm>.

<sup>57</sup> Kevin Fitchard, *Clearwire's Wolff embraces 4G as a whole but touts spectrum position*, TELEPHONY ONLINE, Apr. 2, 2009, [http://blog.telephonyonline.com/bloglive\\_ctia/2009/04/02/clearwires-wolff-embraces-4g-as-a-whole-but-touts-spectrum-position/](http://blog.telephonyonline.com/bloglive_ctia/2009/04/02/clearwires-wolff-embraces-4g-as-a-whole-but-touts-spectrum-position/) (last visited Sept. 29, 2009).

<sup>58</sup> Clearwire Corporation Q4 2008 Earnings Call Transcript, 1 (Mar. 6, 2009), <http://seekingalpha.com/article/124559-clearwire-corporation-q4-2008-earnings-call-transcript>.

<sup>59</sup> See Clearwire, Plans, <http://www.clearwire.com/wireless-broadband/overview.php> (last visited Sept. 27, 2009).

<sup>60</sup> See Clearwire Sept. 1 Press Release. Clearwire's mobile and residential plans can be purchased by the day or by the month, with several no-service-contract options available. Home Internet service plans start at \$25 per month; mobile Internet plans start at \$35 per month; and a mobile day pass is available for \$10. Clearwire is currently advertising a “Pick 1 Unlimited” plan option, offering unlimited home or mobile Internet for \$22.50 for the first 3 (continued on next page)

Clearwire also intends to sell wholesale services to its partners, including Sprint, Comcast, Time Warner Cable and Bright House, who will resell the service to their customers. Analysts estimate that Clearwire's wholesale model "will support as many as three more [mobile wireless providers] in every market, and maybe more, with each setting price independently."<sup>61</sup> Some have cited important synergies generated by Clearwire's relationships with its cable investors. Indeed, "the key driver of [the Sprint/Clearwire] transaction was all about Sprint and the cablecos using Clearwire to more effectively compete with Verizon and AT&T, getting into 4G first, and doing so with partners that are already well established in all the key areas necessary for success for this new venture."<sup>62</sup>

***Regional Facilities-Based Providers Create Additional Consumer Choice.*** In addition, several large regional carriers have played, and are continuing to play, a significant role in shaping the competitive industry and the consumer experience. These regional providers include Leap Wireless ("Leap"), which covers at least 91 million people,<sup>63</sup> MetroPCS, which covers at least 87 million people,<sup>64</sup> and United States Cellular Corp. ("U.S. Cellular"), which covers at least 82.3 million people.<sup>65</sup> These regional players have experienced significant success in many local markets, often gaining market share greater than some of the national players. For

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months and \$45 per month thereafter. See Clearwire, Plans, <http://www.clearwire.com/products/gallery.php> (last visited Sept. 27, 2009).

<sup>61</sup> CRAIG MOFFETT, BERNSTEIN RESEARCH, WEEKEND MEDIA BLAST: TOO MANY COOKS IN THE KITCHEN 2 (Aug. 21, 2009) ("TOO MANY COOKS") (emphasis in original).

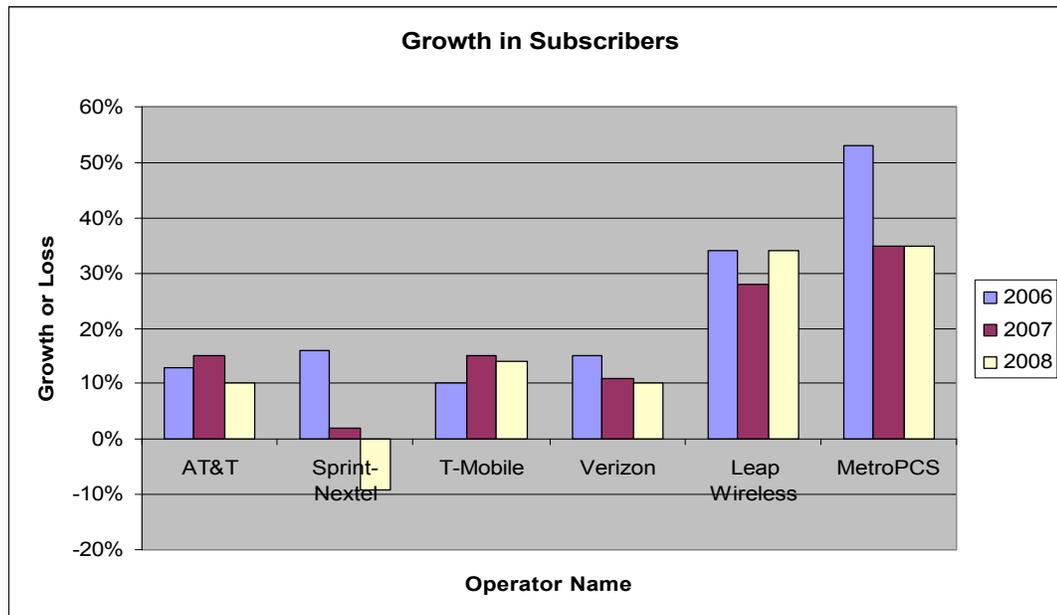
<sup>62</sup> Berge Ayvazian and Brian Dolan, *The New Clearwire: Renewed Relationship Between Clearwire, Sprint Xohm Brings Fresh Opportunities for WiMAX Buildout in U.S.* in WIMAX BUSINESS & TECHNOLOGY STRATEGIES at S3 (Aug. 4, 2008).

<sup>63</sup> SIMON FLANNERY AND SEAN ITTEL, MORGAN STANLEY, TELECOM SERVICES: UNLIMITED PREPAID WARS HEATING UP 3 (Aug. 10, 2009) ("UNLIMITED PREPAID WARS").

<sup>64</sup> See MetroPCS, Investor Overview <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-irhome> (last visited Sept. 26, 2009).

<sup>65</sup> See *Thirteenth Report*, 24 FCC Rcd at 6199 ¶ 14.

example, according to industry analysts, MetroPCS and Leap have achieved market penetration rates of anywhere from 8% to 13% in those markets where they have been offering service for at least five years.<sup>66</sup> These non-”national” providers are strong competitors, and are gaining momentum, as the following graph shows:



Source: CTIA and Company Reports for Year-End Numbers in 2006, 07, 08

Leap. Leap owns an expanding network and has recently launched service in Chicago, Baltimore, Philadelphia, and Washington, D.C.<sup>67</sup> Leap also serves such major metropolitan areas as Houston, Denver, Portland, San Diego, Phoenix, Cincinnati, and Milwaukee, among

<sup>66</sup> See Arnol Sharma and Vishesh Kumar, *Cox Plans to Launch a Cellular Network Unlike Cable Rivals, Atlanta Company Sees Need to Own a Wireless System*, WALL STREET JOURNAL, Apr. 7, 2009, B5; see also MACQUARIE RESEARCH EQUITIES, PREPAID WIRELESS SERVICES: SLUMDOG MILLIONAIRES 10-12 (May 1, 2009) (“PREPAID WIRELESS SERVICES”).

<sup>67</sup> UNLIMITED PREPAID WARS at 3.

others.<sup>68</sup> Leap combines its significant spectrum holdings with roaming agreements to provide its customers with nearly nationwide service.<sup>69</sup>

Since 2004, when it emerged from bankruptcy with long-term debt reduced by \$2 billion, Leap has been aggressively marketing its services to grow its market share. Leap's recent successes include a "year-over-year customer growth rate of 34 percent [that] was the second highest in the wireless industry," and "service revenues [that] rose 23 percent for the year to \$1.7 billion...."<sup>70</sup> The investment community has recognized that "Leap issued [an] encouraging 2009 outlook, calling for some of the strongest growth in the industry," and has concluded that "the company is well positioned to achieve these targets from ongoing market expansion plans."<sup>71</sup> Furthermore, the AWS-1 spectrum Leap recently acquired will facilitate the company's roll-out of advanced wireless services.<sup>72</sup>

In a recent FCC filing, Leap emphasized the important role its Cricket service plays as a competitive rival to other providers: "Upon this foundation of simplicity and affordability as its business model, Cricket and its joint venture partners have built a network covering almost 84

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<sup>68</sup> *Id.*

<sup>69</sup> Press Release, Leap Wireless International, Inc., Cricket Footprint Grows with Premium Extended Coverage, Forming Largest Roaming Coverage Area for a Low-Cost, Unlimited Carrier (Nov. 13, 2008), <http://phx.corporate-ir.net/phoenix.zhtml?c=191722&p=irol-newsArticle&ID=1226044&highlight=> ("Leap November 13 Press Release") (explaining that Leap "has significantly expanded the size of its Cricket footprint with the availability of Premium Extended Coverage," a roaming program that "gives [Leap] the largest unlimited roaming coverage area of any low cost, unlimited carrier" through "[s]trategic roaming partnerships with 14 wireless companies."). *See also* CEO Letter, Leap Wireless 2008 Annual Review, [http://www.leapwireless.com/ar2008/ceo\\_letter.php](http://www.leapwireless.com/ar2008/ceo_letter.php) at 1 ("Leap CEO Letter").

<sup>70</sup> Leap CEO Letter at 1.

<sup>71</sup> *See* MORGAN STANLEY, LEAP WIRELESS: POSITIVE OUTLOOK FOR 2009 (Mar. 2, 2009). Leap describes its competitive status as follows: "Our business is well positioned. We're expanding our role as a value-leader in the wireless space .... We've assembled significant assets at the right time. We have adequate financial resources and an attractive spectrum portfolio." Leap, - Q4 2008 Leap Wireless International Earnings Conference Call, Final Transcript (Feb. 26, 2009), <http://seekingalpha.com/article/123043-leapwireless-international-inc-q4-2008-earnings-call-transcript?page=7>.

<sup>72</sup> *See* Leap Wireless International, Inc. Annual Report (Form 10-K) at 14 (Feb. 27, 2009), <http://www.corporate-ir.net/seccapsule/seccapsule.asp?m=f&c=95536&fid=6179830&dc>.

million individuals in 32 states and are steadily expanding into new communities where the telecommunications needs of consumers are not being met by existing providers. Cricket's growth and success demonstrate the pro-consumer benefits that small and mid-sized carriers bring to the wireless marketplace."<sup>73</sup> Cricket further observes that its presence

disciplines prices in every market that it enters, and indeed, its presence spurs other carriers to offer a wider range of choices, including flat-rate pricing plans along the lines that Cricket innovated.<sup>74</sup>

MetroPCS. Regional provider MetroPCS serves major markets such as Los Angeles, San Francisco, Dallas, Atlanta, Detroit, Miami, and Las Vegas, and recently added service in New York, Boston, and Philadelphia. In the first quarter of 2009, MetroPCS's total revenues increased more than 20% over the prior year's first quarter results;<sup>75</sup> it reported the highest share of gross subscriber additions of any U.S. carrier in its operating markets and the highest quarterly net additions in company history.<sup>76</sup> Indeed, in a recent filing with the Commission, MetroPCS noted that "the retail CMRS marketplace is competitive."<sup>77</sup>

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<sup>73</sup> Comments of Cricket Communications, Inc., WT Docket No. 09-66, 3 (filed June 15, 2009).

<sup>74</sup> *Id.*

<sup>75</sup> Press Release, MetroPCS, MetroPCS Reports First Quarter 2009 Results, Industry Leading High-Growth, Low Cost Structure, Results in Record First Quarter Adjusted EBITDA (May 7, 2009), <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1285538&highlight=> ("May 7, 2009 MetroPCS Press Release"). See Victor Godinez, *Richardson's MetroPCS plans to build on [sic] niche with frugal cellphone users*, THE DALLAS MORNING NEWS, June 2, 2009, <http://www.dallasnews.com/sharedcontent/dws/bus/stories/060209dnbusmetropcs.41a513c.html>.

<sup>76</sup> See May 7, 2009 MetroPCS Press Release.

<sup>77</sup> Comments of MetroPCS Comm. Inc., WT Docket No. 09-66, ii (filed June 15, 2009). MetroPCS oddly went on to complain about roaming rates notwithstanding the competitive state of the retail market. This complaint misapprehends the core principle – discussed above – that what matters is whether government policy protects competition itself, not whether it protects specific *competitors*.

U.S. Cellular. Headquartered in Chicago, regional provider U.S. Cellular operates in 26 states and has approximately 6.2 million total customers.<sup>78</sup> In the second quarter of 2009, U.S. Cellular achieved sales revenues of \$974.8 million, which included a 31% increase in data revenues to \$162.0 million.<sup>79</sup> According to John Rooney, President of U.S. Cellular, the company expects growth in data revenues “to continue, as we bring our 3G network – which now covers 40 percent of our customer base – to 70 percent of our customers by year end.”<sup>80</sup> U.S. Cellular is also a partner in King Street Wireless, L.P., the winning bidder of 152 licenses in the FCC’s recent 700 MHz auction.<sup>81</sup> These licenses will “cover areas that overlap or are proximate or contiguous to areas covered by licenses that U.S. Cellular currently owns, operates and/or consolidates.”<sup>82</sup> U.S. Cellular’s corporate parent Telephone & Data Systems is the majority partner in Barat Wireless, L.P., which won 17 AWS-1 licenses worth over \$169 million in FCC Auction 66, including a license for the large Mississippi Valley region.

***Smaller Carriers.*** Finally, the market is also shaped by the behavior of numerous smaller carriers, including Cincinnati Bell Wireless, NTELOS, SouthernLINC, Corr Wireless, Pocket Communications, Cellular South, and – upon the completion of its pending purchase of divested Verizon Wireless assets – Atlantic Tele-Network. These smaller carriers provide service to

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<sup>78</sup> U.S. Cellular, Notice of Meeting and Proxy Statement for 2009 Annual Meeting of Shareholders and 2008 Annual Report, 1 (Apr. 15, 2009), <http://phx.corporate-ir.net/External.File?item=UGFyZW50SUQ9MzMzMjQwZmE1MDMyfFR5cGU9MQ==&t=1> (“USCC 2008 Annual Report”).

<sup>79</sup> Press Release, U.S. Cellular, U.S. Cellular Reports Second Quarter Results (Aug. 6, 2009), <http://phx.corporate-ir.net/phoenix.zhtml?c=106793&p=irol-newsArticle&ID=1317829&highlight>.

<sup>80</sup> *Id.*

<sup>81</sup> *See* USCC 2008 Annual Report at 1.

<sup>82</sup> *Id.*

millions of Americans. Cincinnati Bell Wireless serves approximately 550,000 customers,<sup>83</sup> and last year the company deployed 3G network improvements that will further position it “to provide enhanced high-speed data services and meet increased demand for voice minutes of use.”<sup>84</sup>

NTELOS has over 440,000 wireless subscribers and recently completed a \$46 million network upgrade to expand its 3G EV-DO coverage.<sup>85</sup> The company “holds PCS licenses to operate in twenty-nine basic trading areas with a total licensed population of approximately 8.8 million,” “has been steadily building out mountainous and relatively sparsely populated communities in Virginia and West Virginia for many years,” and “continues to make significant investments in its wireless network.”<sup>86</sup>

SouthernLINC Wireless covers a geographic footprint of over 128,000 square miles in the Southeastern United States and serves approximately 275,000 customers.<sup>87</sup> Meanwhile, Corr Wireless, a family-owned business centered in Alabama and Georgia, offers national and regional unlimited plans, including an unlimited nationwide prepaid service that starts at only

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<sup>83</sup> Cincinnati Bell 2008 Annual Report 3 (Feb. 26, 2009), [http://library.corporate-ir.net/library/11/111/111332/items/329432/AF3CDD98-6630-42A9-B8F1-5C2A866655E2\\_2008AR.pdf](http://library.corporate-ir.net/library/11/111/111332/items/329432/AF3CDD98-6630-42A9-B8F1-5C2A866655E2_2008AR.pdf).

<sup>84</sup> *Id.*

<sup>85</sup> See Press Release, NTELOS, NTELOS Completes \$46 Million Upgrade to 3G Network (July 8, 2009), <http://www.ir-site.com/images/library/ntelos/07-08-09.html>; Press Release, NTELOS, NTELOS Holdings Corp. Reports Second Quarter 2009 Operating Results (Aug. 6, 2009), <http://www.ir-site.com/images/library/ntelos/08-05-09.html>.

<sup>86</sup> Reply Comments of NTELOS Inc., WT Docket No. 09-66, 2 (filed July 13, 2009).

<sup>87</sup> See SouthernLINC Wireless, SouthernLINC Wireless Press Room, <http://www.southernlinc.com/pressroom/presskit.asp#overview> (last visited Sept. 26, 2009).

\$20.<sup>88</sup> Pocket Communications offers flat-rate wireless services to parts of Texas, Connecticut and Massachusetts and serves over 250,000 customers.<sup>89</sup>

Cellular South is the nation's largest privately held wireless carrier, serving over 700,000 customers primarily in rural areas in 10 states.<sup>90</sup> Finally, Atlantic Tele-Network is poised to become a leader in the provision of rural wireless services. Upon closing of its transaction with Verizon Wireless, Atlantic Tele-Network will, along with its current wholesale network, have wireless operations in more than 15 states and provide retail service to around 800,000 subscribers.

***Resellers/MVNOs Provide Distinct Competitive Features.*** Mobile resellers/MVNOs also play a role in wireless competition and innovation. Because resale does not require the acquisition of spectrum or the build-out of extensive infrastructure, MVNOs enjoy considerable market freedom. Resellers/MVNOs can therefore promote competition and innovation in the wireless services marketplace at very low cost. New entrants constantly emerge. Some ventures succeed and others fail, competing freely in the marketplace and providing additional customer choice and benefits.

Until 2002, the FCC required wireless operators to permit resale of their services. But resale never took off as a substantial business, and resellers tended simply to rebrand existing cellular service.<sup>91</sup> Since the sunset of mandatory resale,<sup>92</sup> however, carriers and resellers alike

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<sup>88</sup> See Corr Wireless, About Us, <http://www.corrwireless.com/AboutUs.aspx> (last visited Sept. 26, 2009).

<sup>89</sup> Pocket Communications, About Us, [http://www.pocket.com/index.php/page/about\\_us](http://www.pocket.com/index.php/page/about_us) (last visited Sept. 26, 2009).

<sup>90</sup> See Comments of Cellular South, WT Docket No. 09-66, 1-2 (filed June 15, 2009).

<sup>91</sup> See Interconnection and Resale Obligations Pertaining to Commercial Mobile Radio Services, *First Report and Order*, 11 FCC Rcd 18455 (1996) ("*Resale First Report and Order*"), *aff'd sub nom.*, *Cellnet Commc'ns v. FCC*, 149 F.3d 429 (6th Cir. 1998), *Order on Reconsideration*, 14 FCC Rcd 16340 (1999).

have experimented with a wide variety of resale arrangements that have attracted millions of customers. It is noteworthy that these arrangements have developed without any regulatory requirement, but rather based on carriers' desire and willingness to put additional traffic on their networks and reach new and diverse consumers.

### Resale Customers

Year	Subscribers	%Resold	Resale Subscribers
2000	101,043,239	9.0%	9,093,892
2001	123,990,857	5.0%	6,199,543
2002	138,878,293	5.0%	6,943,915
2003	157,042,082	6.0%	9,422,525
2004	181,105,135	9.0%	16,299,462
2005	203,667,474	6.0%	12,220,048
2006	229,619,397	7.0%	16,073,358
2007	249,235,715	7.0%	17,446,500

Source: FCC's Semi-Annual Local Telephone Competition Survey, Mobile Telephone Subscribership<sup>93</sup>

One analyst has reported that, as of May 2009, there were 43 MVNOs operating in the U.S.,<sup>94</sup> many of which are providing a wireless service targeted to a specific demographic.<sup>95</sup> Not surprisingly, MVNOs typically target narrower customer segments than the larger facilities-

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<sup>92</sup> The Commission's resale rule sunset on November 24, 2002, *see id.*, in accordance with the Commission's 1996 decision that the rule would sunset "five years after we award the last group of initial licenses for currently allocated broadband PCS spectrum," *Resale First Report and Order* at ¶ 24.

<sup>93</sup> *See, e.g.*, Industry Analysis and Technology Division, FCC, *Local Telephone Competition: Status of December 31, 2007*, Table 14 (Sept. 2008). The table above tabulates data for December of each year through the end of 2007, but the most recent report includes similar data, finding 255,301,307 wireless subscribers as of June 2008, with 8% (20,424,105) of those subscribers have service through an MVNO.

<sup>94</sup> Informa Telecoms and Media., *Global MVNO Operations – A study of current business models and emerging opportunities*, (May 2009) (online summary), <http://www.telecomsmarketresearch.com/research/TMAAAQPN-WCIS-Insight--Global-MVNO-Operations---A-study-of-current-business-models-and-emerging-opportunities.shtml> (last visited Sept. 27, 2009).

<sup>95</sup> *Id.*

based carriers. Such customized offerings often can be marketed very effectively by an entity focused on addressing targeted customers' interests.<sup>96</sup> For example:

### MVNO Operator Examples

<b>MNVO</b>	<b>Specialization</b>
Beyond Mobile	Business
Bratz Mobile	Children
Credo	Socially Responsible Consumer
Firefly Mobile	Kids and Tweens
Jitterbug	Simple Device/Ease of Use
Hop On	Gamers
KORE Wireless	Telematics, M2M
Movida	U.S. Hispanics
OnStar	Automobile Safety
TuYo Mobile	U.S. Hispanics
Virgin Mobile USA <sup>97</sup>	Young Adults

Source: [www.mvnolist.com](http://www.mvnolist.com)

MVNOs rely on a wide variety of carriers for their underlying connectivity. While some MVNOs resell only one carrier's service, others, including TracFone and Locus Telecommunications, provide service based on multiple underlying networks and thus offer customers a choice of access technologies. All major national wireless network operators

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<sup>96</sup> For example, researchers have discovered significant variations in mobile phone usage based on race. DARRELL M. WEST, GOVERNANCE STUDIES AT BROOKINGS, WHAT CONSUMERS WANT FROM MOBILE COMMUNICATIONS IN THE UNITED STATES, UNITED KINGDOM, SPAIN AND JAPAN 3 (Sept. 2009), [http://www.brookings.edu/papers/2009/09\\_mobile\\_west.aspx](http://www.brookings.edu/papers/2009/09_mobile_west.aspx) (last visited Sept. 23, 2009) ("WHAT CONSUMERS WANT").

<sup>97</sup> Sprint recently entered into an agreement to acquire Virgin Mobile and its 5.2 million subscribers. See Press Release, Sprint, Sprint Nextel to acquire Virgin Mobile USA (July 28, 2009), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1312854](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1312854); Roger Cheng, *Sprint Dives Deeper into Prepaid*, WALL STREET JOURNAL, July 29, 2009, B2.

provide capacity to MVNOs to varying extents.<sup>98</sup> Verizon Wireless, for example, provides capacity to TracFone and a number of smaller MVNOs. But it is hardly alone:

**MVNO Operators and Underlying Carriers**

MVNO	Physical Network
Circle-K Talk&Go	AT&T
Credo	Sprint
Firefly Mobile	AT&T
Jitterbug	Sprint
KORE Wireless	AT&T, T-Mobile
NET10	AT&T
OnStar	Verizon Wireless
Page Plus	Verizon Wireless
TimeWarner	Sprint
Total Call Mobile	Sprint
TracFone	AT&T, T-Mobile, US Cellular, Verizon Wireless
TuYo Mobile	T-Mobile

Source: [www.mvnolist.com](http://www.mvnolist.com).

Many consumers find the MVNO service option to be appealing. For example, TracFone serves roughly 12.5 million subscribers by specializing in low-cost, prepaid service plans.<sup>99</sup> TracFone alone tripled its year-over-year addition of customers, adding 730,000 customers in the second quarter of 2009 alone.<sup>100</sup>

***Emerging and Non-Traditional Providers Present New Competitive Pressures.*** In addition to the providers described above, the competitive analysis must also account for other existing and incipient competitors. These include: “traditional” wireless service offered by non-traditional providers such as Cox; mobile services offered by satellite providers; VoIP offerings

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<sup>98</sup> The fact that major providers voluntarily offer wholesale service to third-party providers who compete against them in the end-user retail market itself indicates that they do not exercise market power. If they did, one would expect them to preserve the high price of their primary retail offering by foreclosing the resale market.

<sup>99</sup> America Movil, S.A.B. de C.V., Second Quarter of 2009 Financial and Operating Report 3 (July 21, 2009) [http://www.americamovil.com/docs/reportes/eng/2009\\_2.pdf](http://www.americamovil.com/docs/reportes/eng/2009_2.pdf) (last visited Sept. 16, 2009).

<sup>100</sup> *Id.* at 13.

relying on mobile broadband Internet access service; and intermodal providers. These entities' plans to enter the market or expand confirms the presence of substantial competitive opportunities in the sector.<sup>101</sup>

Cable. Even apart from cable's relationships with Clearwire, at least one major cable provider has acquired additional spectrum for the provision of mobile wireless service. Cox Communications ("Cox") is well-positioned to become a significant player in the wireless marketplace. Privately owned, Cox is the third-largest cable entertainment and broadband services provider in the nation, with more than six million residential and commercial customers.<sup>102</sup> Cox has invested \$16 billion in a state-of-the-art broadband network that serves customers in 18 states.<sup>103</sup>

Cox expects to use Advanced Wireless Service ("AWS") spectrum from SpectrumCo (a joint venture among major cable operators that acquired more than 130 AWS licenses in Auction

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<sup>101</sup> Qualcomm's MediaFLO USA network ("MediaFLO") is another innovative example of a new facilities-based wireless entrant. MediaFLO enables Verizon Wireless and AT&T customers to experience and enjoy mobile TV service. Through the use of the MediaFLO platform, Verizon V CAST customers can enjoy their favorite full-length TV shows, plus the latest in news, sports, weather, and live entertainment, on demand from their mobile devices. V CAST Video allows users to stream and download videos from 14 popular categories including Kids, Music, Sports, Latino, Cutting Edge, Hollywood. See Verizon Wireless, Answers to FAQs – V CAST, <http://support.vzw.com/faqs/V%20CAST/faq.html#item2> (last visited Sept. 27, 2009). V CAST subscribers also have hundreds of video options at their fingertips from popular media outlets like ESPN, Comedy Central, BET and many more. See Verizon Wireless, V CAST Videos: Browse, [http://products.vzw.com/video\\_browse.aspx?id=video\\_browse](http://products.vzw.com/video_browse.aspx?id=video_browse) (last visited Sept. 27, 2009). Qualcomm uses lower 700 MHz spectrum to provide its MediaFLO service, see *Thirteenth Report*, 24 FCC Rcd at 6204 ¶ 25, which serves as an "end-to-end mobile multimedia platform." Qualcomm MediaFLO, Enabling the Convergence of Media and Mobile, [http://www.mediaflo.com/news/pdf/MFLO\\_Overview.pdf](http://www.mediaflo.com/news/pdf/MFLO_Overview.pdf) (last visited Sept. 27, 2009). MediaFLO receives live TV broadcasts, transforms them into a mobile format and securely transmits them to a vast number of mobile users. As Qualcomm has noted, the one-to-many approach of the MediaFLO system "simplifies the transit of video, audio and data to mobile devices, supports the business models of both mobile network operators and multi-channel operators, and provides benefits for the entire mobile TV ecosystem." *Id.*

<sup>102</sup> See Cox Communications, Our Story, <http://ww2.cox.com/aboutus/our-story.cox> (last visited Sept. 27, 2009).

<sup>103</sup> *Id.*; Comments of Cox Communications, Inc., GN Docket No. 09-51, 2 (filed June 8, 2009).

66, resulting in a near-nationwide footprint)<sup>104</sup> and newly acquired 700 MHz spectrum to provide facilities-based service to 10% of the country.<sup>105</sup> Cox holds 30 AWS licenses and 22 700 MHz licenses, and the company is constructing infrastructure in its current cable service markets using these holdings.<sup>106</sup> According to Cox, its wireless service will offer broadband on the go “with the administrative and cost efficiencies of bundling and the benefit of accessibility to Cox content and applications from any location.”<sup>107</sup> Cox plans to launch its mobile service later this year.<sup>108</sup> In addition, Cox intends to enter the mobile market by utilizing Sprint’s 3G CDMA network for initial service rollout while it deploys its network.<sup>109</sup> In the future, Cox anticipates using Long Term Evolution (“LTE”), and intends to conduct 4G trials in two markets by 2010.<sup>110</sup>

Satellite. Mobile Satellite Service (“MSS”) providers’ activities continue to intensify. The Commission has authorized satellite systems in three MSS spectrum bands – the L-Band, Big-LEO, and 2 GHz – covering over 130 MHz of prime spectrum below 3 GHz.<sup>111</sup> There are four systems presently operating in those bands: SkyTerra and Inmarsat in the L-Band, and Globalstar and Iridium in the Big-LEO band. Two additional systems are under development,

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<sup>104</sup> The SpectrumCo participants at the time of the AWS auction were Comcast Corporation, Time Warner Cable, Inc., Cox Enterprises, Inc., and Bright House Networks, LLC. See Comments of SpectrumCo LLC, WT Docket No. 07-195, 1 n.1 (filed July 25, 2008). SpectrumCo has since assigned a portion of the AWS holdings to Cox Wireless. See Telecommunications Industry Association, Q&A, Stephen Bye - Wireless VP, Cox Communications, [http://ict2020.tiaonline.org/july\\_august\\_2009/q\\_and\\_a\\_stephen\\_bye.cfm](http://ict2020.tiaonline.org/july_august_2009/q_and_a_stephen_bye.cfm) (last visited Sept. 26, 2009).

<sup>105</sup> TOO MANY COOKS at 2; see also Press Release, Cox Communications, Cox to Launch Next Generation Bundle with Wireless in 2009 (Oct. 27, 2008), [http://media.corporateir.net/media\\_files/irol/76/76341/release\\_I02708.pdf](http://media.corporateir.net/media_files/irol/76/76341/release_I02708.pdf).

<sup>106</sup> See Reply Comments of Cox Wireless, WT Docket No. 09-66, 4 (filed July 13, 2009) (“Cox Reply Comments”).

<sup>107</sup> *Id.* at 5.

<sup>108</sup> See, e.g., Dan Butcher, *Cable giant Cox ramps up mobile infrastructure*, MOBILE MARKETER, Sept. 2, 2009, <http://www.mobilemarketer.com/cms/news/media/4083.html> (citing plans for fourth-quarter launch) (last visited Sept. 29, 2009).

<sup>109</sup> Cox Reply Comments at 4.

<sup>110</sup> See *id.*

<sup>111</sup> See *Thirteenth Report*, 24 FCC Rcd at 6299 ¶ 241.

relying on satellites that already have been launched in the 2 GHz band<sup>112</sup> – DBSD North America and TerreStar Networks. The six MSS providers are in varying stages of implementation of their business plans.

To date, three MSS providers have been granted ancillary terrestrial component (“ATC”) authority to provide combined satellite/terrestrial services over their MSS spectrum: DBSD North America,<sup>113</sup> SkyTerra,<sup>114</sup> and Globalstar.<sup>115</sup> Globalstar’s ATC capabilities have now been enhanced by an arrangement with Open Range Communications that will provide “affordable high-speed broadband Internet and voice services to more than six million citizens in 546 underserved and rural communities, using WiMax technology, within five years.”<sup>116</sup> Open Range recently secured significant funding to achieve this goal – a \$274 million Broadband Access Loan from the U.S. Department of Agriculture’s Rural Development Utilities Program, supplemented by an additional \$100 million loan from the private equity arm of JPMorgan Chase & Co.<sup>117</sup> The Open Range network will cover 17 states including communities from Ocean City, New Jersey to Greeley, Colorado.<sup>118</sup>

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<sup>112</sup> See *id.* at 6301-02 ¶¶ 249-250; Mike Musgrove, *TerreStar: Today’s Launch a Success*, WASHINGTON POST, July 1, 2009, [http://voices.washingtonpost.com/posttech/2009/07/terrestar\\_satellite\\_launch\\_is.html](http://voices.washingtonpost.com/posttech/2009/07/terrestar_satellite_launch_is.html).

<sup>113</sup> ICO Global Communications, Overview, <http://www.ico.com/about/> (last visited Sept. 27, 2009).

<sup>114</sup> Skyterra, Corporate Profile, <http://www.skyterra.com/about/corporate-profile.cfm> (last visited Sept. 27, 2009).

<sup>115</sup> Press Release, Globalstar, Globalstar Becomes the First Mobile Satellite Services Provider to Utilize Its ATC Spectrum Authority (Jan. 12, 2009), <http://www.globalstarusa.com/en/content.php?cid=600> (last visited Sept. 27, 2009).

<sup>116</sup> Press Release, Open Range, Open Range Communications Secures \$374 Million to Deploy Wireless Broadband Services to 546 Rural Communities (Jan. 9, 2009), [http://www.openrangecomm.com/pr/pr\\_022009.html](http://www.openrangecomm.com/pr/pr_022009.html). Open Range promises to offer high speed broadband Internet service for less than \$40 per month and unlimited nationwide voice for less than \$30 per month. See Open Range Fact Sheet, [http://www.openrangecomm.com/pdf/or\\_fact\\_sheet\\_feb09.pdf](http://www.openrangecomm.com/pdf/or_fact_sheet_feb09.pdf) (last visited Sept. 27, 2009).

<sup>117</sup> *Id.*

<sup>118</sup> See USDA Rural Development, Broadband Search Results By Company – Open Range Communications, Inc., [http://broadbandsearch.sc.egov.usda.gov/SearchResult\\_Company.aspx?CompanyId=d30fef89-b559-406d-af41-0a2ecba8e958](http://broadbandsearch.sc.egov.usda.gov/SearchResult_Company.aspx?CompanyId=d30fef89-b559-406d-af41-0a2ecba8e958) (last visited Sept. 20, 2009).

Three providers do not have ATC authority, yet still offer (or will offer) voice and data services: Inmarsat,<sup>119</sup> Iridium,<sup>120</sup> and TerreStar.<sup>121</sup> TerreStar, along with SkyTerra and Infineon Technologies, recently announced the world's first multi-standard mobile platform based on Infineon's software defined radio ("SDR") technology. The technology will enable "ubiquitous mobile communications coverage from anywhere in North America using mass-market devices costing about the same as terrestrial cellular-only devices. SDR-enabled satellite-terrestrial handsets will operate with multiple cellular and satellite-based communications technologies including GSM, GPRS, EDGE, WCDMA, HSDPA, and GMR1-2G/3G."<sup>122</sup> Further, TerreStar and AT&T signed a nationwide reciprocal roaming agreement last year.<sup>123</sup> That roaming agreement will allow TerreStar to offer its customers roaming service over AT&T's extensive network in areas where TerreStar has not yet commenced providing service on its own, and will extend AT&T service as well. Unsurprisingly, given expanded competition, MSS handset prices have fallen, and new pricing structures appear to be emerging.<sup>124</sup>

DBS. Direct Broadcast Satellite ("DBS") providers are entering the wireless marketplace as well. For example, DISH Network Corporation ("DISH"), through its wholly-owned

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<sup>119</sup> Inmarsat Services, <http://www.inmarsat.com/Services/?language=EN&textonly=False> (last visited Sept. 27, 2009).

<sup>120</sup> Iridium, Company Profile, <http://www.iridium.com/about/companyprofile.php> (last visited Sept. 27, 2009).

<sup>121</sup> TerreStar Networks, Welcome to the Next Generation of Mobile Communications, <http://www.terrestar.com/about.php> (last visited Sept. 27, 2009). TerreStar has pending an applications on file requesting ATC authority and related waivers. See Application of TerreStar Networks Inc., FCC File No. SES-AMD-20070907-01253 (filed Sept. 7, 2007); Application of TerreStar Networks Inc., FCC File No. SES-AMD-20070723-00978 (filed July 23, 2007).

<sup>122</sup> Press Release, TerreStar Networks, Infineon, SkyTerra and TerreStar Announce Agreement to Develop the World's First Satellite-Cellular Mobile Platform Based on SDR Technology (Apr. 1, 2009), <http://www.terrestar.com/press/20090401.html>.

<sup>123</sup> Press Release, TerreStar Networks, TerreStar Announces Nationwide Roaming Agreement with AT&T (Aug. 1, 2008), <http://www.terrestar.com/press/archive/20080801.html>.

<sup>124</sup> See *Thirteenth Report*, 24 FCC Rcd at 6304-05 ¶¶ 259-262.

subsidiary Manifest Wireless, L.L.C. (“Manifest”), acquired 168 licenses in the 700 MHz auction. Those licenses provide Manifest with a footprint on six MHz of unpaired spectrum covering 76% of the U.S. population.<sup>125</sup> The spectrum may be used to provide a range of fixed, mobile, and broadcast services. According to DISH’s recent SEC filings, the company plans to “perform a market test to evaluate different technologies and consumer acceptance during 2010.”<sup>126</sup>

VoIP. Voice over Internet Protocol (“VoIP”) providers are increasingly offering mobile service, with applications designed to reside on mobile wireless devices that may obviate use of the customer’s traditional voice plan. These offerings may rely on the customer’s licensed wireless data plan, a local WiFi network, or both. Users increasingly rely on these applications, prompting mobile voice providers to respond with more innovative and inexpensive alternatives.<sup>127</sup> A new report from market research firm In-Stat predicts that by 2013, mobile VoIP applications will generate annual revenues of \$32.2 billion with 278 million users worldwide, and that this growth will be driven in no small part by the wireless industry’s evolution to 4G:

[T]he transition to mobile VoIP is expected to accelerate with the launch of new, 4G wireless networking technologies such as LTE (long term evolution) and WiMAX. Once the major wireless providers begin to roll out these faster, higher-capacity next generation networks, layered on their existing networks, mobile VoIP will begin to rapidly replace legacy cellular voice technologies, not just for long distance, but for all calling....<sup>128</sup>

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<sup>125</sup> Securities and Exchange Commission (“SEC”) Form 8-K, filed March 21, 2008 by DISH Network Corporation.

<sup>126</sup> SEC Form 10-Q, filed August 10, 2009 by DISH Network Corporation.

<sup>127</sup> See, e.g., SHARON ARMBRUST AND JOHN FLETCHER, SNL KAGAN, WIRELESS CARRIERS HANG ON TO THEIR FUTURES BY A DIGITAL THREAD 4 (Apr. 6, 2009) (“SNL KAGAN APRIL 2009”) (“Next up, competition from without, as VoIP challengers go mobile.”).

<sup>128</sup> Patrick Barnard, In-Stat Predicts Mobile VoIP Will Generate Annual Revenues of \$32.2 Billion by 2013 (Sept. 16, 2009), <http://fixed-mobile-convergence.tmcnet.com/topics/mobile-communications/articles/64533-in-stat-> (continued on next page)

In-Stat also notes that Mobile VoIP “represents a dynamic new capability that promises numerous applications.... One new application integrates Mobile VoIP into a unified mobile interface to social networking sites. In another new development, MVNOs and 3G operators without legacy networks are using Mobile VoIP to more cost effectively add voice to data offerings. In yet another scenario, a few carriers are using a form of Mobile VoIP, UMA, to support better indoor coverage and off-load macro networks.”<sup>129</sup> Also, Vonage recently announced that Apple has approved its mobile application for the iPhone and iPod Touch.<sup>130</sup> The company is “currently conducting a beta test and general availability [of the mobile application] will be announced at a later date.”<sup>131</sup> Skype offers a mobile version of its peer-to-peer (P2P) VoIP phone service, which can be downloaded to personal mobile devices. Skype also markets mobile phones with the Skype service built in.<sup>132</sup> With WiFi capabilities, Skype Mobile allows its users to call other Skype users for free and to call everyone else for the same rates as those that apply to a PC-based Skype account.<sup>133</sup>

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[predicts-mobile-voip-will-generate-annual.htm](#) (last visited Sept. 19, 2009); *see also* Press Release, In-Stat, Mobile VoIP Could Transform Mobile Landscape (Sept. 15, 2009), <http://www.instat.com/press.asp?ID=2618&sku=IN0904428MCM>.

<sup>129</sup> *Id.*

<sup>130</sup> *See* Press Release, Vonage, Vonage Obtains Application Approval for iTunes App Store (Sept. 1, 2009), <http://pr.vonage.com/releasedetail.cfm?ReleaseID=406478>.

<sup>131</sup> *Id.*

<sup>132</sup> *See* Skype, Skype on your Mobile, <http://www.skype.com/mobile/> (last visited Sept. 27, 2009)

<sup>133</sup> *See* Mobile VoIP Review, Skype Mobile Review, <http://www.mobilevoipreview.com/skype-mobile-review/> (last visited Sept. 27, 2009).

In addition, Google is using its considerable resources to make inroads into the mobile market with Google Voice.<sup>134</sup> Google Voice offers its users a separate interface (a phone number not tied to any particular device) through which they can make phone calls and send text messages, listen to voice mails and read transcripts of them, and select which mobile or landline phones they want calls to reach. Google Voice can be downloaded onto mobile devices,<sup>135</sup> and operates in conjunction with the user's underlying voice and data plan.

As the foregoing discussion shows, the VoIP market represents yet another growing competitive force in the mobile wireless marketplace.

Intermodal Competitors. Finally, any analysis of competition in the wireless space must also account for rival *intermodal* offerings. Mobile wireless providers face intermodal competition from traditional wireline and cable providers, who offer voice, data, and video service functionally similar to the services they offer themselves. For example, some consumers may choose to rely only on wired broadband and forego the benefits of a mobile broadband offering. Licensed wireless providers also face competition from Wi-Fi Internet access, which is increasingly widely available either free or for a nominal cost. An increasing number of retail establishments provide free or inexpensive Wi-Fi Internet access to their customers — including Barnes & Noble, Bob Evans, McDonalds and Staples stores.<sup>136</sup>

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<sup>134</sup> See Google Voice, Google Voice Invitation Request, <https://services.google.com/fb/forms/googlevoiceinvite/> (last visited Sept. 26, 2009); see also Olga Kharif, *Google Voice: Trouble Calling for Skype?*, BUSINESS WEEK ONLINE (July 19, 2009), [http://www.businessweek.com/technology/content/jul2009/tc20090717\\_582966.htm](http://www.businessweek.com/technology/content/jul2009/tc20090717_582966.htm).

<sup>135</sup> Verizon Wireless does not take any actions to preclude the download or use of Google Voice by its subscribers.

<sup>136</sup> See, e.g., Wi-Fi-FreeSpot, Wi-Fi-FreeSpot Directory - locations that offer Free Wi-Fi, <http://www.wififreespot.com/companies.html> (last visited Sept. 27, 2009); TravelPost, Airport Wireless Internet Access Guide, <http://www.travelpost.com/airport-wireless-internet.aspx> (last visited Sept. 27, 2009); Gogo, Gogo Inflight Internet, <http://www.gogoinflight.com> (last visited Sept. 27, 2009). Virtually all hotels and motels (and even many RV parks and campgrounds) offer wireless internet access to their guests — and often to visitors in their public areas as well. See, e.g., Wi-Fi-FreeSpot, Wi-Fi-FreeSpot - hotels, <http://www.wififreespot.com/hotels.html> (last visited Sept. 27, 2009). The increasing availability of public Wi-Fi makes licensed wireless data service, in (continued on next page)

These intermodal offerings are real and meaningful sources of competitive pressure on mobile wireless providers' behavior. And, as the courts have made clear time and again (and as recently as last month), the Commission must consider the role of intermodal competition in the evaluation of markets under its jurisdiction.<sup>137</sup>

## **2. The U.S. Is Among the Least Concentrated Markets Internationally**

Furthermore, any reasoned comparison of the domestic market to markets in other countries demonstrates that the U.S. wireless industry is highly competitive, and that competition is driving investment and innovation.<sup>138</sup> For example, there are more wireless operators in the U.S. than in any other country.<sup>139</sup> As a result, the American market is among the least concentrated in the world. *The top four U.S. wireless providers collectively hold a smaller percentage of the U.S. wireless market based on subscribership than the top four carriers in any other country in the world besides the U.K.*<sup>140</sup> This level of competition is further evidenced by

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particular, subject to a considerable degree of competition from non-traditional providers. That intermodal competition will only increase as 4G wireless service is rolled out, both by traditional wireless companies and by wireless Internet service providers.

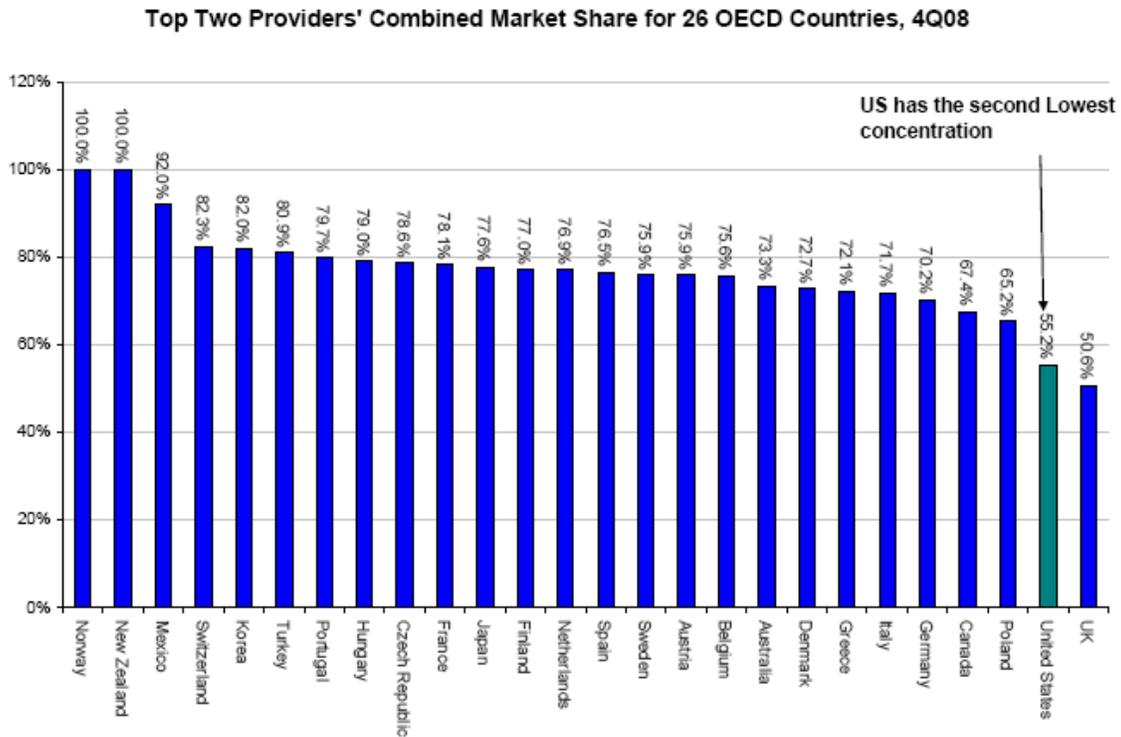
<sup>137</sup> See, e.g., *Comcast Corp. v. FCC*, 2009 U.S. App. LEXIS 19483 at \*13-\*14 (D.C. Cir. Aug. 28, 2009) (citing *Time Warner Entm't Co. v. FCC*, 240 F.3d 1126, 1134 (2001) (Commission must consider competition from direct broadcast satellite providers in evaluating competition in the cable market) (citation omitted)); *United States Telecom Ass'n v. FCC*, 359 F.3d 554, 572-73 (D.C. Cir. 2004) (stating that in evaluating competition for purposes of incumbent LEC unbundling, "the Commission cannot ignore intermodal alternatives"); *United States Telecom Ass'n v. FCC*, 290 F.3d 415, 428-30 (D.C. Cir. 2002) (rejecting conclusions regarding competition in wireline broadband Internet access market for failure to consider competition from cable-modem service).

<sup>138</sup> CTIA, THE UNITED STATES AND WORLD WIRELESS MARKETS: COMPETITION AND INNOVATION ARE DRIVING WIRELESS VALUE IN THE U.S. 6-7 (May 2009) (showing mobile operator market share by subscribership and market concentration using the Herfindahl-Hirschman Index ("HHI")) ("CTIA, WIRELESS MARKETS"), attached to *Ex Parte* Notice from Christopher Guttman-McCabe, CTIA, to Marlene H. Dortch, Secretary, FCC, RM-11361 et al. (May 12, 2009); see also BANK OF AMERICA – MERRILL LYNCH, GLOBAL WIRELESS MATRIX 2Q09 2 tbl. 1 (June 25, 2009) (depicting HHI values for 22 developed countries) ("MERRILL LYNCH, GLOBAL WIRELESS MATRIX 2Q09").

<sup>139</sup> CTIA, MARKET CONCENTRATION 2 (Aug. 14, 2009) (citing BANK OF AMERICA – MERRILL LYNCH, GLOBAL WIRELESS MATRIX 4Q08 (Dec. 2008)) ("CTIA, MARKET CONCENTRATION"), attached to *Ex Parte* Notice from Christopher Guttman-McCabe, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 et al. (filed Aug. 14, 2009).

<sup>140</sup> *Id.*

the fact that, in contrast to the U.S., the top four carriers in 23 of the 26 Organization for Economic Co-operation and Development (“OECD”) countries have 100% of the market and the top *three* carriers in 13 of the OECD countries have 100% of the market.<sup>141</sup> Similarly, as demonstrated in the chart below, historical data show that the top two U.S. carriers – Verizon Wireless and AT&T – possess a lower combined market share than the top two providers in all of the 26 OECD countries except for the U.K.<sup>142</sup> If the proposed Orange/T-Mobile merger in the U.K. proceeds, the United States will rank as the least concentrated market in this respect:



Source: CTIA, WIRELESS MARKETS.

<sup>141</sup> *Id.*

<sup>142</sup> CTIA, WIRELESS MARKETS at 8.

Likewise, although HHIs are not determinative in any assessment of competition,<sup>143</sup> it is worth noting that the HHI score for the U.S. is the second-lowest of the 26 OECD countries. While the chart below does not show the impact of the Verizon Wireless/ALLTEL transaction, the note to the chart calculates a post-transaction HHI that would rank the United States below only the United Kingdom (pending the Orange/T-Mobile transaction):

Wireless Mobile Competition in OECD Countries, 4Q08						
HHI Values						
Operators	1	2	3	4	Others	HHI Sum
Australia	1,656.49	1,062.76	324.00	75.69	0.00	3,118.94
Austria	1,814.76	1,036.84	380.25	33.64	0.00	3,265.49
Belgium	1,998.09	954.81	595.36	0.00	0.00	3,548.26
Canada	1,354.24	936.36	806.56	4.00	4.84	3,106.00
Czech Republic	1,592.01	1,497.69	453.69	0.00	0.00	3,543.39
Denmark	2,134.44	702.25	475.24	31.36	0.00	3,343.29
Finland	1,560.25	1,406.25	533.61	0.00	0.00	3,500.11
France	2,218.41	1,310.44	278.89	0.00	0.00	3,807.74
Germany	1,332.25	1,135.69	275.56	174.24	0.00	2,917.74
Greece	1,697.44	954.81	778.41	0.00	0.00	3,430.66
Hungary	1,927.21	1,232.01	479.61	0.00	0.00	3,638.83
Italy	1,482.25	1,102.24	349.69	94.09	0.00	3,028.27
Japan	2,460.16	784.00	334.89	17.64	0.00	3,596.69
Korea	2,550.25	992.25	324.00	0.00	0.00	3,866.50
Mexico	5,227.29	388.09	20.25	12.25	0.00	5,647.88
Netherlands	2,480.04	729.00	533.61	0.00	0.00	3,742.65
New Zealand	2,777.29	2,237.29	0.00	0.00	0.00	5,014.58
Norway	3,069.16	1,989.16	0.00	0.00	0.00	5,058.32
Poland	1,082.41	1,043.29	912.04	21.16	0.00	3,058.90
Portugal	1,953.64	1,260.25	412.09	0.00	0.00	3,625.98
Spain	2,025.00	992.25	470.89	3.24	0.00	3,491.38
Sweden	2,171.56	858.49	275.56	54.76	0.00	3,360.37
Switzerland	3,831.61	416.16	316.84	0.00	0.00	4,564.61
Turkey	3,102.49	635.04	364.81	0.00	0.00	4,102.34
United Kingdom	650.25	630.01	484.00	436.81	42.25	2,243.32
United States*	812.25	712.89	331.24	146.41	210.25	2,213.04

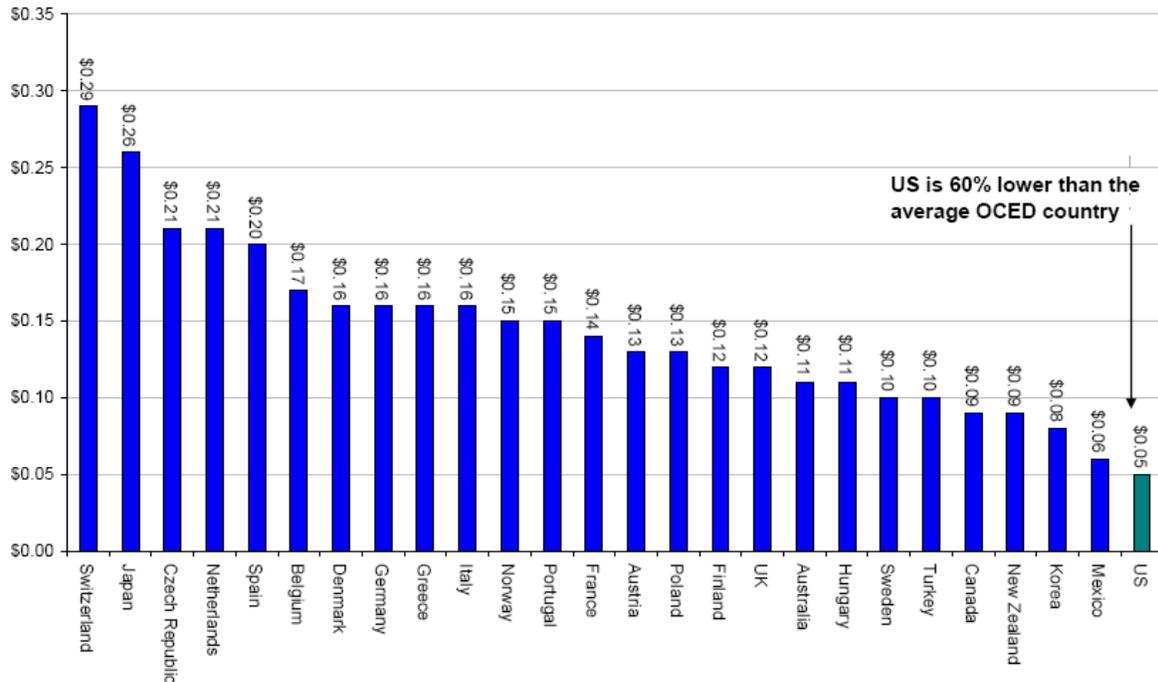
Note that this calculation actually overstates the YE2008 HHI for the US, as it counts all "others" as a single operator with a 14.5% market share, instead of as 145 separate operators, with market shares ranging from 5% to less than 0.001%. Also note that when the United State numbers are adjusted to account for the Verizon Wireless – Alltel transaction (which took place in 1Q09) the overstated U.S. HHI still rises to only 2280. Source: Merrill Lynch, "Global Wireless Matrix 4Q08"

Source: CTIA, WIRELESS MARKETS.

<sup>143</sup> See *supra* Part II.B.

U.S. mobile wireless subscribers are reaping the benefits of this competition. Today, wireless carriers in the U.S. earn the lowest revenue per minute of any other OECD country:

**Comparative Revenue Per Minute in 26 OECD Countries, 4Q08**

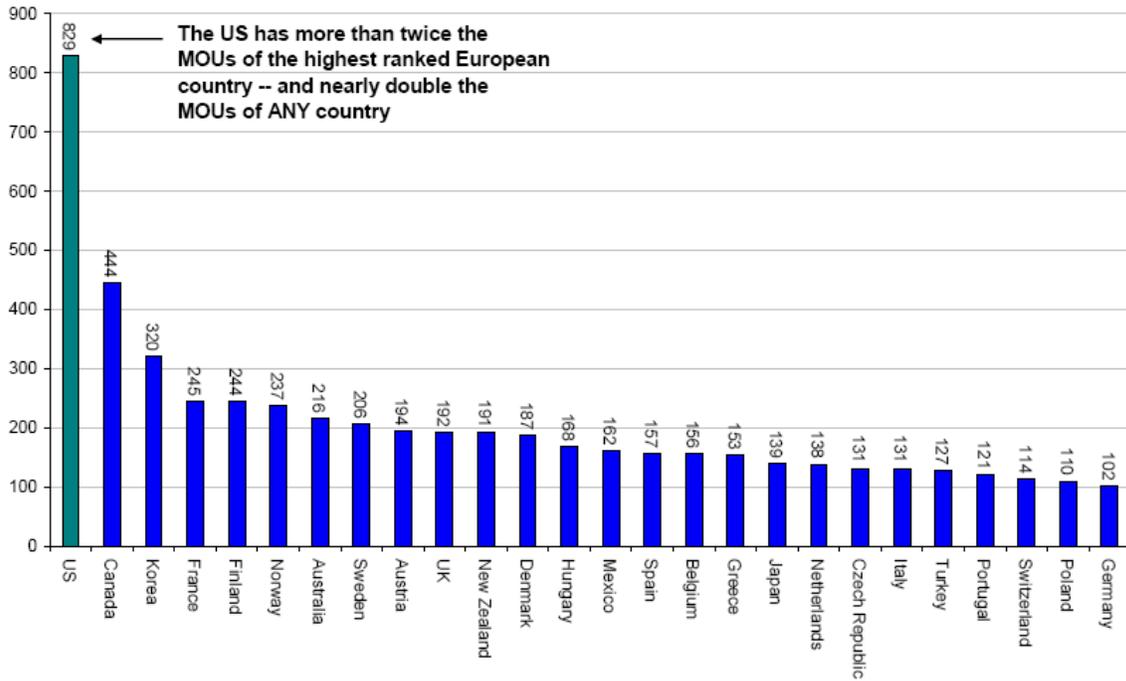


Source: CTIA, WIRELESS MARKETS.

Further, U.S. wireless subscribers use almost twice as many MOUs as users in any other country.<sup>144</sup> Americans average 829 MOUs per month – nearly *five times* the European figure. Consumers in the nations with the second-, third- and fourth-highest usage figures – Canada, South Korea, and France – average only 444, 320, and 245 MOUs per month, respectively:

<sup>144</sup> CTIA, MARKET CONCENTRATION at 2.

### Comparative Monthly Wireless MOUs in 26 OECD Countries, 4Q08



Source: CTIA, WIRELESS MARKETS.

In addition, more handsets are available in the U.S. than in any other country in the world.<sup>145</sup> Specifically, more than 630 different wireless handsets are available in the U.S., while only 147 different handsets are available in the U.K.<sup>146</sup> These U.S. handsets are manufactured and produced by more than 30 different manufacturers:

<sup>145</sup> CTIA, HANDSET INNOVATION, attached to *Ex Parte* Notice from Christopher Guttman-McCabe, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 *et al.* (filed Aug. 14, 2009).

<sup>146</sup> *Id.*

HANDSET MANUFACTURERS PRODUCING/SELLING IN THE UNITED STATES		
Alcatel	HTC	PCD
Apple	Huawei	Research in Motion
ASUS	Jitterbug	Samsung
Axxesstel	Kyocera	Sanyo
BandRich	LG	Sharp
BenQ	Motorola	Siemens
Cal-Comp	Nokia	Sierra Wireless
Casio	Novatel Wireless	Sony Ericsson
Firefly	Option	Uniden
HP	Palm	Waxess USA
	Pantech & Curitel	ZTE

Source: CTIA, WIRELESS MARKETS.

Low revenues per minute, high minutes of use, and diversity of handsets translate into unparalleled value and competition for U.S. consumers' dollars – value exceeding that reaped by customers in other nations.

### 3. New Providers Enter the Market with Relative Ease

A market's competitiveness is also buttressed by the ability of new providers to enter the market. As demonstrated below with respect to facilities-based entry, the wireless market performs very well along this vector. These facilities-based carriers are joined by the diverse array of reseller/MVNOs that enter and exit the market with relative ease.<sup>147</sup>

***New Spectrum.*** Recent expansion in the availability of licensed spectrum is increasing competition. The AWS and 700 MHz auctions resulted in substantial license acquisitions by new and incumbent service providers other than the four nationwide carriers, as demonstrated in the following chart:

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<sup>147</sup> For further discussion, see *supra* Section III.A.1 (discussing the MVNO/reseller role in the wireless market).

<b>Entity</b>	<b>Auction</b>	<b>Number of Licenses Acquired</b>	<b>Number of POPs</b>
SpectrumCo (consortium of new entrant cable companies and Sprint)	AWS <sup>148</sup>	137	267 million
MetroPCS	AWS	8	144.5 million
Leap/Cricket	AWS	100 (one through Denali Wireless)	176 million
AWS Wireless (owned by NextWave)	AWS	154	60 million
Red Rock Spectrum (now Stelera Wireless)	AWS	42	5.5 million
Cable One (owned by the Washington Post)	AWS	30	4.8 million
Barat Wireless (an entity in which TDS holds an interest through US Cellular)	AWS	17	41.6 million
Atlantic Wireless (an equity-backed entity)	AWS	15	35.8 million
Manifest Wireless (subsidiary of DBS operator DISH)	700 MHz <sup>149</sup>	168	217.2 million
Cox Wireless	700 MHz	22	20.7 million
Vulcan Spectrum (owned by Paul Allen)	700 MHz	2	7 million
King Street (partially owned by US Cellular)	700 MHz	152	40.6 million
CenturyTel	700 MHz	69	17.7 million
Cavalier Wireless	700 MHz	35	26.8 million
Cellular South	700 MHz	24	14.9 million
Triad 700	700 MHz	36	11.8 million
Continuum	700 MHz	10	12 million
Qualcomm	700 MHz	8	68.5 million

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<sup>148</sup> Data compiled from FCC databases containing results of FCC Auction 66. See FCC, Auction 66, Advanced Wireless Services (AWS-1), [http://wireless.fcc.gov/auctions/default.htm?job=auction\\_summary&id=66](http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=66) (follow “Closing Charts, Bidder Data” hyperlink).

<sup>149</sup> Data compiled from FCC databases containing results of FCC Auction 73. See FCC, Auction 73, 700 MHz Band, [http://wireless.fcc.gov/auctions/default.htm?job=auction\\_summary&id=73](http://wireless.fcc.gov/auctions/default.htm?job=auction_summary&id=73).

Indeed, out of the 1,087 licenses acquired in the AWS auction, 906 were won by non-nationwide wireless service providers.<sup>150</sup> And more than half of the licenses won were acquired by small businesses that claimed designated entity status.<sup>151</sup> The 700 MHz auction provided similar opportunities for new entrants and non-nationwide operators. While high-profile player Google dropped out of the auction,<sup>152</sup> a non-nationwide wireless service provider won a license in every market.<sup>153</sup> Non-nationwide service providers won 754 (or 69%) of the 1090 licenses sold; 55% of the winning bidders claimed designated entity bidding credits as a small businesses.<sup>154</sup> There also was substantial interest in rural areas among new players – 75 new entities won 428 licenses in 305 rural service areas.<sup>155</sup>

These efforts, combined with the Commission's removing restrictions from the BRS/EBS spectrum, have created a significant entry vehicle for a large number of potential providers, large and small, local, regional and national. An additional 50 MHz of spectrum remains in the Commission's cupboard as the agency weighs appropriate service and technical rules.<sup>156</sup> And the FCC and NTIA have tools at their disposal to identify additional spectrum for licensed

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<sup>150</sup> *See id.*

<sup>151</sup> News Release, FCC, Statement of Chairman Kevin J. Martin on the Conclusion of Advanced Wireless Services Auction (Sept. 18, 2006), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-267473A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-267473A1.pdf).

<sup>152</sup> Despite its pre-auction clamor for a new entrant, Google chose to drop out of the auction, although it could have topped Verizon Wireless's entire 700 MHz C Block bid for an additional \$242 million (less than Google's market cap increased each Wall Street trading day throughout 2007); *see also* Miguel Helft, *An Auction That Google Was Content to Lose*, N.Y. TIMES, Apr. 4, 2008, <http://www.nytimes.com/2008/04/04/technology/04auction.html>.

<sup>153</sup> News Release, FCC, Statement of Chairman Kevin J. Martin (Mar. 20, 2008), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-280968A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-280968A1.pdf).

<sup>154</sup> *Id.*

<sup>155</sup> *Id.*

<sup>156</sup> The following spectrum rights remain unassigned: *AWS-2/AWS-3*: 40 MHz, in the 1.9 GHz and 2.0 GHz bands; and *700 MHz*: 10 MHz D Block.

wireless broadband use that would create even more opportunities for entry and expanded bandwidth.

***Secondary Markets.*** A dynamic secondary market is an important spectrum management tool that allows spectrum to flow to its best and most efficient use as demand and supply conditions change.<sup>157</sup> The Commission has taken several steps to facilitate wireless service providers' access to spectrum in the secondary market, and these policies have helped achieve the Commission's goal of "permit[ting] spectrum to flow more freely among users and uses in response to economic demand."<sup>158</sup>

First, in 1996, the Commission expanded the ability of wireless licensees to engage in secondary market transactions through the partitioning of licensed service areas and/or the disaggregation of spectrum.<sup>159</sup> It concluded at the time that these options can provide licensees with the flexibility to use spectrum more efficiently, increase opportunities for entry into the wireless market, speed service to unserved and underserved areas, and provide a funding source to enable licensees to innovate and build out their systems.<sup>160</sup> The Commission later found that

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<sup>157</sup> See JOHN W. MAYO AND SCOTT WALLSTEN, ENABLING EFFICIENT WIRELESS COMMUNICATIONS: THE ROLE OF SECONDARY SPECTRUM MARKETS 2 (July 2009), <http://cbpp.georgetown.edu/75849.html> ("MAYO-WALLSTEN").

<sup>158</sup> Fostering Innovation and Investment in the Wireless Communications Market; a National Broadband Plan for Our Future, *Notice of Inquiry*, FCC 09-66, ¶ 33 n.27 (rel. Aug. 27, 2009) ("*Innovation NOI*"); see also Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503, 17505 ¶ 1 (2004).

<sup>159</sup> See Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees and Implementation of Section 257 of the Communications Act – Elimination of Market Entry Barriers, *Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 21831 (1996) (adopting rules permitting partitioning and disaggregation by all broadband PCS licensees, and proposing adopting similar partitioning and disaggregation rules for cellular and General Wireless Communications Services licensees) ("*Partitioning/Disaggregation Order*"), *aff'd* 15 FCC Rcd 8726 (2000); see also Geographic Partitioning and Spectrum Disaggregation by Commercial Mobile Radio Services Licensees, *Second Report and Order*, 15 FCC Rcd 10432 (2000) (adopting rules for spectrum disaggregation by cellular licensees, maintaining existing partitioning rules for initial cellular licensees, and extending partitioning rules to unserved area licensees).

<sup>160</sup> *Partitioning/Disaggregation Order*, 11 FCC Rcd at 21836-38 ¶¶ 3-4.

these policies also help bring wireless services into rural areas by allowing rural carriers to purchase licenses that best meet their service area and financial needs.<sup>161</sup> The Commission's rules permitting partitioning and disaggregation have resulted in the creation of hundreds of new licenses and have proved an effective means of ensuring spectrum is used efficiently by those best able to use it.<sup>162</sup>

In 2000, the Commission initiated a far-reaching secondary market policy review designed to promote more efficient use of spectrum, remove regulatory uncertainties, and establish clear policies and rules concerning spectrum leasing.<sup>163</sup> In 2003, it authorized the leasing of spectrum usage rights in the secondary market, finding that providing a diverse array of parties the opportunity to access spectrum through leasing arrangements would “significantly advance our goal of promoting facilities-based competition in broadband and other communications services as well as our objective to ensure more efficient, intensive, and innovative uses of spectrum.”<sup>164</sup> With respect to some leasing arrangements (*e.g.*, spectrum manager leases), the Commission subsequently eliminated altogether the requirement of prior regulatory approval and expanded the number of wireless services whose licensees can avail

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<sup>161</sup> Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services, *Notice of Inquiry*, 17 FCC Rcd 25554, 25558-59 ¶ 8 (2002).

<sup>162</sup> In fact, of the 102 original A Block and B Block MTA PCS licenses, only 17 have not been partitioned and/or disaggregated, resulting in 717 active A and B Block PCS licenses today.

<sup>163</sup> See Principles for Promoting the Efficient Use of Spectrum by Encouraging the Development of Secondary Markets, *Policy Statement*, 15 FCC Rcd 24178 (2000); Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Notice of Proposed Rulemaking*, 15 FCC Rcd 24203, 24208-33 ¶¶ 14-82 (2000).

<sup>164</sup> See Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Report and Order and Further Notice of Proposed Rulemaking*, 18 FCC Rcd 20604, 20623 ¶ 39 (2003).

themselves of the leasing option.<sup>165</sup> At the same time, the Commission made changes to its application processing rules to streamline the approval process for leases and transfers/assignment, with many transactions qualifying for “immediate approval procedures.”<sup>166</sup> These policy shifts have reduced the average time for the Commission to act on an application proposing transfer of a PCS license from 151 days in 1998 to approximately 30-40 days today.<sup>167</sup>

All of these Commission reforms have significantly expanded secondary market opportunities, granting licensees considerable flexibility – as well as a powerful financial incentive – to make unused spectrum available to other carriers. According to data compiled from the Commission’s Universal Licensing System (“ULS”), the number of approved transfer/assignment applications jumped from an average of roughly 620 per year for the years 1997-1999 to an average of over 2,500 for the years 2000-2008.<sup>168</sup> A similar increase is seen in the leasing of spectrum. The number of spectrum lease applications/notifications filed has grown from 120 in 2004 to an average of 573 over the past three calendar years.<sup>169</sup> Indeed, as of September 27, 2009, there were 2,632 spectrum leases. Of those leases, 1,763 were “long term,” with 1,515 involving arrangements where the lessee has *de facto* control over use of the spectrum. Leasing has been utilized by smaller rural carriers, including Commnet Wireless, GCI Communication, Long Lines Wireless, MTPCS, Pioneer Telephone, RSA 1 Limited Partnership

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<sup>165</sup> See Promoting Efficient Use of Spectrum Through Elimination of Barriers to the Development of Secondary Markets, *Second Report and Order, Order on Reconsideration, and Second Further Notice of Proposed Rulemaking*, 19 FCC Rcd 17503, 17528-36 ¶¶ 51-66 (2004).

<sup>166</sup> *Id.* at 17509-28 ¶¶ 10-50.

<sup>167</sup> MAYO-WALLSTEN at 26.

<sup>168</sup> *Id.* at 21, Table 3. These figures are for approved applications, and thus do not reflect the total number of separate licenses or service areas in which spectrum was transferred. The primary radio services reflected in this calculation are Cellular, PCS, Paging, BRS, EBS, Microwave, Public Safety, Land Mobile, Industrial/Business, and Coast Guard.

<sup>169</sup> *Id.* at 22-23, Tables 4 and 5.

d/b/a Cellular 29 Plus, and USA Communications. In addition, at least one provider has gained access to a nationwide license pursuant to a spectrum leasing arrangement.<sup>170</sup>

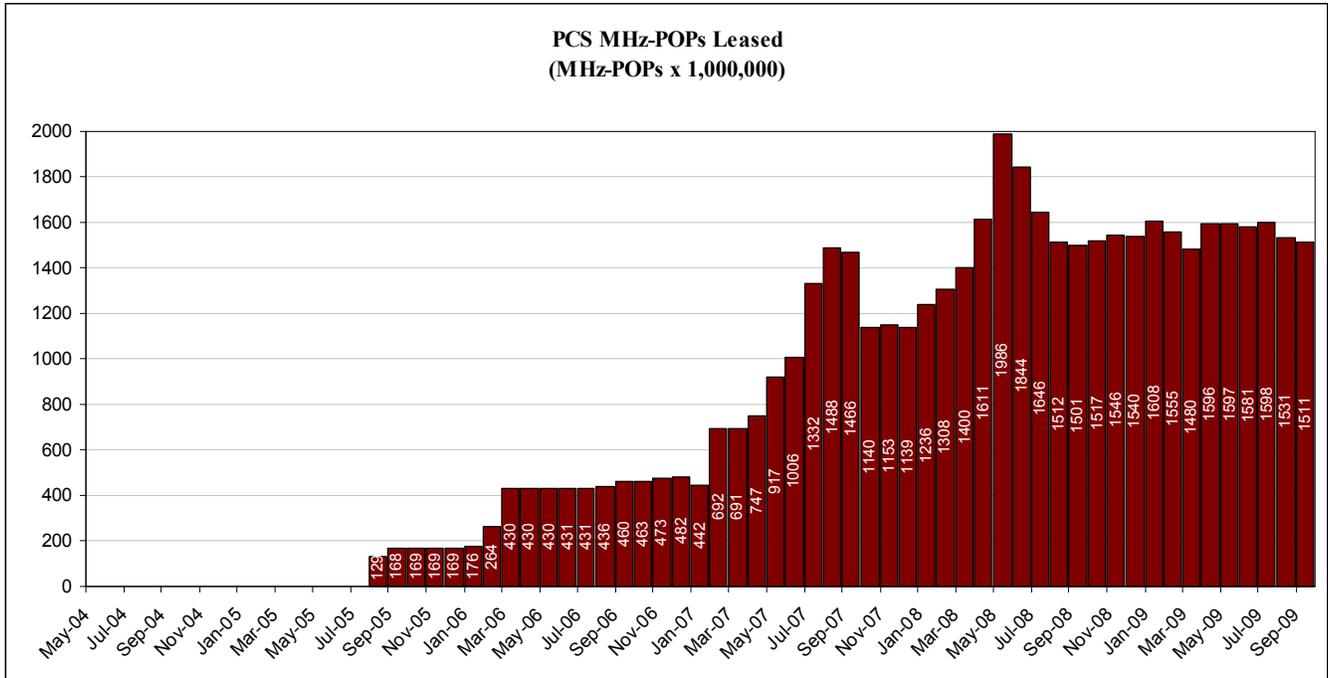
To analyze the efficacy of the leasing option, Verizon Wireless undertook an examination of ULS data related to active leases of broadband PCS spectrum.<sup>171</sup> Verizon Wireless selected broadband PCS as being representative of a mature, market-area licensed service appropriate for leasing (unlike cellular, which is largely site-licensed, and the BRS/EBS band, where a large number of leases pre-date the lease filing system and are therefore unavailable for analysis).<sup>172</sup> The results in the chart below demonstrate that, in fact, secondary markets are being widely used and have a broad impact on mobile spectrum:

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<sup>170</sup> Long-Term *De Facto* Transfer Lease Application, File No. 0003108073 (filed July 17, 2008); News Release, Crown Castle International, Crown Castle Announces Long-Term Modeo Spectrum Lease (July 23, 2007) (announcing ULS Lease ID L000002305, covering the 1670-1675 MHz band), <http://investor.crowncastle.com/releasedetail.cfm?ReleaseID=255947>.

<sup>171</sup> While Mayo & Wallsten have performed some analysis of the FCC's secondary markets, their analysis concentrated on the number of completed leases. Verizon Wireless's evaluation of the number of MHz-POPs actually under lease at any given point in time provides another metric for assessing the impact of secondary markets.

<sup>172</sup> ULS lease data for PCS authorizations, database extract for Market Based Services as of 9/20/2009. Data limited to "CW" (PCS) leases in HD table, and net additions/subtractions to total amounts under lease derived by multiplying POPs, as defined in MP table, by frequency bands under lease as shown in MF table, and summing by lease. Leased MHz-POPs increased upon Grant Date for lease in HD table and subtracted upon Cancellation Date shown in HD table. Does not include a small number of leases for undefined areas where POPs in MP table was zero or null value. More information regarding the data contained in ULS records can be found in the ULS data dictionary, [http://wireless.fcc.gov/uls/data/documentation/pa\\_ddef38.pdf](http://wireless.fcc.gov/uls/data/documentation/pa_ddef38.pdf).



*Total Broadband PCS MHz-POPs Subject to Lease*

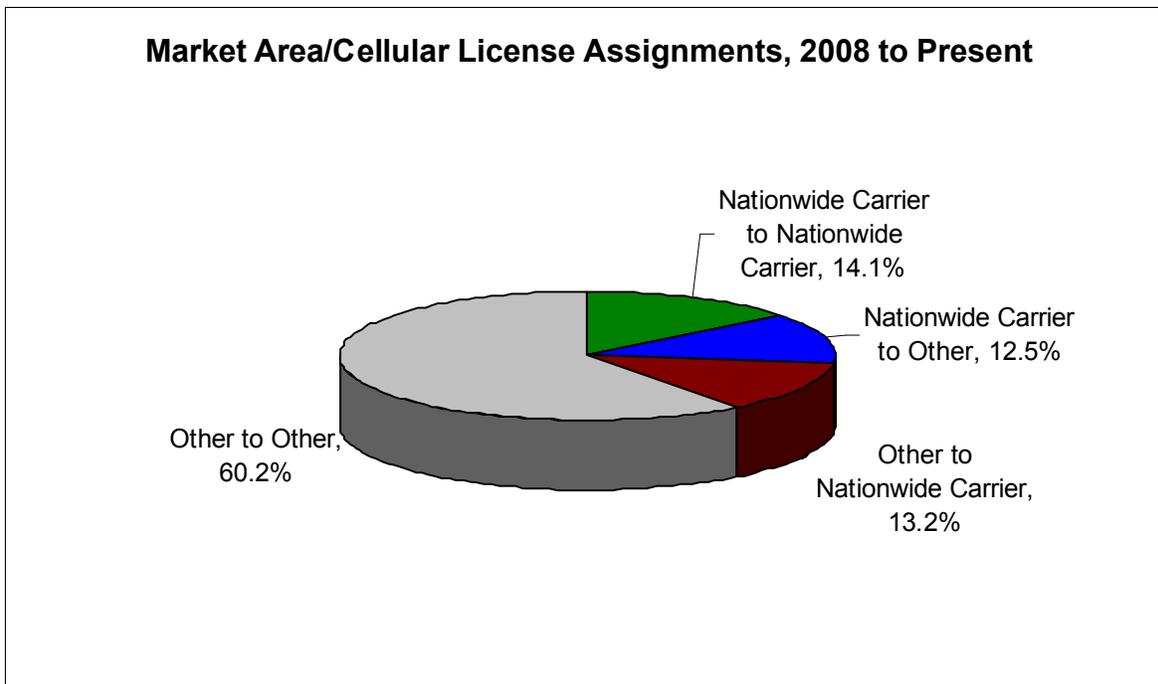
In fact, the net PCS MHz-POPs under lease at present is roughly equivalent to a lease of 5 MHz nationwide.

There is no merit to the claim that small carriers cannot obtain spectrum through market-based mechanisms. To evaluate this assertion, Verizon Wireless analyzed assignments of market-area and cellular authorizations from 2008 through the present.<sup>173</sup> Verizon Wireless identified, for each assignment transaction, whether the assignee or assignor was affiliated with Verizon Wireless, AT&T, Sprint, or T-Mobile (“Nationwide Carriers”). Based upon those classifications, the data show that the overwhelming majority of such transactions take place between non-Nationwide Carriers. Moreover, the percentage of transactions where non-Nationwide Carriers assigned spectrum to Nationwide Carriers was almost exactly balanced by

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<sup>173</sup> Verizon Wireless obtained data from the FCC’s ULS databases. Verizon Wireless limited the dataset to those applications with a consummated status, where the consummation occurred after Jan. 1, 2008. Verizon Wireless also eliminated those applications that did not involve at least one market-based license or cellular license, defined as those authorizations that are currently “active” in either the L\_Market or L\_Cell database files.

transactions involving the assignment of spectrum from Nationwide Carriers to non-Nationwide Carriers:



*License Assignment Categories, 2008 to Present*

The robust state of the secondary market for the purchase and lease of spectrum, and the ways in which that market serves small and large carriers alike, is illustrated by the emergence of marketplace actors such as Spectrum Bridge Inc., which serves as a clearinghouse for secondary market transactions. Spectrum Bridge provides “asset management tools and [a] comprehensive spectrum database” for entities ranging from “the smallest of local companies to the largest global spectrum holders and users.”<sup>174</sup> Using Spectrum Bridge’s SpecEx, a marketplace for spectrum, wireless companies can buy, sell and lease rights to their spectrum.<sup>175</sup> Indeed, the

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<sup>174</sup> Spectrum Bridge, About Us, [http://spectrumbridge.com/web/index.php?option=com\\_content&view=article&id=54&Itemid=76](http://spectrumbridge.com/web/index.php?option=com_content&view=article&id=54&Itemid=76) (last visited Sept. 27, 2009).

<sup>175</sup> *See id.*

president of the Rural Telecom Group (“RTG”) stated that “Spectrum Bridge simplified the process of finding the right spectrum to expand my clients’ and RTG members’ wireless networks. I was able to quickly search through hundreds of millions of dollars worth of available spectrum and find exactly what my clients needed.”<sup>176</sup> As of September 2009, SpecEx listed licenses in spectrum bands including 700 MHz, AWS, EBS, and PCS Broadband as available for purchase or lease across an assortment of states.<sup>177</sup>

In a well-functioning secondary market, spectrum will migrate to more efficient uses as supply and demand shift.<sup>178</sup> It is clear that the Commission’s existing secondary market policies are enabling access to spectrum. Indeed, as shown above, almost three-quarters of the cellular assignments over the last two years gave non-Nationwide Carriers access to additional spectrum. Moreover, approximately 10 billion MHz-pops of PCS spectrum have changed hands annually since 2003.<sup>179</sup> Verizon Wireless urges the Commission to “fashion policies that better enable the growth and development of [secondary] markets.”<sup>180</sup> Through continued Commission efforts to expand secondary market opportunities and facilitate secondary market transactions, the Commission will most effectively ensure continued access to spectrum, access which will promote innovation and investment.

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<sup>176</sup> Press Release, Spectrum Bridge, Wireless Carriers, Utilities, Railways And Others Have Made Specex.Com The Number One Source For Secondary Market Spectrum (Aug. 10, 2009), [http://spectrumbridge.com/pdf/SpecExNumber1SourceSecondarySpectrum\\_7-30.pdf](http://spectrumbridge.com/pdf/SpecExNumber1SourceSecondarySpectrum_7-30.pdf).

<sup>177</sup> See SpecEx, Spectrum Listing Search Options, <http://www.specex.com/marketplace/search.aspx> (last visited Sept. 27, 2009). Advocates for some smaller wireless carriers claim that consolidation has made it impossible for them to compete as they are unable to acquire spectrum from larger carriers. See Petition for Rulemaking of Rural Telecommunication Group, Inc., RM-11498 (filed Jul. 16, 2008). The statistics cited above, as well as the RTG’s statement, belie these claims.

<sup>178</sup> MAYO-WALLSTEN at 2.

<sup>179</sup> *Id.* at 24.

<sup>180</sup> *Id.* at 27.

**Roaming.** The roaming marketplace also underscores the high level of competition in the wireless market. Roaming agreements have long enabled carriers to offer their customers service in markets where they are not generally licensed, thereby enhancing carriers' ability to compete. Healthy competition in the CMRS marketplace has led to increased build-out and exerted downward pressure on roaming rates.

For years, some cellular carriers serving rural markets extracted high roaming fees from carriers looking to offer their customers an expanded service area. Rather than seeking regulatory intervention to lower these "tollgate" roaming rates, carriers chose to work within the market structure to respond. Many carriers elected to eliminate the most egregious roaming costs by expanding into rural markets through the acquisition of new licenses or the build-out of their footprint. Due to these efforts, competition has expanded into rural markets more rapidly and roaming rates have steadily declined. Indeed, Verizon Wireless in 2005 observed that average roaming rates in its experience had fallen to about 10% of what they were ten years earlier.<sup>181</sup> And in the last five years, the rates set forth in Verizon Wireless's roaming agreements have dropped, on average, roughly 60% – and *roughly 35% in the past two years alone*. As further evidence that roaming is an increasingly efficient market, the Commission recently found that "the contribution of roaming revenues to total service revenues continued its decline ... to 2.7 percent in 2007, down from over ten percent seven years ago."<sup>182</sup>

These reductions in roaming revenues have worked to the direct benefit of consumers. As noted by the Commission, "[t]oday, all of the nationwide operators, and many of the smaller operators, offer some version of a national rate pricing plan in which customers can purchase a

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<sup>181</sup> See Comments of Verizon Wireless, WT Docket No. 05-265, 11 (filed Nov. 28, 2005).

<sup>182</sup> *Thirteenth Report*, 24 FCC Rcd at 6260-61 ¶¶ 76-77.

bucket of minutes to use on a nationwide network without incurring roaming or long distance charges.”<sup>183</sup> MVNOs, as well, have introduced similar rate plans. In July 2008, for example, MVNO Virgin Mobile unveiled a plan for prepaid users that did not assess roaming fees.<sup>184</sup>

Overall, Commission data confirm a correlation between falling roaming revenues as a percentage of overall revenues and aggressive carrier network build-out in new areas:

<b>Year</b>	<b>Customer Roaming Revenues as Percentage of Total Service Revenues</b>	<b>Percentage of U.S. Population Estimated to be Covered by 3 or More Wireless Service Providers</b>	<b>Percentage of U.S. Population Estimated to be Covered by 4 or More Wireless Service Providers</b>
1998	10.6%	Statistics not collected	Statistics not collected
1999	10.2%	Statistics not collected	Statistics not collected
2000	7.4%	87.8%	79.8%
2001	5.7%	90.8%	84.4%
2002	5.1%	94.1%	88.7%
2003	4.3%	94.7%	89.3%
2004	4.1%	96.8%	93.0%
2005	3.3%	96.9%	93.2%
2006	2.8%	98.0%	93.8%
2007*	2.7%	95.5%	89.9%

\* Coverage estimates for 2007 are based on Census Blocks whereas coverage estimates prior to 2007 are based on counties, consistent with FCC *Competition Reports*; all figures are derived from FCC *Competition Reports*.

Current Commission policies encourage aggressive buildout. In 2007, the Commission adopted a CMRS automatic roaming requirement but refrained from extending the rule to markets where the requesting carrier holds spectrum rights and thus is expected to build a network to compete directly with the would-be host carrier. The Commission concluded that a mandate for automatic roaming in overlap markets would undermine competition to the detriment of consumers, “negatively affect[ing] build-out in these markets, [and] thus, adversely

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<sup>183</sup> *Id.* ¶ 111.

<sup>184</sup> *Id.* ¶ 118 n.298.

impacting network quality, reliability and coverage.”<sup>185</sup> Verizon Wireless supports the *Roaming Order*’s view in favor of negotiated commercial agreements that allow for home roaming. Nonetheless, after discussions in recent months with policymakers on Capitol Hill and at the Commission, Verizon Wireless offered a proposal that would allow all carriers to avail themselves of home roaming for two years, with the possibility of extending that period under certain circumstances.<sup>186</sup> This compromise is intended to address concerns of other parties that new entrants or those with encumbered spectrum need to be able to obtain roaming even in areas where they themselves hold licenses, while ensuring that the Commission’s goals of incenting investment in network buildout and spectrum utilization are not undermined.

Competitive roaming policies also influence providers’ investment in upgrading their networks. The Commission found in the *Roaming Order* that “allowing competitors in a marketplace to gain competitive advantages from their own innovations results in value to subscribers – in terms of new service offerings and features.”<sup>187</sup> Carriers with advanced services are willing to offer favorable data roaming terms to other carriers that have implemented similar advanced technology, so that customers who buy a new product in their home market can use those capabilities when they travel. Accordingly, carriers offering the new product have the incentive to negotiate with their roaming partners.

The evolution of CDMA data roaming illustrates how such dynamic market incentives work. When Verizon Wireless deployed CDMA 1xRTT technology, it enabled the company to

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<sup>185</sup> Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers, *Report and Order and Further Notice of Proposed Rulemaking*, 22 FCC Rcd 15817, 15834 ¶ 49 (2007) (“*Roaming Order*”).

<sup>186</sup> See *Ex Parte* Letter from John T. Scott, III, Verizon Wireless, to Marlene H. Dortch, Secretary, FCC, WT Docket No. 05-265 *et al.* (Jul. 23, 2009).

<sup>187</sup> *Roaming Order*, 22 FCC Rcd at 15845 ¶ 78.

offer the premier data service. As other CDMA providers implemented 1xRTT and Verizon Wireless's customers sought the services and features that depend upon 1xRTT data as they traveled, the company negotiated reciprocal roaming arrangements. Today, Verizon Wireless makes data roaming available to technologically compatible requesting carriers, and 1xRTT data roaming is commonplace. Similarly, roaming agreements for CDMA EV-DO are becoming more commonplace as other CDMA carriers invest in their own EV-DO networks, and the company has agreements with small and rural wireless carriers. The roaming marketplace thus drives carriers to modernize their networks and advance the public interest. Because the competitive marketplace already provides incentives for carriers to enter into roaming agreements for data services, policymakers should allow market forces to continue to work.

#### **4. Barriers to Customer Switching are Low**

A market's competitiveness is further bolstered by the ability of consumers to change providers. Switching barriers in the mobile wireless space are low. Consumers enjoy substantial market information, benefit from porting, and have a variety of plans available to facilitate switching.

***Consumer Information.*** Consumers enjoy a huge range of easily accessed information regarding the breadth of mobile wireless plans and service provider options. In Topper's words: "[A]s noted in the *Thirteenth Report*, there is a large amount of high quality information available to consumers. Third party publications such as *Consumer Reports* and J.D. Power and Associates provide overviews and comparisons. J.D. Power and Associates posts a semiannual wireless user survey which rates providers by region."<sup>188</sup> *Consumer Reports* provides

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<sup>188</sup> TOPPER at 43-44 (footnote omitted).

information regarding connectivity (service quality) of the major nationwide providers in 23 specific cities, as well as extensive details regarding the features of commonly used devices.<sup>189</sup>

The 30-plus carriers that adhere to the voluntary CTIA Consumer Code also prioritize consumer education as a key driver of the competitive market.<sup>190</sup>

Mobile wireless carriers also offer customers extensive plan-related information in their stores and on their websites, ranging from pricing and usage figures to detailed coverage maps.<sup>191</sup> Numerous carriers, moreover, offer interactive mapping information with street-level coverage to potential customers. These include Verizon Wireless, AT&T, Sprint, T-Mobile, Leap, MetroPCS, Cellular South, and Cincinnati Bell.<sup>192</sup> Verizon Wireless makes available

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<sup>189</sup> *Best Cell-Phone Service*, CONSUMER REPORTS, Jan. 2009, <http://www.consumerreports.org/cro/electronics-computers/phones-mobile-devices/phones/cell-phone-service-providers/cell-phone-service/overview/cell-phone-service-ov.htm> (“Verizon is a standout cell-phone carrier for most people, based on our exclusive best cell phone service survey of readers in 23 cities. The company received high marks from survey respondents in overall satisfaction and customer service, and service is available in most of the country.”) (“CONSUMER REPORTS Survey Results”); Consumer Reports, Cell Phones and Services Buying Guide, <http://www.consumerreports.org/cro/electronics-computers/phones-mobile-devices/cell-phones-services/cell-phone-service-buying-advice/index.htm> (last visited Sept. 29, 2008) (offering advice and recommendations on types of phones, brands, features, and more).

<sup>190</sup> See CTIA, Consumer Code Participants, <http://www.ctia.org/content/index.cfm/AID/10623> (last visited Sept. 27, 2009). In addition, in 2004, the largest national carriers, including Verizon Wireless, also agreed to follow certain uniform nationwide consumer protection practices in conducting their businesses. This agreement, known as the Assurance of Voluntary Compliance (“AVC”), also helps to ensure that consumers are provided with useful and more standardized information covering advertising, point of sale rate and term disclosures, coverage map information, cancellation and trial periods for phone usage, and customer billing formats.

<sup>191</sup> See CTIA CMRS Comments at 35-36. Verizon Wireless offers an online coverage map, which consumers can use to determine anticipated service coverage down to street level or zip code. Consumers can also print the results of their searches. See Verizon Wireless, Coverage Locator, <http://www.verizonwireless.com/b2c/CoverageLocatorController> (last visited Sept. 27, 2009). Separate, searchable maps are available for voice/text services, mobile web, mobile broadband/V CAST features, V CAST Mobile TV, push-to-talk, and prepaid service. Consumers can also use the map site to track directions from one address to another. Verizon Wireless also explains at the site the limitations of the map.

<sup>192</sup> See Verizon Wireless, Coverage Locator, <http://www.verizonwireless.com/b2c/CoverageLocatorController?requesttype=NEWREQUEST&lid=//global//plans//coverage+maps> (last visited Sept. 27, 2009); AT&T, Coverage Viewer, <http://www.wireless.att.com/coverageviewer/> (last visited Sept. 27, 2009); Sprint, Coverage Tool, <http://coverage.sprint.com/IMPACT.jsp?language=EN> (last visited Sept. 27, 2009); T-Mobile, Personal Coverage Check, <http://www.t-mobile.com/coverage/pcc.aspx> (last visited Sept. 27, 2009); Cricket Wireless, Coverage Maps, <http://www.mycricket.com/cricketcoveragemaps/> (last visited Sept. 27, 2009); MetroPCS, Wireless Coverage, <http://www.metropcs.com/coverage/> (last visited Sept. 27, 2009); Cellular, South Coverage and Store Locator, <http://www.>

(continued on next page)

searchable coverage maps for voice/text services, mobile web, mobile broadband/V CAST features, V CAST Mobile TV, push-to-talk, and prepaid service as well.

**Number Portability.** The availability of intra- and intermodal number portability also facilitates customer migration between and among providers.<sup>193</sup> Commission data demonstrate that customers regularly utilize porting to move from one wireless provider to another:

<b>Year</b>	<b>Intramodal Porting (Wireless to Wireless) Total Numbers Ported</b>
2004 <sup>194</sup>	8,912,000
2005	10,643,000
2006	10,270,000
2007	13,286,000
2008	14,424,000

Number Portability Trend

Source: Craig Stroup and John Vu, *Numbering Resource Utilization in the United States*, FCC, Mar. 2009, at 35.

Porting is also fast for a wireless customer who chooses to switch to another provider. The wireless industry implemented intermodal streamlined porting procedures that complete the vast majority of ports in a matter of hours. Recent FCC policy changes designed to increase the ease of porting further reduce switching barriers and enhance competition.<sup>195</sup>

Finally, Verizon Wireless and other carriers take other steps to ease customer migrations.

All major carriers offer a way for customers to automatically backup their address book

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[cellularsouth.com/coverage/](http://cellularsouth.com/coverage/) (last visited Sept. 27, 2009); Cincinnati Bell, Wireless Coverage, <http://www.cincinnati-bell.com/consumer/wireless/coverage/> (last visited Sept. 27, 2009).

<sup>193</sup> See TOPPER at 44; see also 47 C.F.R. § 52.31 (requiring porting).

<sup>194</sup> CMRS carriers in the top 100 MSAs were required to begin providing number portability by November 24, 2003; CMRS outside the top 100 MSAs were required to be capable of porting numbers by May 24, 2004. See 47 C.F.R. § 52.31(a)(1)(iv).

<sup>195</sup> See, e.g., Local Number Portability Porting Interval and Validation Requirements, *Report and Order and Further Notice of Proposed Rulemaking*, 24 FCC Rcd 6084 (2009) (reducing porting interval for simple wireline and intermodal port requests).

information and then access that information using a computer.<sup>196</sup> Customers who are switching carriers can use such tools to transfer their address books, or save and print them to a single document.

In light of the above, consumers who wish to switch providers can do so easily. According to the *Thirteenth Report*, most mobile telephone providers report the rate of switching between carriers, or churn rates, to be between 1.5% and 3.0% per month.<sup>197</sup> Churn rates generally have been trending lower in the past several years, with the nationwide carriers averaging a monthly churn rate of 1.9% in the first quarter of 2008 in comparison to 2.8% seven years earlier.<sup>198</sup> Because satisfaction affects customer churn, and surveys are showing increasing customer satisfaction, it is not surprising that churn may decline.<sup>199</sup>

***Variety of Plans.*** Topper discusses several factors that have severely undercut any alleged switching barrier posed by the structure of contracts:

First, consumers can avoid ETFs [early termination fees] by signing up on a prepaid basis (and many of them do choose that option as indicated by the strong growth of prepaid plans). Second, consumers who enter into postpaid contracts with ETFs can typically cancel service within a grace period of approximately one month. Third, in 2006 Verizon became the first carrier to prorate its ETF such that the fee is reduced each month the customer stays with the plan. In 2007, AT&T, Sprint, and T-Mobile

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<sup>196</sup> See, e.g., Verizon Wireless, Press Release, FusionOne, Verizon and FusionOne Team Up for Multi-Service Sync (Feb. 16, 2009), <http://www.fusionone.com/news/press.php?pressID=177>; AT&T, Mobile Backup, <http://mobilebackup.att.com> (last visited Sept. 27, 2009); Verizon Wireless, Backup Assistant, <http://www.verizonwireless.com/b2c/landingpages/backup.jsp> (last visited Sept. 27, 2009); T-Mobile, Mobile Backup FAQs, <http://support.t-mobile.com/doc/tm23951.xml> (last visited Sept. 27, 2009); Sprint, Sprint® Mobile Sync - My Contacts, [http://www.nextel.com/en/services/organize/sprint\\_mobile\\_sync.shtml](http://www.nextel.com/en/services/organize/sprint_mobile_sync.shtml) (last visited Sept. 27, 2009).

<sup>197</sup> See *Thirteenth Report*, 24 FCC Rcd at 6271 ¶¶ 180-81.

<sup>198</sup> *Id.*

<sup>199</sup> ROSSTON-TOPPER at 24. As discussed by Rosston and Topper, carrier network investments, improved customer care and incentives, as well increasing customer experience over time with wireless network services, have also limited churn rates and reflect an increase in the quality of the customer experience. See *id.*

followed suit with similar policies. Fourth, carriers have recently introduced month-to-month postpaid plans that do not have ETFs. Fifth, the major wireless providers have put in place policies that allow consumers to change contract options without triggering a contract extension. Finally, the Commission cites some evidence that secondary markets for unexpired wireless contracts have developed, in which consumers who want to cancel unexpired contracts can transfer their contracts to other consumers.<sup>200</sup>

Verizon Wireless's plans illustrate this diversity. The company's postpaid calling plans have a minimum service term, usually one or two years. As part of Verizon Wireless's Worry Free Guarantee®, a customer may return his handset and terminate his Customer Agreement within 30 days of activation without any early termination fee whatsoever. After those 30 days, if the Customer Agreement is terminated before the minimum term is complete, an ETF of \$175 is assessed. However, that fee is reduced \$5 per month of service already received.<sup>201</sup> Prepaid plans have no ETFs. Verizon Wireless also offers a month-to-month, no-contract, no-ETF option for all of its nationwide voice and data plans.<sup>202</sup>

#### **B. Mobile Wireless Providers Compete Fiercely on Price and Numerous Other Factors**

Not only does the structure of the mobile wireless marketplace show all the hallmarks of competition, conduct in the market demonstrates vibrant competition as well, with providers slashing rates aggressively while simultaneously enhancing service. Data available for 2009 show that robust price and non-price competition continues to provide consumers this year with lower prices and more choices.

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<sup>200</sup> TOPPER at 46 (footnotes omitted).

<sup>201</sup> See Verizon Wireless, Customer Agreement, [http://www.verizonwireless.com/b2c/globalText?textName=CUSTOMER\\_AGREEMENT&jspName=footer/customerAgreement.jsp](http://www.verizonwireless.com/b2c/globalText?textName=CUSTOMER_AGREEMENT&jspName=footer/customerAgreement.jsp); see also Press Release, Verizon Wireless, Verizon Wireless Expands the 'Worry-Free Wireless Guarantee' It Pioneered, Nov. 16, 2006, <http://news.vzw.com/news/2008/09/pr2008-09-22b.html>.

<sup>202</sup> Press Release, Verizon Wireless, No Contract Required – New Month-To-Month Agreement Gives Verizon Wireless Customers Even More Freedom (Sept. 22, 2008), <http://news.vzw.com/news/2008/09/pr2008-09-22b.html>.

## 1. Price Competition

Price competition in the wireless space is even more intense in 2009, belying any claim that providers exercise market power. Analysts have for years noted the downward pressures on average revenue per user (“ARPU”), driven by declining voice prices.<sup>203</sup> Those pressures have pushed margins down substantially, particularly in recent months. According to SNL Kagan: “[F]ierce competition within the industry is whittling away voice revenues, as one carrier after another plays the price-cut card. Voice ARPU dropped 12 percent from the fourth quarter of 2006 to the fourth quarter of 2008, and the unlimited noncontract voice plans newly on the table for 2009 are going to accelerate that decline and very likely also accelerate churn.”<sup>204</sup>

***Prepaid Market.*** Price-cutting activity in recent months has been fierce in the fast-growing prepaid market. According to some reports, approximately 34% of the growth of the wireless industry in 2008 came from a variety of prepaid plans.<sup>205</sup> Prepaid plans have historically been attractive to those who want to limit their spending, those with only sporadic need for service, and those lacking the means to maintain an ongoing relationship with a provider. Now, the use of prepaid plans by many different users is greatly expanding. “In the last few years, subscribership at [the two largest prepaid] providers have increased by about 30% per year in contrast to an overall industry annual growth rate of about 10%.”<sup>206</sup> Year-over-year

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<sup>203</sup> See, e.g., Gene J. Koprowski, *Competition in Voice Market Squeezes Wireless Carriers*, TECHNEWSWORLD, Jan. 12, 2006, <http://www.technewsworld.com/story/47901.html?wlc=1253992850> (citing Strategy Analytics report on wireless industry performance in third quarter of 2005).

<sup>204</sup> SNL KAGAN APRIL 2009 at 3.

<sup>205</sup> PREPAID WIRELESS SERVICES at 1.

<sup>206</sup> TOPPER at 19 (citing MERRILL LYNCH, GLOBAL WIRELESS MATRIX 2Q09 at 187).

growth in prepaid service more than doubled postpaid growth between the fourth quarter of 2005 and the first quarter of 2009, and in many of those quarters more than tripled postpaid growth.<sup>207</sup>

This growth has also prompted some postpaid providers to capitalize on this growing market trend. T-Mobile, for example, has seen dramatic growth in prepaid services; indeed, prepaid offerings have recently accounted for “[t]he bulk of [its] new subscribers.”<sup>208</sup> Likewise, Sprint appears poised to take a leadership role in the prepaid markets through Boost and its recent acquisition of Virgin Mobile. As Sprint CEO Dan Hesse has stated, “the acquisition of Virgin Mobile USA positions Sprint for even greater success in the prepaid wireless segment.... Prepaid is growing at an unprecedented rate with consumers keenly focused on value. Virgin Mobile is an iconic brand in the marketplace that will complement [the] Boost Mobile brand.”<sup>209</sup> According to Sprint, in this “changing economic environment,” its prepaid offerings are experiencing “strong demand” as its “simple, no long-term contract solution provides good service and value.”<sup>210</sup> Morgan Stanley Research observed several weeks ago that “[t]he unlimited prepaid market has gone from a segment with a few participants and a regional focus to one that is increasingly competitive and nationally focused.”<sup>211</sup> This finding is underscored by the following graph:

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<sup>207</sup> CRAIG MOFFETT ET AL., BERNSTEIN RESEARCH, U.S. WIRELESS: BOOST-ED... IS THE PRE-PAID SUBSCRIBER BOOM FOR REAL? (HINT: MAYBE NOT) 7 (May 11, 2009).

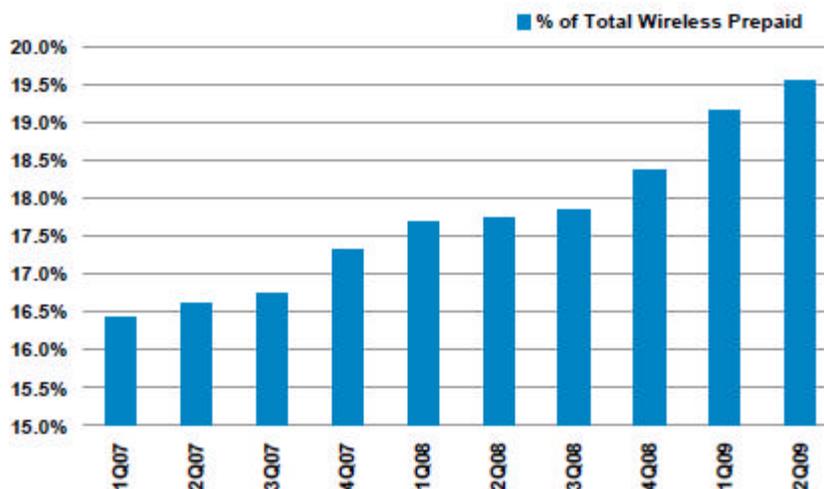
<sup>208</sup> Marguerite Reardon, *T-Mobile USA faces stiff competition*, CNET NEWS, Jan. 29, 2009, [http://news.cnet.com/8301-1035\\_3-10152961-94.html](http://news.cnet.com/8301-1035_3-10152961-94.html).

<sup>209</sup> Cecilia Kang, Sprint Nextel to Acquire Virgin Mobile USA, WASHINGTON POST, July 28, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/28/AR2009072800878.html>.

<sup>210</sup> Sprint, Quarterly Report (Form 10-Q), at 19 (Aug. 4, 2009), <http://investors.sprint.com/phoenix.zhtml?c=127149&p=irol-sec#6443661>.

<sup>211</sup> SIMON FLANNERY AND SEAN ITTEL, MORGAN STANLEY, TELECOM SERVICES: LOWERING LEAP/PCS ESTIMATES ON PREPAID PRESSURES 1 (Sept. 11, 2009) (“LOWERING LEAP”).

## Prepaid Climbs to 19.5% of Total Market from 16.5% Two Years Ago



Source: Morgan Stanley Research<sup>212</sup>

The growth in prepaid offerings has set off an aggressive price war in 2009 among the segment's major participants, which include Sprint (through its "Boost" unit), Leap, TracFone, and Virgin Mobile. In January, Sprint cut its Boost Unlimited price by half – from \$100 to \$50 per month.<sup>213</sup> Following these moves, carriers reduced rates for postpaid and prepaid plans alike. Leap and MetroPCS, "both of whom had business plans predicated on the notion that they would be priced at half the market rate," cut their own prices: Leap to \$45 per month for unlimited talk, long distance, texts and picture text, texts to Mexico, and mobile web; and MetroPCS to \$40 for voice, texting and Web access, and adding unlimited email, navigation and social networking to its \$45 a month unlimited plan.<sup>214</sup> Virgin Mobile also cut its monthly rate to \$50.<sup>215</sup> As

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<sup>212</sup> *Id.* at 2.

<sup>213</sup> TOO MANY COOKS at 1.

<sup>214</sup> *Id.*; see also Cricket Wireless, Cellphone Plans, <http://www.mycricket.com/cricketplans/> (last visited Sept. 26, 2009); Barry Levine, *Sprint's Boost Mobile Will Offer \$50 Unlimited Plan*, NEWSFACTOR.COM, Jan. 15, 2009, [http://www.newsfactor.com/story.xhtml?story\\_id=020000P5OCIO&full\\_skip=1](http://www.newsfactor.com/story.xhtml?story_id=020000P5OCIO&full_skip=1); Marguerite Reardon, *MetroPCS cuts unlimited plan to \$40 a month*, CNET NEWS, July 30, 2009, [http://news.cnet.com/8301-1035\\_3-10300058-94.html?tag=mncol;title](http://news.cnet.com/8301-1035_3-10300058-94.html?tag=mncol;title).

Bernstein Research summarized the state of the prepaid market in April 2009: “A year ago, the benchmark price for unlimited voice and data plans was \$100 per month. A year later, it is \$50.”<sup>216</sup>

But the price war did not end in April. In fact, Morgan Stanley recently called the ongoing prepaid price war “[p]erhaps the most dramatic story of the summer.”<sup>217</sup> In July, TracFone announced an unlimited monthly “Straight Talk” plan, running over the Verizon Wireless network, priced at \$45,<sup>218</sup> as well as a \$30 per month plan offering 1,000 MOUs, 1,000 SMS/MMS messages, and 30 Mbps of data.<sup>219</sup> Just last month, Leap added new services to its existing pricing plans, effectively shifting users into what had been more expensive plans at no additional charge “in what amount[ed] to an 11 percent price cut.”<sup>220</sup> Leap and Virgin also offer prepaid wireless data plans with a variety of options.<sup>221</sup> Prepaid reseller Page Plus began offering the “Unlimited Talk n Text” plan, including “unlimited domestic voice minutes, unlimited domestic text messages, and 20 Megabytes of data transfer,” all for \$39.95 per

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<sup>215</sup> TOO MANY COOKS at 1.

<sup>216</sup> CRAIG MOFFETT ET AL., BERNSTEIN RESEARCH, U.S. WIRELESS: PRE-PAID PRICING... FIFTY IS THE NEW ONE HUNDRED 1 (April 14, 2009) (“U.S. PRE-PAID PRICING”).

<sup>217</sup> LOWERING LEAP at 2.

<sup>218</sup> *Id.*; CRAIG MOFFETT ET AL., BERNSTEIN RESEARCH, WIRELESS LIMBO... HOW LOW CAN YOU GO 1 (July 2, 2009).

<sup>219</sup> MACQUARIE RESEARCH EQUITIES (USA), MORE ME-TOO PREPAID UNLIMITED 1 (Aug. 4, 2009) (“MORE ME TOO PREPAID”); Peter Svensson, *TracFone Tests Unlimited Plan on Verizon*, I STOCK ANALYST, July 15, 2009, <http://www.istockanalyst.com/article/viewiStockNews/articleid/3351958>. Straight Talk phones are currently available for purchase at Wal-Mart store locations in 16 states, *see* Tracfone Wireless, Inc., Straight Talk Locations, <http://www.straighttalk.com/retail> (last visited Sept. 18, 2009). But analysts predict that TracFone will shift to a nationwide footprint soon. *See* LOWERING LEAP at 1-2.

<sup>220</sup> CRAIG MOFFETT ET AL., BERNSTEIN RESEARCH, QUICK TAKE – U.S. TELECOMMUNICATIONS: ANOTHER LEAP INTO THE ABYSS (OF PRE-PAID PRICING) 1 (Aug. 4, 2009) (“QUICK TAKE”).

<sup>221</sup> Rob Pegoraro, *Prepaid Wireless-Data Plans Now Have More to Offer*, WASHINGTON POST, Sept. 13, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/11/AR2009091101299.html>.

month.<sup>222</sup> Needless to say, such movement puts substantial new pricing pressure on all providers.<sup>223</sup>

**Postpaid Market.** Price-cutting is not limited to the prepaid sector. Carriers are cutting rates for their postpaid service packages as well. In February 2008, Verizon Wireless introduced a flat-rate postpaid Nationwide Unlimited Anytime voice plan for \$99 per month, “set[ting] in motion a chain reaction that left the industry teetering on the brink of price war.”<sup>224</sup> AT&T issued a similar offering for the same price, while Sprint and T-Mobile introduced more data-inclusive unlimited voice plans for \$99 per month.<sup>225</sup> T-Mobile reduced postpaid prices to \$50 per month for existing customers.<sup>226</sup> In July 2009, MetroPCS announced that “its \$40 unlimited talk plan will now include unlimited text and MetroWEB,” offerings “previously reserved for the \$45 plans in a number of older markets,” effectively chopping prices for each plan “tier.” Likewise, “MetroPCS’s \$30 and \$35 local unlimited plans will now include caller ID and call waiting.”<sup>227</sup> For \$69.99, Sprint’s “Any Mobile, Anytime” plan enables free mobile-to-mobile calling between Sprint customers who purchase “Sprint Everything” data plans and customers of

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<sup>222</sup> See Pageplus, Unlimited Talk n Text, <http://www.pagepluscellular.com/> (last visited Sept. 26, 2009); see also MORE ME TOO PREPAID; UNLIMITED PREPAID WARS HEATING UP at 1.

<sup>223</sup> MOFFETT ET AL., QUICK TAKE at 2.

<sup>224</sup> MOFFETT ET AL., U.S. PREPAID PRICING at 3; see also RBC CAPITAL MARKETS, U.S. WIRELESS REVIEW 3 (Mar. 9, 2009) (“RBC CAPITAL MARKETS, U.S. WIRELESS REVIEW”).

<sup>225</sup> RBC CAPITAL MARKETS, U.S. WIRELESS REVIEW at 3; see also AT&T, Nation Unlimited, [http://www.wireless.att.com/cell-phone-service/cell-phone-plan-details/?q\\_sku=sku3830293&q\\_planCategory=cat1370011](http://www.wireless.att.com/cell-phone-service/cell-phone-plan-details/?q_sku=sku3830293&q_planCategory=cat1370011) (last visited Sept. 26, 2009).

<sup>226</sup> Allie Winter, *T-Mobile Drops Unlimited Voice Plan to \$50*, RCRWIRELESS, Mar. 2, 2009, <http://www.rcrwireless.com/article/20090302/WIRELESS/903029987/t-mobile-usa-drops-unlimited-voice-plan-to-50>.

<sup>227</sup> Press Release, MetroPCS, MetroPCS Announces Enhanced Services that Pack More Value (July 30, 2009), <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1314223&highlight>.

any other domestic mobile network.<sup>228</sup> Sprint also offers a family version of the plan, starting at \$42.50 per person, for a family of four.<sup>229</sup> MVNOs also are engaged in extensive price competition. For example, TracFone currently offers a full year of service for \$99.99.<sup>230</sup> Several smaller resellers offer plans providing two to three months of service for as little as \$10.<sup>231</sup>

Analysts expect prices to drop still further soon: Morgan Stanley predicted earlier this month that T-Mobile, “under pressure to respond,” could very likely “revamp its postpaid and prepaid pricing in coming weeks.”<sup>232</sup> Similarly, Craig Moffett of Bernstein Research last month opined that the recent upheaval in prepaid pricing “also destabilizes” pricing in the postpaid market, and postpaid carriers will feel the pressure to cut prices now that their services are at a “pulse-pounding” premium over postpaid services.<sup>233</sup> Even analysts who are not predicting a full-blown pricing war believe postpaid providers will have to develop “promotional offers and/or handset or retention based initiatives” in order to even maintain market share in the face of competitive pricing pressure.<sup>234</sup> Morgan Stanley expressed a similar view, predicting price-

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<sup>228</sup> Sue Marek, *Sprint's Any Mobile Any Time is a winner – now let's step up the marketing*, FIERCE WIRELESS, Sept. 11, 2009, <http://www.fiercewireless.com/story/sprints-any-mobile-anytime-plan-winner-now-lets-step-marketing/2009-09-11>.

<sup>229</sup> See Press Release, Sprint, Sprint Customers Can Break Free of Calling Circles with Any Mobile, Anytime (Sept. 10, 2009), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1330317&highlight=](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1330317&highlight=).

<sup>230</sup> See TracFone, Value Plans, <http://www.tracfone.com/direct/ValuePlans?app=TRACFONE&lang=en> (last visited Sept. 26, 2009); TracFone, Buy Air Time, <https://www.tracfone.com/direct/Purchase?payGo=true> (last visited Sept. 26, 2009).

<sup>231</sup> See PlatinumTel, dot10, <http://www.platinumtel.com/plans/dot10> (last visited Sept. 26, 2009); O2 Wireless, <http://www.o2wirelesservice.com/> (last visited Sept. 26, 2009); eCallPlus Prepaid Cellular, <http://www.ecallplus.com/> (last visited Sept. 26, 2009).

<sup>232</sup> LOWERING LEAP at 4.

<sup>233</sup> TOO MANY COOKS at 2.

<sup>234</sup> RBC CAPITAL MARKETS, U.S. WIRELESS REVIEW at 3.

cutting “promotional activity by T-Mobile and Sprint ahead of the holidays,” and citing an expectation that “increased competitive activity will carry into 2010 and beyond....”<sup>235</sup>

The wide breadth of pricing and service plans available to consumers in the prepaid and postpaid market segments belies claims of so-called “parallel pricing” in the mobile wireless market.<sup>236</sup> Indeed, even if prices were more similar to each other, that would still fail to demonstrate parallelism, because the services offered for such prices would still remain broadly disparate in terms of coverage, call quality, and other relevant factors. Furthermore, the suggestion that similar prices reveal some sort of anticompetitive market is puzzling from a theoretical perspective: “[I]t has long been recognized that, in equilibrium, perfectly competitive firms will all charge the same price as one another. Hence, it is simply false to assert that evidence of parallel pricing (if it existed) would establish that service providers were engaged in a collective exercise of market power.”<sup>237</sup>

**Data Pricing.** Consistent with the downward pressure on voice prices, wireless data rates per megabyte have also declined over time. A comparison of the data plans available in 2004 and 2009, respectively, demonstrates that the emergence of four national players coincided with dropping prices and ever-increasing data speeds:

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<sup>235</sup> *Lowering Leap* at 1.

<sup>236</sup> See CFA Comments at 8-12.

<sup>237</sup> KATZ, MEASURING EFFECTIVE CMRS COMPETITION ¶ 5.

<b>DATA PLANS AND PRICES (2004)</b>		
<b>Carrier</b>	<b>Pay-Per-use Charge</b>	<b>Unlimited Use Monthly Fee</b>
AT&T Wireless	\$19.99 monthly for first 8 MB; \$6.144 per MB thereafter	\$49.99
Cingular	\$9.99 monthly for first 2 MB; \$10.24 per MB thereafter	\$54.99
Nextel	\$19.99 monthly for first 5 MB; \$9.22 per MB thereafter	\$59.99
Sprint PCS	\$40.00 monthly for first 20 MB; \$2.05 per MB thereafter	\$80.00 (limited to 300 MB)
T-Mobile USA	N/A	\$29.99
<b>Verizon Wireless</b>	N/A	\$79.99

*Data Plans and Prices from 2004<sup>238</sup>*

For the sake of comparison, below are 2009 prices for some common wireless data services:

<b>DATA PLANS AND PRICES (2009)</b>			
<b>Carrier</b>	<b>Plan</b>	<b>Max Monthly Traffic</b>	<b>Price</b>
Verizon Wireless	Daypass	Unlimited for 24 Hours	\$15.00
Verizon Wireless	Mobile Broadband 250MB	250 MB	\$39.99
Verizon Wireless	Mobile Broadband 5GB	5 GB	\$59.99
AT&T Wireless	DataConnect 200 MB	200 MB	\$40.00
AT&T Wireless	DataConnect 5 GB	5 GB	\$60.00
Sprint	Mobile Broadband Connection Plan - 3G	5 GB	\$59.99
Sprint	Mobile Broadband Connection Plan – 4G/3G	4G: Unlimited; 3G: 5GB	\$69.99
T-Mobile	WebConnect	5 GB	\$59.99
Leap Wireless / Cricket	Cricket Broadband	Unlimited*	\$40.00
<b>US Cellular</b>	<b>Wireless Modem Plan</b>	<b>5GB</b>	\$49.95

**Data Plans and Prices, September 2009**  
**Source: Company websites, September 2009**

<sup>238</sup> Gerard A. Brosnan, *Trends in the Mobile Data Services Market*, The Telecommunications Review 2005, a4 (Table 2), (2005), <http://www.noblis.org/NewsPublications/Publications/TechnicalPublications/TelecommunicationsReview/Documents/04-Brosnan-TR2005.pdf> (emphasis omitted).

Broadband data plans have followed the same trend observed above with regard to voice service: Prices have generally dropped even as underlying offerings have improved. The price per megabyte has dropped dramatically. For example, the most expensive “unlimited” monthly plan from 2004, at \$80, was capped at 300 MB of throughput per month. Thus, a heavy data user (by 2004 standards) would pay about 27 cents per MB. In contrast, a \$69.99 plan in 2009 is ten dollars cheaper and includes unlimited 4G throughput (where available) and 5 GB of 3G data throughput. If a customer uses only the 3G data capability, she would pay as little as 1.4 cents per MB if she used the full 5 GB of capacity, and the price per MB would go even lower if she employed the 4G capability for additional throughput.<sup>239</sup>

Reliance on price per megabyte alone, however, would fail to capture the whole story. Over the past five years, competition has forced network operators to offer the customer more data for the money.<sup>240</sup> Many of the data plans from 2004 offered older, lower-speed 2G or 2.5G technology, while all of the plans offered in 2009 provide higher-speed 3G or 4G service. Many networks that used 3G EV-DO technology in 2004 today use EV-DO Rev. A, which offers greatly increased speeds. All the networks have also experienced continued buildout of advanced technology, making broadband service available at more and more sites. These technology upgrades have given consumers much faster data rates for a far better user experience, as well as a lower total monthly price.<sup>241</sup>

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<sup>239</sup> Because the plan itself is lower in price, even a customer whose usage was unchanged since 2004, still using only 300 MB of throughput, would find that the price per MB had declined to 23 cents.

<sup>240</sup> In addition, competition has prompted providers to innovate with regard to the breadth of plans offered. For a time, most carriers only offered “unlimited” data plans with no fixed maximum usage limits. As the market grew, however, providers such as Verizon Wireless introduced plans with usage caps at lower price points, to suit the needs of those wishing to consume less, and accordingly to *pay* less.

<sup>241</sup> The increase in throughput allowed under the data plans over this five-year period reflects the initial stage of what is expected to be an exponential growth in mobile data for years to come. Cisco estimates that the volume of (continued on next page)

In addition to offering data-only service, wireless carriers typically offer a separate data plan for smartphones, either on a stand-alone basis or as part of a voice/data bundle. Some of the combination plans are comparable in price to the data-only plans from 2004, but include far more data throughput, and include voice minutes as well. The following charts compare the principal carriers' current smartphone data rate plans:

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mobile data traffic in North America will grow at a compound annual growth rate of 129%, rising from 6 Petabytes/month to 397 Petabytes/month over the 6 year period 2008-2013. Cisco, Cisco Visual Networking Index: Forecast and Methodology, 2008–2013, 12 (Table 13), [http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white\\_paper\\_c11-481360.pdf](http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360.pdf) (a Petabyte is one quadrillion bytes, or one million gigabytes).

**Data-Only Plans for Smartphones**

<b>Carrier</b>	<b>Plan</b>	<b>Max Monthly Traffic</b>	<b>Price</b>	<b>Notes</b>
Verizon Wireless	PDA/Smartphone/ BlackBerry Solution - Unlimited Data Usage	Unlimited	\$49.99	
AT&T	PDA/Blackberry Personal	Unlimited	\$35.00	\$30 with a voice plan
AT&T	PDA /BlackBerry Personal w/ Tethering	5GB / Mo	\$65.00	\$60 with a voice plan
T-Mobile	BlackBerry Unlimited	Unlimited	\$39.99	Voice calls .20/minute
T-Mobile	Sidekick Unlimited Web + 300 Texts	Unlimited	\$44.99	Voice calls .20/minute
T-Mobile	Sidekick Unlimited + Unlimited Texts	Unlimited	\$54.99	Voice calls .20/minute
Sprint	Only offers Combo plans			
Cricket	Only offers Combo plans			
MetroPCS	Only offers Combo plans			
US Cellular	BlackBerry / Windows Mobile Email & Web Personal Service		\$29.95	\$24.95 with a voice plan
US Cellular	BlackBerry Email & Webservice (Corporate enterprise)		\$44.95	\$39.95 with a voice plan

**Combination Plans for Smartphones**

<b>Carrier</b>	<b>Plan</b>	<b>Max Monthly Traffic</b>	<b>Price</b>	<b>Notes</b>
Verizon Wireless	PDA/Smartphone Nationwide Email (450 voice minutes)	5GB	\$79.99	Price is \$129.99 for unlimited voice minutes
Verizon Wireless	Mobile Broadband Connect (5GB) Tethering	5GB	\$15 to \$50	Price is \$50 when added to voice plans, \$15 when added to any Nationwide email plan.
AT&T	See chart above for price reduction in combos.			
T-Mobile	BlackBerry Enterprise (includes 300 texts)	Unlimited	\$39.98	
Sprint	Simply Everything	Unlimited	\$99.99	unlimited voice, data, messaging
Sprint	Everything Data - with Any Mobile, Anytime (450 voice minutes)	Unlimited	\$69.99	unlimited data and messaging
Cricket	All smartphones require \$15 for mobile web browsing at 3G speeds		\$15	
MetroPCS	Both available smartphones have \$50 plans		\$50	Includes unlimited nationwide long distance

Source: Company websites, Sept. 2009

**Mobile Messaging Pricing.** Despite well-publicized criticism regarding rates for text and other mobile messaging,<sup>242</sup> prices for the overwhelming majority of messaging services have in fact declined dramatically in recent years. Verizon Wireless’s average price per text message is just about *one cent* (\$0.0104), down from almost three cents at the close of 2006.<sup>243</sup> Most Verizon Wireless customers pay less than one cent. Claims relying on much higher prices – for example, the oft-cited “20-cent per message” charge – apply to the extremely low proportion of customers who affirmatively choose not to purchase plans including “buckets” of messages – those, that is, who judge their needs to be better served by a higher per-message charge on those rare occasions on which they use mobile messaging. Less than *one percent* of text messages sent on the Verizon Wireless network are subject to pay-per-text charges.<sup>244</sup> The remainder – more than 99% of all messages – are provided subject to a range of plans involving much lower per-message charges. Verizon Wireless offers plans including unlimited messages for an additional \$20 per month for an individual or \$30 per month for a family, as well as plans offering “buckets” of 250, 500, 1500 or 5000 messages for \$5, \$10, \$15, or \$20, respectively. Other nationwide providers also offer lower prices to customers who purchase plans including messaging, though the specifics of these plans differ from carrier to carrier. For \$5, AT&T

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<sup>242</sup> See Letter from Hon. Herb Kohl, Chairman, Senate Subcommittee on Antitrust, Competition Policy and Consumer Rights to Lowell McAdam, President and CEO, Verizon Wireless, and other wireless carriers, Sept. 9, 2008, <http://kohl.senate.gov/LT%20-%20cell%20ph%20CV.pdf>.

<sup>243</sup> See *Cell Phone Text Messaging Rates Increases and the State of the Competition in the Wireless Market: Hearing Before the Subcomm. on Antitrust, Competition Policy and Consumer Rights of the Senate Comm. on the Judiciary*, 111th Cong., 1st Sess., Attachment at 1 (June 16, 2009) (testimony of Randal S. Milch, Vice President and General Counsel, Verizon Communications) (“Milch Testimony”).

<sup>244</sup> See Verizon Wireless Response to Sen. Kohl’s Follow-up Questions for Hearing on “Cell Phone Text Messaging Rate Increases and the State of Competition in the Wireless Market,” Answer 1. AT&T has stated that this is also true of its network. *Cell Phone Text Messaging Rates Increases and the State of the Competition in the Wireless Market: Hearing Before the Subcomm. on Antitrust, Competition Policy and Consumer Rights of the Senate Comm. on the Judiciary*, 111th Cong., 1st Sess. 4 (June 16, 2009) (testimony of Wayne Watts, Executive Vice President and General Counsel, AT&T Inc.).

provides 200 messages,<sup>245</sup> Sprint provides 300 messages,<sup>246</sup> and T-Mobile provides 300 messages.<sup>247</sup>

The practice of offering “buckets” alongside a “charge per message” option makes good economic sense, and serves consumer interests. As commentator George Ou observes:

Much attention has been placed on the 15 or 20 cent cost of text messages recently, but these are the worst case single unit prices. For people who might at most text 5 to 20 times a month, paying an average of \$2 per month makes a lot of sense. Anyone who consistently uses more than a few dozen text messages a month [is] better off buying a \$5 bundle which is good for hundreds of text messages. By committing to an inexpensive monthly texting plan which carries no contractual obligations beyond 30 days, the cost of each text message drops to a few pennies.

...

While bundled rates are great, it's not for everyone and consumers should have the choice to buy single units or bundles. If carriers can't charge higher rates for single text messages, then they will simply remove the option and make everyone buy the bundled plans. So while it may be popular to criticize higher single unit rates, taking that option off the table isn't doing consumers any favors.<sup>248</sup>

Usage figures confirm that customers value mobile messaging services very highly, and are consuming these offerings at a rapidly accelerating rate. The following charts highlight growth in the use of messaging over the past four years, showing a twelve-fold increase in text messaging and a fifteen-fold increase in multimedia messaging:

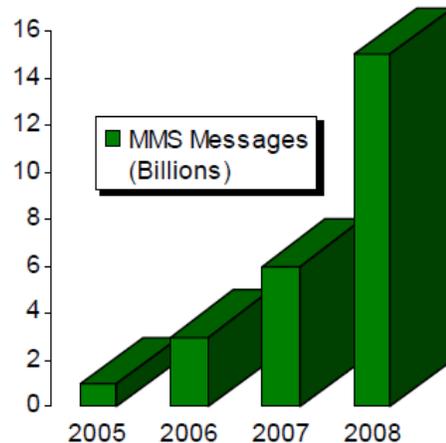
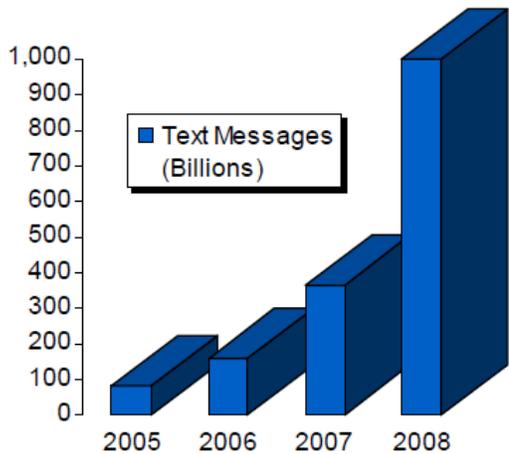
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<sup>245</sup> Milch Testimony at 6, Attachment at 5.

<sup>246</sup> *Id.*

<sup>247</sup> See T-Mobile, Messaging, <http://www.t-mobile.com/shop/addons/services/information.aspx?PAsset=Messaging&oscid=4CD51BA7-B5AF-4AB2-85E0-50EC0AF141F9&tp=Svc Tab TextMessaging> (last visited Sept. 28, 2009).

<sup>248</sup> George Ou, *Being rational about text message pricing*, DIGITAL SOCIETY, Sept. 14, 2009, <http://www.digitalsociety.org/2009/09/being-rational-about-text-message-pricing>.



In the second quarter of 2009 alone, Verizon Wireless customers sent and received more than 146 billion text messages, as well as 2.5 billion MMS messages (e.g., photo or video messages).<sup>249</sup> These statistics demonstrate that the mobile messaging market is dynamic and in increasing demand by consumers.

***Bundled Service Pricing.*** Finally, wireless providers also differentiate themselves by offering packages of “bundled” services – often referred to as double, triple or quadruple plays. These packages give consumers the option of “mixing and matching” a selection of wireless, wireline voice, wireline Internet, and cable services for a single price. Bundled service plans are popular because they frequently offer consumers the dual advantages of lower prices and convenient, straightforward billing.<sup>250</sup>

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<sup>249</sup> Verizon Wireless, Best Network, Network Facts, [http://aboutus.vzw.com/bestnetwork/network\\_facts.html](http://aboutus.vzw.com/bestnetwork/network_facts.html) (last visited Sept. 26, 2009).

<sup>250</sup> See, e.g., Daniel Vasquez, *Bundling Phone, Internet and Video Services Can Save Money*, SUN-SENTINEL (Aug. 17, 2009), [http://www.sun-sentinel.com/business/sfl-bundling-deals-vasquez-08170sbaug17\\_0\\_5021244.column](http://www.sun-sentinel.com/business/sfl-bundling-deals-vasquez-08170sbaug17_0_5021244.column) (last visited Sept. 26, 2009) (“Consumer Reports recently reported that most customers who opt for bundling with the most reputable and highly-rated companies are satisfied with their services - and costs.... More consumers may be happier price-wise because in the past year bundle packages have dropped prices by up to 20% - to about \$80 per month. Bundling plans also offer one-bill service, making it easier to keep an eye on what you pay for and easier to hold onto since you don’t have multiple mailed statements to deal with.”).

Verizon, for example, offers a Flex Double Play bundle for consumers who want to use Verizon Wireless's phone service for their home voice service, but want broadband Internet service from Verizon Communications via their landline.<sup>251</sup> FiOS TV service can also be added to create a triple-play bundle. Just days ago, AT&T launched "Talk, Text & Surf," under which customers can bundle wireless and wireline telephone service plus DSL for a monthly discount.<sup>252</sup> Similarly, Comcast recently launched a 4G high-speed wireless data service – through its partnership with Clearwire – which the company plans to bundle with one or more of its Internet, phone, or television products.<sup>253</sup>

As the foregoing discussion clearly demonstrates, significant pricing competition is occurring at a feverish pace this year.

## **2. Non-Price Competition**

Today's wireless carriers must design offerings that meet the diverse and dynamic needs of American consumers. While price certainly is a major factor, customers may also select a carrier based on its coverage map, network quality, device portfolio, customer service, unique content, or available applications. Thus, competition has driven substantial efforts to improve the customer experience along all of these vectors.<sup>254</sup>

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<sup>251</sup> Press Release, Verizon, Verizon Home Broadband and Wireless Combination Now Easy for Consumers (June 17, 2008), <http://newscenter.verizon.com/press-releases/verizon/2008/verizon-home-broadband-and.html>.

<sup>252</sup> Press Release, AT&T, AT&T Lets Customers "Talk, Text & Surf" With Greater Savings (Sept. 21, 2009), <http://www.att.com/gen/press-room?pid=5097&cdvn=news&newsarticleid=27151>; see also AT&T Triple Pack – Residential, <http://www.att.com/gen/general?pid=7684> (last visited Sept. 26, 2009).

<sup>253</sup> Press Release, Comcast, Comcast Begins National Rollout of High-Speed Wireless Data Service (June 29, 2009), <http://www.comcast.com/About/PressRelease/PressReleaseDetail.aspx?PRID=887&fss=wireless> ("Comcast June 29 Press Release").

<sup>254</sup> As the Commission has aptly observed, "[s]ervice providers in the mobile telecommunications market also compete on many more dimensions other than price, including non-price characteristics such as coverage, call quality, data speeds, and mobile data content." Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Commercial Mobile Services, *Twelfth Report*, 23 FCC Rcd 2441, 2298 ¶ 124 (2008) ("*Twelfth Report*").

**a. Network Investment and Technological Innovation**

*Network Coverage and Quality.* Carriers have long been judged by the capabilities and reliability of their service offerings and the geographic scope of their coverage. One need only review the advertising campaigns of any of the major carriers for confirmation that speed, coverage, and reliability are fertile ground for competition. The Commission has regularly recognized the importance of building larger coverage footprints, approving any number of transactions partly on this basis.<sup>255</sup> Verizon Wireless continuously works to expand its coverage footprint and currently has network facilities providing service in more than 90% of the rural counties within its licensed footprint.

Study after study indicates that network reliability also is a leading factor in consumer choice of service providers.<sup>256</sup> Verizon Wireless pioneered this competitive strategy with its “Can You Hear Me Now?” campaign, and it continues today with its “America’s most reliable wireless network” promotion.<sup>257</sup>

To compete based on coverage and quality, mobile wireless providers have spent hundreds of billions of dollars in the aggregate to improve and expand their networks – \$264 billion since 1985.<sup>258</sup> Since 2001, America’s wireless carriers have made an average combined

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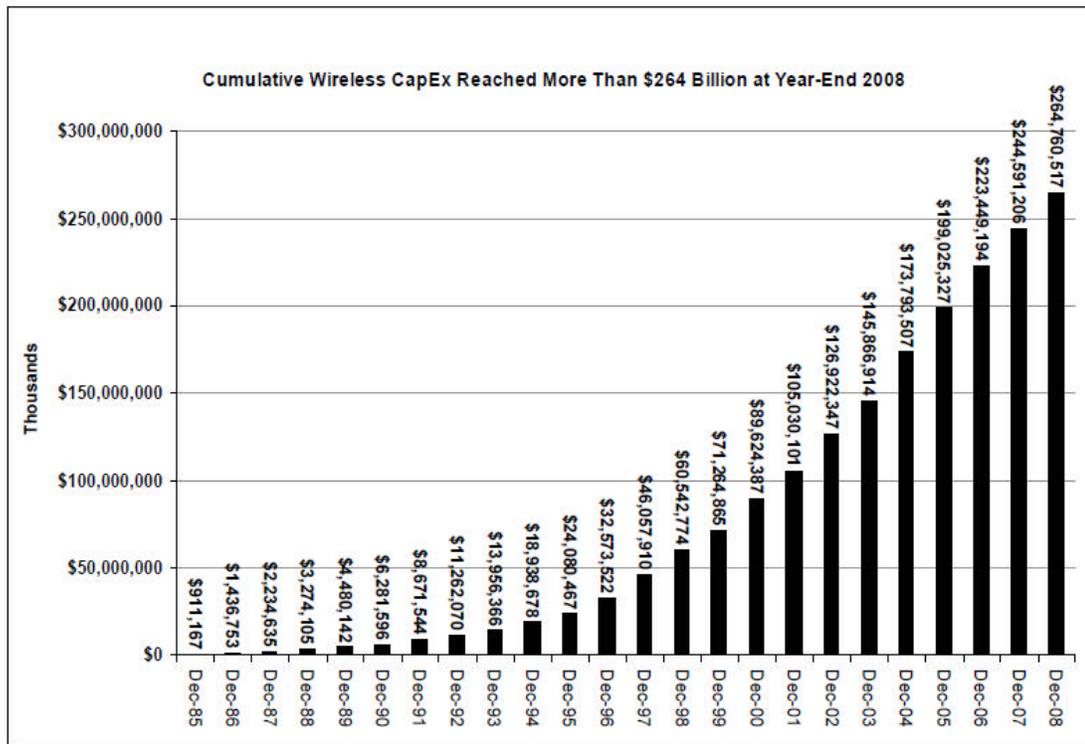
<sup>255</sup> See, e.g., Applications of Western Wireless Corporation and ALLTEL Corporation, *Memorandum Opinion and Order*, 20 FCC Rcd 13053, 13103-04 ¶¶ 138-140 (2005); Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corp., *Memorandum Opinion and Order*, 19 FCC Rcd 21522, 21604-05 ¶¶ 216-220 (2004); *SBC-BellSouth Order*, 15 FCC Rcd at 25480-81 ¶¶ 46-48; see also *Thirteenth Report*, 24 FCC Rcd at 6215 ¶¶ 51-52.

<sup>256</sup> See, e.g., CONSUMER REPORTS Survey Results; J.D. Power and Associates, 2009 Wireless Call Quality Performance Study—Volume 2, referenced at <http://www.jdpower.com/telecom/articles/2009-Wireless-Call-Quality-Volume-2> (last visited Sept. 26, 2009).

<sup>257</sup> *Twelfth Report*, 23 FCC Rcd at 2310 ¶ 166.

<sup>258</sup> *Ex Parte* Letter from Christopher Guttman-McCabe, CTIA, to Chairman Julius Genachowski *et al.*, FCC, GN Docket No. 09-51, WT Docket Nos. 08-165, 09-66, Attachment at 4 (July 9, 2009).

investment of more than \$22.8 billion *per year* to upgrade their networks.<sup>259</sup> Importantly, despite the current economic conditions, competition continues to drive additional investment. One analyst recently estimated that “[i]n the first quarter of 2009, ... spending continued with \$4.7 billion ... by the four major carriers as they continue to deploy advanced technologies.”<sup>260</sup> Moreover, as the following chart highlights, investment has only grown *more* as the current market structure has evolved:



Source: CTIA Semi-Annual Survey

Investment in network facilities and infrastructure has had a direct and overwhelmingly positive impact on customer welfare. A 2008 CTIA study concluded that far more than 90% of

<sup>259</sup> *Id.*

<sup>260</sup> See TOPPER at 34 (citing BANK OF AMERICA – MERRILL LYNCH, GLOBAL WIRELESS MATRIX 2Q09 VOICE AND DATA DIVERGENCE 187 (June 25, 2009)).

Americans have access to 3G mobile broadband services at their primary place of residence.<sup>261</sup> Moreover, almost 30 million Americans lived in zip codes covered by four or more 3G providers.<sup>262</sup> According to the Commission, as of May 2008, 92.3% of Americans lived in areas served by 3G mobile broadband, and more than 72% of consumers had a choice of multiple 3G mobile broadband carriers.<sup>263</sup>

The deployment of 3G technology continues and many wireless carriers also have started to transition to 4G technologies. Verizon Wireless's 3G network now covers 284 million people. Further, Verizon Wireless plans to complete its upgrade of Alltel EV-DO Rev. 0 markets to EV-DO Rev. A by the end of 2009. Sprint also offers 3G service utilizing EV-DO Rev. A.<sup>264</sup> AT&T offers 3G services utilizing a different technology – High Speed Packet Access (“HSPA”) – to nearly 350 markets<sup>265</sup> and is taking steps to upgrade its current HSPA network to faster speeds.<sup>266</sup> Similarly, T-Mobile offers 3G technology in numerous markets and recently announced plans to upgrade its 3G technology to higher speeds.<sup>267</sup>

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<sup>261</sup> COSTQUEST ASSOCIATES, INC., U.S. UBIQUITOUS MOBILITY STUDY 4 (Apr. 17, 2008) (submitted to CTIA).

<sup>262</sup> COSTQUEST ASSOCIATES, INC., U.S. 3G MOBILE WIRELESS BROADBAND COMPETITION REPORT 3 (July 14, 2008) (submitted to CTIA).

<sup>263</sup> *Thirteenth Report*, 24 FCC Rcd at 6257-58 ¶¶ 144-146.

<sup>264</sup> Press Release, Sprint, America's Largest and Fastest Mobile Broadband Network Just Got Even Larger: Sprint Customers Can Do More, in More Places, and at Fast Speeds (June 19, 2007), <http://www.thefreelibrary.com/America%27s+Largest+and+Fastest+Mobile+Broadband+Network+Just+Got+Even...-a0165230979>.

<sup>265</sup> Comments of AT&T Inc., GN Docket No. 09-51, 129 (filed June 8, 2009).

<sup>266</sup> See Kevin Fitchard, *AT&T Doubling 3G Capacity*, TELEPHONY ONLINE, Apr. 20, 2009. AT&T also recently announced that it “plans to invest between \$17 billion and \$18 billion this year, more than two-thirds of which is going toward broadband and wireless. The company's deployment of HSPA 7.2 and additional backhaul connections are a key part of this network enhancement strategy.” Press Release, AT&T, AT&T to Make Faster 3G Technology Available in Six Major Cities This Year, <http://www.att.com/gen/press-room?pid=4800&cdiv=news&newsarticleid=27068> (last visited Sept. 26, 2009).

<sup>267</sup> See Jason Ankeny, *T-Mobile's Ray promises national HSPA+ deployment by mid-2010*, FIERCE WIRELESS (Sept. 18, 2009), <http://www.fiercewireless.com/story/t-mobiles-ray-promises-national-hspa-deployment-mid-2010/2009-09-18>.

Tier II and Tier III carriers also continue to deploy 3G technologies. For example, U.S. Cellular has announced that more than 60% of its sites will be EV-DO capable by the end of this year.<sup>268</sup> Other companies, such as BlueGrass Cellular,<sup>269</sup> Cellular South,<sup>270</sup> NTELOS,<sup>271</sup> and Alaska Communications Systems,<sup>272</sup> have rolled out high-speed wireless broadband networks in their various markets around the country and continue to upgrade their networks.

Verizon Wireless takes pride in its leading role as a technological innovator. Thus, Verizon Wireless already has announced plans to develop and deploy its fourth generation mobile broadband network using LTE technology, as developed within the Third Generation Partnership Project (“3GPP”) standards organization.<sup>273</sup> Verizon Wireless is the first carrier – in the U.S. or abroad – to test and deploy LTE. In 2008, Verizon Wireless invested over \$9 billion for spectrum in the 700 MHz auction. The company will initiate commercial LTE service in the 700 MHz band in 2010, with coverage to approximately 100 million people in 20 to 30 markets

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<sup>268</sup>CTIA, WIRELESS MARKETS at 14; *see also* Sarah Reedy, *US Cellular accelerates EV-DO push, weighing LTE trial*, TelephonyOnline, May 9, 2009, <http://telephonyonline.com/wireless/news/us-cellular-evdo-upgrade-0506/>.

<sup>269</sup> *See, e.g.*, Press Release, Bluegrass Cellular, *Bluegrass Cellular Adds 3G Coverage in Russell County* (Sept. 15, 2009), [http://www.bluegrasscellular.com/about/news/bluegrass\\_cellular\\_adds\\_3g\\_coverage\\_in\\_russell\\_county](http://www.bluegrasscellular.com/about/news/bluegrass_cellular_adds_3g_coverage_in_russell_county).

<sup>270</sup> *See, e.g.*, Press Release, Cellular South, *Cellular South Expands 3G High-Speed Mobile Broadband Data Services Throughout Much of Mississippi Delta Region* (Aug. 4, 2009), <https://www.cellularsouth.com/news/2009/20090804.html>.

<sup>271</sup> *See* Press Release, NTELOS, *NTELOS Completes \$46 Million Upgrade to 3G Network*, (July 8, 2009), <http://www.ir-site.com/images/library/ntelos/07-08-09.html>. Wireless Internet Service Providers (WISPs) also are aggressively deploying fixed wireless broadband networks; *see, e.g.*, Testimony of Brett Glass, Owner and Founder of LARIAT, *Broadband Network Management Practices En Banc Public Hearing*, (Apr. 17, 2008), [http://www.fcc.gov/broadband\\_network\\_management/041708/glass-stmt.pdf](http://www.fcc.gov/broadband_network_management/041708/glass-stmt.pdf).

<sup>272</sup> *See, e.g.*, ACS Mobile Internet, <http://www.acsalaska.com/business/enterprise/mobile-solutions/mobile-internet.asp> (last visited Sept. 26, 2009) (noting that ACS has offered 3G service since 2004, and has recently upgraded to EV-DO Rev A).

<sup>273</sup> *See* Press Release, Verizon Wireless, *Verizon Selects LTE as 4G Wireless Broadband Direction* (Nov. 29, 2007), <http://news.vzw.com/news/2007/11/pr2007-11-29.html>. A more extensive discussion of Verizon Wireless’s plans for LTE is contained in Section II of Verizon Wireless’s comments in GN Docket No. 09-157, submitted today.

that year. The company projects the LTE network will be built out nationwide by the end of 2013.

Competition is driving additional 4G deployments as well. AT&T is preparing for field trials of 4G LTE wireless networks next year, with deployment planned to follow in 2011.<sup>274</sup> MetroPCS plans to begin deployment of its LTE network in the second half of 2010.<sup>275</sup> Cox has also announced plans to use LTE for its network.<sup>276</sup> Sprint and Clearwire plan to offer their 4G WiMAX service widely by the end of next year,<sup>277</sup> and Comcast and Time Warner have already either begun or announced plans to resell Clearwire's 4G network wireless services.<sup>278</sup>

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<sup>274</sup> Press Release, AT&T, AT&T to Make Faster 3G Technology Available in Six Major Cities This Year (Sept. 9, 2009), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=27068>; *see also* Press Release, AT&T, AT&T Acquires Key Spectrum To Set Foundation For Future Of Wireless Broadband, More Choices For Customers (Apr. 3, 2008), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=25428>.

<sup>275</sup> Press Release, MetroPCS, Unlimited Wireless Carrier MetroPCS Announces Vendors for 2010 4G LTE Launch (Sept. 15, 2009), <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1331809&highlight>; *see also* Marin Perez, *MetroPCS Chooses LTE For 4G Wireless Network*, INFORMATIONWEEK, Aug. 13, 2008, <http://www.informationweek.com/news/mobility/wifiwimax/showArticle.jhtml?articleID=210003630>; SNL KAGAN APRIL 2009 at 5 (stating that MetroPCS has announced that it will upgrade to LTE as early as 2010 – a move that “could give it a whole new and compelling competitive profile as an advanced network provider with mobile broadband service offers and no contract commitments”).

<sup>276</sup> Lynnette Luna, *Cox goes with LTE-ready CDMA*, FIERCEBROADBANDWIRELESS, Mar. 30, 2009, <http://www.fiercebroadbandwireless.com/story/cox-goes-lte-ready-cdma-700-mhz-band/2009-03-30>.

<sup>277</sup> Wireless, COMMUNICATIONS DAILY, Apr. 3, 2009; Yu-Ting Wang, *Clearwire Continues Expansion, Targets Applications*, COMMUNICATIONS DAILY, Apr. 22, 2009.

<sup>278</sup> In late June, Comcast announced that it is now offering a wireless broadband service in the Portland, Oregon market over Clearwire's 4G Wi-MAX network, and that it would expand this offering to other markets nationwide as Clearwire builds out its network. *See* Comcast June 29 Press Release. Comcast says that this service allows customers speeds of up to 4 Mbps on the go. *Id.* Time Warner announced in late June that it would begin reselling Clearwire's WiMAX service in Dallas, Texas and Charlotte, North Carolina this fall. Marguerite Reardon, *Time Warner Cable to Resell WiMAX Service*, CNET NEWS, July 30, 2009, [http://news.cnet.com/8301-1035\\_3-10300017-94.html](http://news.cnet.com/8301-1035_3-10300017-94.html).

### **b. Wireless Mobile Devices**

Analysts have noted that competition in the device segment is an increasingly important competitive differentiator.<sup>279</sup> Wireless carriers offer a wide and evolving choice of mobile devices, ranging from basic phones that provide simple mobile voice connectivity,<sup>280</sup> to aircards and netbooks that provide Internet connectivity, to state-of-the-art smartphones offering a full menu of feature-rich voice and data options. Devices are available through a multitude of sources from carriers to on-line retailers and at increasingly lower prices. These dynamics are discussed in greater detail below.

### **c. Applications, Content, and Openness**

The last several years, and especially the last two years, also have witnessed an explosion in the number of applications and the amount of content designed to run on mobile devices. Many consumers have been drawn to certain applications or content or devices and the networks that allow them to access these offerings without restrictions; carriers and manufacturers have responded to meet this demand. Verizon Wireless allows subscribers with smartphones, aircards or netbooks to download applications of their choice from the Internet, subject only to certain terms of their contracts related to maintaining the quality of service to all users. Verizon

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<sup>279</sup> See MARK LOWENSTEIN, THE EVOLVING ROLE OF HANDSETS IN THE U.S. WIRELESS INDUSTRY, 4-6 (Jan. 2009) (“LOWENSTEIN”), attached to Comments of Verizon Wireless Requesting Dismissal or Denial of Petition, RM-11497, Att. A (filed Feb. 2, 2009) (“Verizon Wireless Handset Exclusivity Comments”).

<sup>280</sup> Many consumers prefer simplicity in their wireless phones and wireless service offerings, and purchase a wireless phone primarily for its basic features. See Press Release, Wirefly, Wirefly Releases Results of Its Cell Phone Feature Survey (July 16, 2009), [http://www.wirefly.com/learn/company\\_news/wirefly-releases-results-of-its-cell-phone-feature-survey/](http://www.wirefly.com/learn/company_news/wirefly-releases-results-of-its-cell-phone-feature-survey/) (finding that “3 out of 5 consumers (64 percent) are less concerned with high-tech features than they are with the basic form factors, such as the size and color of the phone.”); Press Release, New Millennium Research Council, Survey: 60 Million U.S. Consumers Worried About Recession Likely to Hang Up On High Cell Phone Costs (Mar. 19, 2009), [http://www.newmillenniumresearch.org/news/031909\\_NMRC\\_ORC\\_cell\\_phone\\_survey\\_news\\_release.pdf](http://www.newmillenniumresearch.org/news/031909_NMRC_ORC_cell_phone_survey_news_release.pdf) (reporting on a survey which finds “about one in five people see little value” in complex phone offerings “such as Internet connectivity, email and texting”).

Wireless also recently announced its new “V CAST Apps” virtual storefront,<sup>281</sup> which will be available to customers who purchase smartphones operating on the EV-DO Rev. A broadband network. The robust competition in the application and content markets is discussed in greater detail below.

#### **d. Customer Care**

Mobile wireless providers also compete to provide the very best customer care. In a 2009 customer care study, J.D. Power and Associates found that “overall wireless customer care performance has improved considerably,” as customers have reported shorter hold times for inquiries and improved rates of problem resolution.<sup>282</sup> Notably, the study showed that more than three-fourths of calls were resolved on first contact to customer service, compared with 66% six months ago, and hold times as of the study’s publication averaged of 5.55 minutes compared with 6.58 minutes in February 2009.<sup>283</sup>

Carriers have adopted diverse customer care strategies as ways to distinguish themselves. For example, U.S. Cellular offers *Battery Swap*, which “makes it easy to always have a charged phone”: customers can “just stop into any U.S. Cellular retail store and swap out your dead battery for a fully charged one for free.”<sup>284</sup> In these difficult economic times, Virgin Mobile offers “*Pink Slip Protection*” that gives contract plan customers three free months of service if

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<sup>281</sup> Press Release, Verizon Wireless, Verizon Developer Community Is Open for Business (July 28, 2009), <http://news.vzw.com/news/2009/07/pr2009-07-28f.html>.

<sup>282</sup> J.D. Power and Associates, 2009 Wireless Call Quality Performance Study—Volume 2, referenced at <http://www.jdpower.com/telecom/articles/2009-Wireless-Customer-Care-Volume-2> (last visited Sept. 26, 2009).

<sup>283</sup> *Id.*

<sup>284</sup> U.S. Cellular, Battery Swap, [http://www.uscellular.com/uscellular/SilverStream/Pages/x\\_page.html?p=batteryswap](http://www.uscellular.com/uscellular/SilverStream/Pages/x_page.html?p=batteryswap) (last visited Sept. 27, 2009).

they lose their jobs.<sup>285</sup> And reflecting its generally older demographic, Jitterbug features LiveNurse (permitting customers to call and speak with a live nurse anytime for \$4 per month), Roadside Assistance services, and 24-hour live domestic operator assistance.<sup>286</sup>

Verizon Wireless has invested heavily in customer service operations.<sup>287</sup> On a daily basis, the company engages in over four million transactions with new, existing and potential customers; it also processes over one million calls and e-mail transactions daily. Customers may also utilize self-serve options, including on-line, handset-accessible, or interactive voice response call-in systems, to address their needs.

Verizon Wireless also offers a host of other tools designed to enhance the customer experience. For example, Verizon Wireless permits customers to subscribe to “personal alerts” via free text messages informing them when their bill is ready for review and when a payment has been received.<sup>288</sup> Subscribers’ address books are automatically safeguarded against phone loss, damage or theft by FusionOne’s Backup Assistant, eliminating the need to manually transfer contacts when a phone is replaced or upgraded.<sup>289</sup> In addition, customers can access their My Verizon account from any computer to pay their bills, set up automatic payments, view and reprint current and past bills, change billing or email addresses, add or change services

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<sup>285</sup> Virgin Mobile, Pink Slip Protection, <http://www.virginmobileusa.com/virgin-mobile-life/pink-slip-protection-program> (last visited Sept. 27, 2009).

<sup>286</sup> Jitterbug, Jitterbug LiveNurse, <http://www.jitterbug.com/ServicesStore/LiveNurse.aspx> (last visited Sept. 27, 2009); Jitterbug, Jitterbug Roadside Assistance, <http://www.jitterbug.com/ServicesStore/RoadsideAssistance.aspx> (last visited Sept. 27, 2009).

<sup>287</sup> See Verizon Wireless, Customer Satisfaction Overview, <http://aboutus.vzw.com/customersatisfaction/index.html> (last visited Sept. 27, 2009).

<sup>288</sup> Press Release, Verizon Wireless, Away this Summer? No Problem for Verizon Wireless Customers (May 20, 2008), <http://news.vzw.com/news/2008/05/pr2008-05-20.html>.

<sup>289</sup> Press Release, Verizon Wireless, Verizon and FusionOne Team Up for Multi-Service Sync (Feb. 16, 2009), <http://news.vzw.com/news/2009/02/pr2009-02-15.html>.

(including setting parental controls or adding Friends & Family to calling plans), upgrade phones, and find equipment guides and demos for their wireless devices.<sup>290</sup> Verizon Wireless also aggressively protects customer privacy from illegal activity such as pretexting as well as from unsolicited calls or unauthorized text messages.<sup>291</sup>

**e. Other Customer Options**

Competition benefits when consumers have information about the products and services they buy. To that end, more than 30 carriers, including the largest providers, have voluntarily adopted CTIA's "Consumer Code."<sup>292</sup> This code requires carriers to give consumers the information they need to make informed choices, make sure consumers understand their wireless service and rate plans, and provide coverage maps.<sup>293</sup> Verizon Wireless distinguishes itself by adopting policies that extend beyond the requirements of the CTIA Code.

Carriers also compete on contract terms and handset portability. As the FCC noted in both the Twelfth and Thirteenth *Competition Reports*, Verizon Wireless became the first carrier to pro-rate ETFs for new contract customers in November 2006.<sup>294</sup> The other national carriers followed suit.<sup>295</sup> In October 2008 Sprint announced a new policy whereby Sprint's ETF of \$200 will decrease by \$10 increments per month beginning in month six of a wireless customer's

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<sup>290</sup> Press Release, Verizon Wireless, *Traveling? Keep Your Cool This Summer with Verizon Wireless Account Management Tools* (May 20, 2009), <http://news.vzw.com/news/2009/05/pr2009-05-19f.html>.

<sup>291</sup> Since 2004, Verizon Wireless has filed nearly two dozen lawsuits against pretexters and other wrongdoers attempting to access its customers' personal information. These suits have resulted in the courts issuing permanent injunctions stopping these illegal activities. In addition, Verizon Wireless has recovered over \$137,000 as part of the resolution of these suits, which it has donated to charities across the country.

<sup>292</sup> CTIA, CTIA Code Participants, <http://www.ctia.org/content/index.cfm/AID/10623> (last visited Sept. 27, 2009).

<sup>293</sup> CTIA, CTIA Consumer Code 1-2, <http://files.ctia.org/pdf/ConsumerCode.pdf> (last visited Sept. 27, 2009). Also, as mentioned previously, pursuant to the AVC, the largest national carriers also follow certain uniform nationwide consumer protection practices in conducting their businesses.

<sup>294</sup> *Thirteenth Report*, 24 FCC Rcd at 6244-45 ¶ 114; *Twelfth Report*, 23 FCC Rcd at 2293 ¶ 115.

<sup>295</sup> *See Thirteenth Report*, 24 FCC Rcd at 6245 ¶ 114.

contract.<sup>296</sup> As of June 2008, AT&T, Verizon Wireless, Sprint, and T-Mobile each had implemented various policies that allow customers the option of changing elements of their contracts without requiring a contract extension, and they each permit customers various periods of time to try their services so that if they are not fully satisfied, they can change plans without penalties.<sup>297</sup> Along similar lines, the four largest carriers have adopted policies that allow consumers to carry their compatible wireless device from one carrier to another.<sup>298</sup>

Competition also exists with respect to contract offerings. Verizon Wireless in September 2008 introduced an option “that allows customers to purchase the company’s nationwide offerings without signing a one- to two-year contract.”<sup>299</sup> Customers can either purchase new devices at the full retail price or use their own compatible devices. These customers can terminate their agreements at the end of any month without paying an ETF. In 2009, other carriers began to offer variations on this plan. Carriers such as MetroPCS, Jitterbug, and Pocket Communications offer service plans with no contracts. AT&T offers what it calls no-commitment pricing by which a customer not on a prepaid plan can purchase a new device at an undiscounted price without a long-term service commitment. T-Mobile offers FlexPay Monthly, under which a customer purchases a phone at the suggested retail price, pays in advance for the rate plan, and there is no need for an annual contract.

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<sup>296</sup> Press Release, Sprint Nextel, Sprint Launches One of the Industry’s Most Customer-Friendly Policies on Pro-Rated Early Termination Fees (Oct. 31, 2008), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1220442&highlight=](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1220442&highlight=).

<sup>297</sup> *Ex Parte* Letter from Christopher Guttman-McCabe, CTIA, to Marlene H. Dortch, Secretary, FCC, WT Docket Nos. 05-194 & 08-27, 2-4 (filed June 11, 2008).

<sup>298</sup> See CTIA, THE FACTS ABOUT THE WIRELESS INDUSTRY: AN INDEPENDENT REVIEW 1 n.iv (June 2009), <http://www.ctia.org/advocacy/research/index.cfm/AID/10538> (citations omitted) (“FACTS ABOUT THE WIRELESS INDUSTRY”).

<sup>299</sup> *Thirteenth Report*, 24 FCC Rcd at 6245 ¶ 115 (citing Press Release, Verizon Wireless, No Contract Required – New Month-To-Month Agreement Gives Verizon Wireless Customers Even More (Sept. 22, 2008)).

## **f. Advertising**

As further evidence of the robustly competitive wireless market, providers engage in aggressive marketing efforts to inform consumers about their service offerings. Wireless companies spend enormous amounts on print and broadcast advertising, as is clearly evident from looking at any newspaper or watching television programming. Each of the national wireless providers is a leading purchaser of advertising, but mid-sized carriers and MVNOs also are major advertisers. These enormous investments in using advertising to reach potential as well as existing customers underscores the intensely competitive efforts wireless companies are engaged in. Such advertising validates the diversity of factors that drive consumers' wireless choice and the importance carriers place on informing customers about their offerings.

Indeed, competition in advertising and brand promotion has extended beyond the airwaves and into the courts. In recent years, wireless providers have challenged one another's advertising claims in numerous disputes before the federal courts and the National Advertising Division of the Council of Better Business Bureaus ("NAD").<sup>300</sup> This activity demonstrates just how seriously carriers work to promote and safeguard their public images, and how important advertising is in the competitive marketplace.

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<sup>300</sup> See, e.g., *Cello Partnership d/b/a Verizon Wireless v. Alltel Corp. et al.*, No. 08-cv-00004 (E.D. Va. filed Jan. 2, 2008, dismissed March 3, 2009); *Cello Partnership d/b/a Verizon Wireless v. AT&T Mobility LLC*, No. 09-cv-06656 (S.D.N.Y. filed July 27, 2009); *Cello Partnership d/b/a Verizon Wireless v. Sprint Nextel Corp.*, No. 09-cv-01480 (D. Az. filed July 17, 2009); *Cingular Wireless LLC v. Sprint Nextel Corp.*, No. 06-cv-01111 (N.D. Ga. filed May 9, 2006). The NAD reviews ads for truthfulness and accuracy, and offers an alternative dispute resolution process for entities challenging the content of an advertisement. See <http://www.nadreview.org/AboutNAD.aspx>. Its cases are not publicly docketed.

### **C. The Competitive Marketplace Has Led to Rising Consumer Satisfaction**

As carriers fight to win and retain their customers in a vigorously competitive market, overall consumer satisfaction levels with wireless service have reached new heights. Indeed, the U.S. wireless industry leads the world in overall customer satisfaction.<sup>301</sup> Wireless carriers recognize that their ability to attract and retain customers is inexorably tied to their ability to keep existing customers content. Regular surveys of Americans' opinions and low instances of complaints show that wireless competitors are succeeding in their efforts.

#### **1. Satisfied Customers**

Recent customer surveys show that the industry is continuing to move in the right direction, and Verizon Wireless is leading the way. The American Customer Satisfaction Index ("ACSI"), *Consumer Reports*, and the GAO have reported that the wireless industry has high consumer satisfaction.<sup>302</sup> Most recently, ACSI found that customer satisfaction with wireless service reached "a new all-time high for the third consecutive year" at 69 on ACSI's 100-point scale.<sup>303</sup> ACSI also found that Verizon Wireless's consumer satisfaction ratings jumped to 74 to "continue its lead over the industry."<sup>304</sup>

In January 2009, *Consumer Reports* found that mobile wireless service has become "significantly better," with 60% of respondents "completely or very satisfied with their

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<sup>301</sup> FACTS ABOUT THE WIRELESS INDUSTRY.

<sup>302</sup> See *id.*; *The Consumer Wireless Experience: Hearing Before the S. Comm. on Commerce Science and Transp.*, 111th Cong., 1st Sess. 4 (June 17, 2009) (testimony of Mark Goldstein, Director, GAO) ("GOLDSTEIN TESTIMONY").

<sup>303</sup> Press Release, ACSI, Customer Satisfaction Rises Again, Now Joined by Other Economic Indicators, 2 (May 19, 2009), [http://www.theacsi.org/images/stories/images/news/0901q\\_Press\\_Release.pdf](http://www.theacsi.org/images/stories/images/news/0901q_Press_Release.pdf).

<sup>304</sup> *Id.*

service.”<sup>305</sup> The results were based on a survey of more than 50,000 people in 23 U.S. cities, and examined several key indicators of customer satisfaction, including service availability, circuit capacity, frequency of dropped calls, and the presence of static.<sup>306</sup>

The major reasons cited for the “surge in satisfaction” are more favorable contract service terms and fewer problems with call quality (attributed to increasing competition).<sup>307</sup> Indeed, a separate study by J.D. Power and Associates found that wireless carriers over a six-month period have continued to reduce the number of connectivity issues (such as dropped calls), failed initial connections, and audio problems (such as calls with static).<sup>308</sup>

And, according to the GAO, approximately “84 percent of adult wireless phone users are very or somewhat satisfied with their wireless phone service.”<sup>309</sup> High satisfaction rates extended across numerous metrics:

We also estimate that 85 percent of wireless phone users are very or somewhat satisfied with call quality, while the percentages of those very or somewhat satisfied with billing, contract terms, carrier’s explanation of key aspects of service at the point of sale, and customer service range from about 70 to 76 percent. Additionally, we estimate that most wireless phone users are satisfied with specific dimensions of call quality. For example, we estimate that 86 to 89 percent of wireless phone users are satisfied with their coverage when using their wireless phones at home, at work, or in their vehicle.<sup>310</sup>

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<sup>305</sup> CONSUMER REPORTS Survey Results.

<sup>306</sup> *Id.*

<sup>307</sup> *Id.*

<sup>308</sup> J.D. Power and Associates, 2009 Wireless Call Quality Performance Study—Volume 2, referenced at <http://www.jdpower.com/telecom/articles/2009-Wireless-Call-Quality-Volume-2>.

<sup>309</sup> GOLDSTEIN TESTIMONY at 4. It is noteworthy that only 10% of customers are very or somewhat dissatisfied – the remaining 6% were neither.

<sup>310</sup> *Id.* at 6.

In its most recent study, *Consumer Reports* found that “Verizon is a standout cell-phone carrier for most people,” receiving “high marks from survey respondents in overall satisfaction and customer service.”<sup>311</sup> The ratings found that Verizon Wireless had the highest customer-satisfaction rating in “87% of the cities surveyed, including such major markets as New York, Chicago, Los Angeles and Washington, D.C.”<sup>312</sup>

## 2. Minimal Complaints

Based on a review of the FCC’s quarterly informal complaint reports,<sup>313</sup> wireless complaints registered by the FCC are extremely low in relation to the total number of wireless subscribers. For example, in 2008, fewer than 62,000 complaints were filed, as compared to more than 270 million wireless subscribers, amounting to a complaint rate of *just over two-hundredths of one percent*.<sup>314</sup> While the number of complaints rose in 2008 in comparison to previous years, the growth appears to be driven by Telecommunications Consumer Protection Act (“TCPA”) complaints relating to telemarketers or spam, not by actions of the carriers themselves.<sup>315</sup> When TCPA-related complaints are excluded, the industry’s complaint rate is

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<sup>311</sup> CONSUMER REPORTS Survey Results.

<sup>312</sup> Brad Reed, *Verizon Trounces Competition in Wireless Quality*, NETWORK WORLD (Dec. 2, 2008) [http://www.pcworld.com/businesscenter/article/154784/verizon\\_trounces\\_competition\\_in\\_wireless\\_quality.html](http://www.pcworld.com/businesscenter/article/154784/verizon_trounces_competition_in_wireless_quality.html).

<sup>313</sup> See generally Quarterly Inquiries and Complaints Reports, <http://www.fcc.gov/cgb/quarter/welcome.html> (providing FCC Quarterly Inquiries and Complaints Reports for 2002 through first quarter 2009).

<sup>314</sup> Compare FCC, Quarterly Reports on Informal Consumer Inquiries and Complaints for Year 2008, <http://www.fcc.gov/cgb/quarter/welcome.html> (reporting the total number of complaints related to wireless telecommunications) with CTIA, CTIA Semi-Annual Wireless Industry Survey, <http://www.ctia.org/advocacy/research/index.cfm/aid/10316> (estimating about 270 million wireless subscribers as of year-end 2008) (“CTIA Semi-Annual Wireless Industry Survey”).

<sup>315</sup> See FCC, Quarterly Reports on Informal Consumer Inquiries and Complaints for Year 2008, <http://www.fcc.gov/cgb/quarter/welcome.html> (reporting more than 42,000 complaints related to TCPA). Verizon Wireless has committed substantial resources to (1) detecting and mitigating the impact of text messages from companies that engage in spam; (2) supporting its subscribers who have been harassed by such unsolicited messages; and (3) bringing lawsuits in federal and state courts against telemarketers and spammers. Verizon Wireless’s use of these resources has allowed it to block millions of unsolicited commercial electronic messages and mitigate the impact of spam attacks on our subscribers. See *supra* note 291.

less than half of the two-hundredths of one percent (or 73 complaints per million subscribers). Seen another way, if TCPA-related complaints are excluded, the industry complaint rate has declined from 2004 to 2008 while the number of subscribers has risen dramatically from 182 million to 270 million.<sup>316</sup>

Verizon Wireless has achieved continued strong growth in customers while maintaining a complaint rate lower than the overall industry average – “[d]uring each month in 2008, the rate of complaints from Verizon Wireless’s customers to the FCC, state PUCs, or state Attorneys General was about 8 complaints per 1 million customers – a rate of only 0.0008%.”<sup>317</sup> In particular, Verizon Wireless’s monthly FCC complaint rate per million customers is low and trending dramatically lower: on average, 5.6 complaints per million customers were received monthly in 2003 and just 2.82 complaints per million customers were received monthly in 2008.

#### **IV. THE INPUT AND DOWNSTREAM MARKET SEGMENTS ILLUSTRATE A COMPETITIVE LANDSCAPE**

In the *NOI*, the Commission “seeks to understand the competitive conditions in each of the market segments and edge markets that are part of the mobile wireless ecosystem.”<sup>318</sup> Accordingly, the Commission has requested “data and information on mobile wireless market segments and edge markets to inform and evaluate competition in the mobile wireless market.”<sup>319</sup>

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<sup>316</sup> Compare FCC, Quarterly Reports on Informal Consumer Inquiries and Complaints for Years 2004 and 2008, <http://www.fcc.gov/cgb/quarter/welcome.html> (reporting 26,447 complaints for 2004 and 19,784 complaints for 2008, excluding TCPA-related complaints) with CTIA Semi-Annual Wireless Industry Survey (estimating about 182 million wireless subscribers for 2004 and 270 million for 2008).

<sup>317</sup> Milch Testimony at 8.

<sup>318</sup> *NOI* ¶ 14.

<sup>319</sup> *Id.*

As an initial matter, Verizon Wireless emphasizes that vibrant competition in the mobile wireless *retail* market refutes any suggestion that carriers have either the ability or the inclination to distort the workings of input and edge markets. Far from exerting power over handset manufacturers, content developers, applications programmers, or other edge market providers, mobile wireless carriers must compete ferociously with one another for access to the best infrastructure, spectrum, backhaul, devices, applications, and content. As Rosston and Topper have observed, this competition preserves the independence of edge providers:

In a network market with considerable competition between network operators there is little competitive concern about preferred supplier relationships. Competing providers have a strong incentive to provide the most attractive package to their end consumers, and will enter into agreements with content providers for obtaining the content that gives them a competitive advantage.... In such a market there is little competitive concern about vertical restrictions and exclusive relationships.<sup>320</sup>

In any event, as discussed below, competition in both the input market segments (such as backhaul, infrastructure, and spectrum) and edge market segments (such as devices, applications, and content) illustrates the effective competitive landscape fostered by current FCC policies.

**A. Competition in the Backhaul, Infrastructure, and Spectrum Segments Confirms that the Mobile Wireless Market is Competitive**

**1. Backhaul**

The marketplace for backhaul is competitive and growing. The competition in backhaul services is particularly vigorous in urban and suburban areas where demand for high-capacity services from cell sites and commercial businesses is most concentrated. Indeed, as Verizon Wireless and other wireless providers have upgraded to 3G and soon will upgrade to 4G networks, wireless traffic volumes have increased and will increase exponentially, boosting

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<sup>320</sup> See ROSSTON-TOPPER at 10.

demand for backhaul services and making it necessary to upgrade to higher-capacity facilities in all areas. Independent analysts at Raymond James have estimated that the size of the wireless backhaul marketplace in the U.S. could grow from approximately \$3 billion annually to approximately \$8 to \$10 billion in the next three to five years, driven in large part by increases in the amount of wireless data traffic.<sup>321</sup> This exponential growth in demand and need for upgraded high-capacity facilities has led many providers, including several new entrants, to focus on providing backhaul services.

Consequently, mobile broadband providers can obtain backhaul, including fiber or microwave, from a variety of providers, “from the utility company, from the cable company, from the existing . . . telco provider.”<sup>322</sup> For instance, traditional fiber providers such as Level 3 Communications and Global Crossing already have networks in urban and suburban areas and offer competing backhaul services. Where higher-capacity facilities must be constructed in the first instance, no backhaul provider has any inherent advantage. Thus, although Verizon is constructing new connections to meet the growing demand for high-capacity backhaul services, it is also competing with a variety of alternative providers.

In recent years, the cable industry has been particularly aggressive in providing backhaul services. Given their ubiquitous networks, cable companies can readily serve cell sites. In 2008, the Chief Operating Officer of Comcast indicated that backhaul services are a “huge opportunity” using the facilities that Comcast “already [has] out there” and that Comcast will be

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<sup>321</sup> FRANK G. LOUTHAN, IV ET AL., RAYMOND JAMES & ASSOCIATES, INC., EXAMINING THE CONVERGENCE OF THE TELECOM AND CABLE SECTORS 16 (Aug. 18, 2008).

<sup>322</sup> Neville Ray, T-Mobile USA, FCC National Broadband Plan Workshop: Wireless Broadband Deployment – General, Tr. 45:21-46:1 (Aug. 12, 2009), [http://www.broadband.gov/docs/ws\\_03\\_deploy\\_wireless\\_transcript.doc](http://www.broadband.gov/docs/ws_03_deploy_wireless_transcript.doc) (“Ray Broadband Testimony”).

able to provide backhaul “cheap[er] than the typical alternative.”<sup>323</sup> Similarly, the Chief Operating Officer of Time Warner Cable has described backhaul services as the next “great opportunity” for the company, and has also indicated that because Time Warner Cable’s fiber is close to cellular towers, it will not require “much incremental expense” to provide backhaul services to those towers.<sup>324</sup> And Cox has indicated that it is prepared to provide backhaul services to wireless providers deploying their 4G networks “because we’re there and we can do sort of spurs off of our network” and “we’re deploying capital to that area to be able to satisfy that demand.”<sup>325</sup>

Fixed wireless backhaul providers, including FiberTower and NextLink, are also rapidly expanding to new areas. These providers have boasted about their ability to serve cell sites rapidly at relatively low cost compared to other providers. In Congressional testimony, FiberTower stated that it “leads the nation in providing backhaul services,” and already “provides backhaul service to over 6,000 mobile base stations (or cell sites) in 13 markets.”<sup>326</sup> FiberTower also has “customer agreements with eight of the largest U.S. wireless carriers.”<sup>327</sup> Similarly, NextLink has an extensive network, with “[f]ixed wireless licenses covering 95

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<sup>323</sup> *Comcast Corporation at Merrill Lynch Media Fall Preview-Final*, FAIR DISCLOSURE WIRE, Tr. 090908a1928849.749 (Sept. 9, 2008) (statement by Steve Burke, President and Chief Operating Officer, Comcast). Earlier this month, Mr. Burke reaffirmed that backhaul is a “very substantial opportunity” because “the number of towers in the United States is going to increase, not decrease” and “the cable industry is very uniquely positioned because we have fiber close to a lot of these towers.” See *Comcast Corporation at Bank of America Securities Media, Communications & Entertainment Conference-Final*, FAIR DISCLOSURE WIRE, Tr. 090909a2385577.777 (Sept. 9, 2009).

<sup>324</sup> *Time Warner Cable, Inc. at Merrill Lynch Media Fall Preview-Final*, FAIR DISCLOSURE WIRE, Tr. 090908au.781 (Sept. 9, 2008) (statement by Landel Hobbs, Chief Operating Officer, Time Warner Cable).

<sup>325</sup> See Dallas Clement, Cox Communications, FCC National Broadband Plan Workshop, Deployment – Wired, Tr. 35:10-13 (Aug. 12, 2009), [http://www.broadband.gov/docs/ws\\_02\\_deploy\\_wired\\_transcript.pdf](http://www.broadband.gov/docs/ws_02_deploy_wired_transcript.pdf).

<sup>326</sup> *Competition in the Wireless Industry: Hearing Before the Subcomm. on Comm., Tech. and the Internet of the H. Comm. on Energy and Commerce*, 111th Cong., 1st Sess. 3-4 (May 7, 2009) (testimony of Ravi Potharlanka, Chief Operating Officer, FiberTower Corporation).

<sup>327</sup> *Id.* at 4.

percent of the top U.S. business markets.”<sup>328</sup> It targets as primary customers “mobile wireless and wireline telecommunications carriers, large commercial enterprises and government agencies.”<sup>329</sup>

Competing wireless providers and cable companies have also entered into various arrangements with new entrants in the marketplace. For example, Clearwire has deployed extensive fixed wireless facilities nationwide. Clearwire claims to have “one of the largest wireless backhaul networks in the world”<sup>330</sup> and has told analysts that it is investing in microwave equipment so it can self-provision facilities to carry “roughly 80 percent of its [wireless] backhaul ... from microwave links.”<sup>331</sup> It expects this investment “will pay for itself in 10 months.”<sup>332</sup> Clearwire has described its operating costs as “negligible”<sup>333</sup> and has publicly stated that Sprint is providing infrastructure to Clearwire, and that Clearwire in turn “w[ill] make its metro wireless backhaul networks available to Sprint at preferred rates, creating additional [real] revenue opportunities for Clearwire and reducing costs for Sprint.”<sup>334</sup>

The result of this extensive competition has been that widespread, low-cost backhaul services are available where demand is greatest. Indeed, the Chief Technology Officer for Sprint

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<sup>328</sup> XO Communications Network Overview, <http://www.xo.com/about/network/Pages/overview.aspx> (follow “Network Overview” hyperlink) (last visited Sept. 26, 2009). The operations of NextLink were integrated into XO Communications as of June 30, 2009. See XO Holdings Inc., Quarterly Report (Form 10-Q), at 11 (June 30, 2009), <http://www.xo.com/about/Pages/investor.aspx> (follow “2Q 2009 Financials” hyperlink).

<sup>329</sup> XO Holdings Inc., Quarterly Report (Form 10-Q), at 11 (Mar. 31, 2009), <http://www.xo.com/about/Pages/investor.aspx> (follow “1Q 2009 Financials” hyperlink).

<sup>330</sup> *Leap Wireless International at Jefferies Panel Discussion-Final*, FAIR DISCLOSURE WIRE, Tr. 090908ay.703 (Sept. 9, 2008) (statement by Scott Richardson, Chief Strategy Officer, Clearwire).

<sup>331</sup> JOHN HODULIK, UBS INVESTMENT RESEARCH, CLEARWIRE CORP. 13 (Dec. 19, 2008).

<sup>332</sup> *Id.*

<sup>333</sup> *Q4 2008 Clearwire Corporation Earnings Conference Call-Final*, FAIR DISCLOSURE WIRE, Tr. 030509a2078472.772 (Mar. 5, 2009) (statement of Perry Satterlee, Chief Operating Officer, Clearwire).

<sup>334</sup> *Sprint Nextel/Clearwire WiMax Call-Final*, FAIR DISCLOSURE WIRE, Tr. 050708a1844939.739 (May 7, 2008) (statement by Ben Wolff, Chief Executive officer, Clearwire).

has indicated that T-1 lines, the most common type of high-capacity connection to cell sites, are “[r]elatively abundant and inexpensive” in the United States.<sup>335</sup> Likewise, Ericsson’s head of marketing for IP Broadband says that “[i]n the U.S. the ability to lease T1s has retarded microwave: it’s always been less expensive to lease T1s.”<sup>336</sup> Other wireless carriers are similarly able to obtain the backhaul services they need. For example, the CEO of Stelera Wireless recently told the Commission that “[w]e don’t have a problem with back haul because we’re using 300 MIP microwave off of those cell sites, so I’ve got plenty of back haul capacity to go back.”<sup>337</sup>

This competition has also resulted in significant price declines in backhaul and other traditional (DS1 and DS3) high-capacity services. Indeed, the real prices customers pay to Verizon Communications for these services have declined by approximately 24% between 2002 and 2008. These significant price declines reflect the steep discounts Verizon offers carrier customers to compete.

In rural areas, it is less likely that either competitors or incumbents have already deployed facilities capable of providing higher-capacity services because the traffic volumes are not

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<sup>335</sup> Stephen Lawson, *Sprint Picks Wireless Backhaul for WiMAX*, THE INDUSTRY STANDARD (July 9, 2008) (citing Barry West, former Chief Technology Officer, Sprint), <http://www.thestandard.com/news/2008/07/09/sprint-picks-wireless-backhaul-wimax>.

<sup>336</sup> See Anne Morris, *Microwave to Retain Key Role In Wireless Backhaul, As Fiber Waits In Wings*, TOTAL TELECOM (Sept. 2, 2009) (quoting Don McCullough, Head - Marketing, Product Area IP Broadband Business Unit Networks, Ericsson), <http://www.totaltele.com/view.aspx?ID=448534>.

<sup>337</sup> See Ed Evans, Stelera Wireless, FCC National Broadband Plan Workshop, Wireless Broadband Deployment – General, Tr. 42:20-43:1 (Aug. 12, 2009), [http://www.broadband.gov/docs/ws\\_03\\_deploy\\_wireless\\_transcript.doc](http://www.broadband.gov/docs/ws_03_deploy_wireless_transcript.doc); Hunter Newby, Allied Fiber, FCC National Broadband Plan Workshop: Deployment – Wired, Tr. 43:15-17 (Aug. 12, 2009) (“there’s all sorts of different” microwave backhaul providers, noting that “DragonWave, Acadian, Alvarion, everybody’s got something”), [http://www.broadband.gov/docs/ws\\_02\\_deploy\\_wired\\_transcript.doc](http://www.broadband.gov/docs/ws_02_deploy_wired_transcript.doc); Ray Broadband Testimony, Tr. 46:8-10 (noting that “some carriers are totally deploying their back haul solutions on a microwave basis”), [http://www.broadband.gov/docs/ws\\_03\\_deploy\\_wireless\\_transcript.doc](http://www.broadband.gov/docs/ws_03_deploy_wireless_transcript.doc); see also Vanu Bose, Vanu Inc., FCC National Broadband Plan Workshop: Wireless Technology, Tr. 104:17-105:22 (Aug. 13, 2009) (explaining that operators in India and Europe have reduced operating expenses by building “their own microwave backhaul”), [http://www.broadband.gov/docs/ws\\_06\\_tech\\_wireless\\_transcript.doc](http://www.broadband.gov/docs/ws_06_tech_wireless_transcript.doc).

sufficiently large to warrant doing so. In these areas, in order to deliver the higher capacity required by newer generation wireless broadband networks, any backhaul provider will have to deploy fiber, microwave, and other non-copper facilities in the first instance that are needed to deliver those higher capacities. Many competitive wireless service providers are applying for stimulus funding to deploy higher-capacity facilities in rural areas.<sup>338</sup> Other providers, including cable companies and fixed wireless providers as well as traditional telephone providers, also may be capable of deploying such facilities. In any event, additional funds, such as the universal service fund, should also be provided to support next generation services to rural Americans.

As demonstrated above, the facts on wireless backhaul competition – extensive and growing supplier competition, declining prices, and existing regulatory price constraints – show that this is a functioning marketplace and there is no basis for imposing additional price regulation on wireless backhaul services or other high-capacity services.

## **2. Infrastructure**

There is also healthy competition in the mobile wireless market segment for infrastructure.<sup>339</sup> Infrastructure – including not only traditional towers, but also the collocation of facilities on existing structures – forms the foundation for the future growth of mobile wireless

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<sup>338</sup> For example, FiberTower has filed seven applications to “bring critical middle mile infrastructure to unserved and underserved parts” of eight states using “[a] hybrid architecture” and that “[w]ireless carriers ... will have access to a range of broadband services through this infrastructure.” See Broadband USA Application Database, <http://www.ntia.doc.gov/broadbandgrants/applications/search.cfm> (search using “FiberTower”). Level 3 is asking for \$15 million in grant funding, which it would match with an additional \$5 million to create new access points or “middle mile” connections for its network in more than 50 rural markets in six states. Press Release, Level 3, Level 3 Requests Federal Stimulus Funding to Expand Broadband, Middle Mile Connections Provide Key Building Block to Close Digital Divide (Aug. 24, 2009), <http://www.level3.com/index.cfm?pageID=491&PR=796>. 360networks is proposing a “middle mile” project that “will access seventeen rural markets and a surrounding ten-mile radius along its existing 1,011 mile fiber optic route extending from Chicago, IL to New Orleans, LA.” Press Release, 360networks, 360networks Positions Itself for Broadband Stimulus Funding (Aug. 26, 2009), <http://www.360networks.com/news.asp?PRID=23>.

<sup>339</sup> See *NOI* ¶¶ 5, 7, 26 (seeking comment on how the “structure of the market for towers affects overall competition”).

services and the ability of various providers to compete. As Chairman Genachowski aptly stated: “[I]nfrastructure matters. It is the way jobs and commerce, innovation and progress of all kinds – in education and health care and energy – are spread across the country. And in the 21st Century, broadband infrastructure will be the platform for growth and opportunity for us, our children, and our children’s children.”<sup>340</sup>

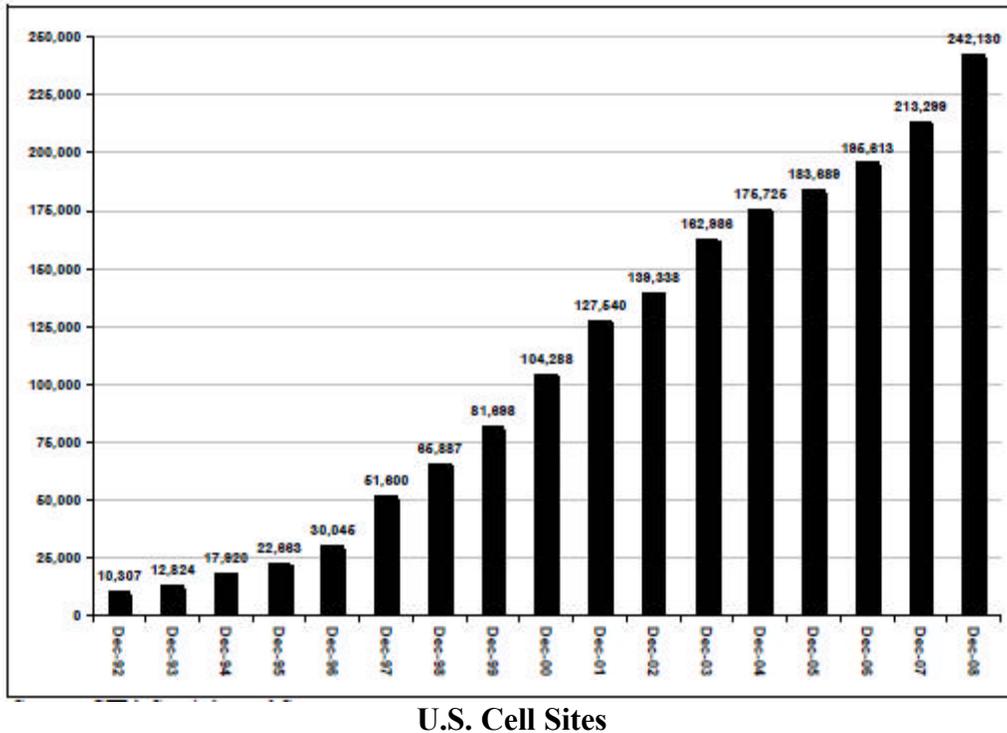
The infrastructure segment shows healthy competition, and is growing. One measure of this growth is the expansion over time in the total number of cell sites, which includes aggregated carrier facilities on towers, buildings, and other structures. According to CTIA, wireless carriers reported 28,831 more cell sites as of December 2008 compared to December 2007, with the total number now at over 242,000 sites.<sup>341</sup> This represents a 13.5% increase in reported cell sites over a one-year period, and a nearly 50% increase over a five-year period:<sup>342</sup>

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<sup>340</sup> Julius Genachowski, FCC Chairman, Statement at Seneca High School, Erie, Pennsylvania (Jul. 1, 2009), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-291860A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-291860A1.pdf).

<sup>341</sup> See CTIA Semi-Annual Wireless Industry Survey.

<sup>342</sup> *Id.*



Source: CTIA Semi-Annual Survey<sup>343</sup>

More important, this growth has created a diversity of siting options, preventing any one tower company or carrier from controlling the infrastructure market segment. As noted, while the total number of cell sites reported to CTIA includes aggregated carrier facilities on towers, rooftops and other structures, an examination just of the tower segment also shows a healthy competitive environment. For example, each of the four top independent tower companies owns between approximately 3,500 and 22,000 towers.<sup>344</sup> These four companies – Crown Castle, American Tower, SBA Communications, and Global Tower Partners – are not affiliated with any of the major wireless companies, and as of 2008 were joined by more than 15 other noteworthy

<sup>343</sup> Comments of CTIA, WT Docket 09-66, 22 (filed June 15, 2009).

<sup>344</sup> See *By the Numbers: Top 10 Tower Companies*, RCR WIRELESS NEWS, Sept. 23, 2009, <http://www.rcrwireless.com/article/20090923/FROTOPAGE/909239996/by-the-numbers-top-10-tower-companies>. Crown Castle is the largest tower company in the country, with 22,000 towers nationwide. American Tower is a close second, with 20,000 towers nationwide, followed by SBA Communications with slightly more than 8,000 towers in the U.S., and Global Tower Partners with more than 3,500 towers. *Id.*

tower companies.<sup>345</sup> In addition, wireless carriers (both national and regional) add further competition to the infrastructure marketplace, with domestic tower holdings for the top four carriers ranging between 6,000 and 10,000 towers apiece as of 2008.<sup>346</sup>

To put these figures in context, Macquarie Research has found that no one tower company owns more than 21% of all towers nationwide, and no one carrier owns more than 7% of all towers nationwide.<sup>347</sup>

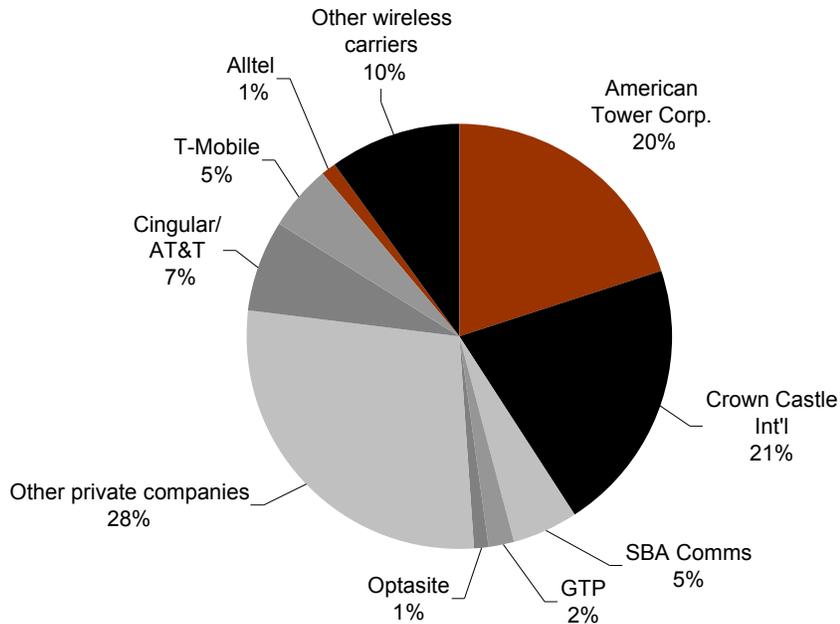
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<sup>345</sup> See Kristen Beckman, *By the Numbers: Top Tower Companies for the Second Quarter of 2008*, RCR WIRELESS NEWS, Oct. 31, 2008, <http://www.rcrwireless.com/article/20081031/WIRELESS/810309983/by-the-numbers-top-tower-companies-for-the-second-quarter-of-2008>. These companies are Message Center Management, Clear Channel Communications, Subcarrier Communications, Optasite, Tower Ventures, Lighttower, Diamond Communications, Vanguard Wireless, DukeNet Communications, Performance Development Group, Industrial Communications, Horvath Communications, New Horizon Towers, TowerCo, Bay Communications, Foresite and Collier Enterprises II L.L.C. *Id.*

<sup>346</sup> See Kristen Beckman, *By the Numbers: Top Tower Companies*, RCR WIRELESS NEWS, June 5, 2008, <http://www.rcrwireless.com/article/20080605/FREE/776356231/by-the-numbers-top-tower-companies>. Data are not provided for mid-size and smaller carrier tower holdings. In 2009, RCR changed its methodology and now lists only company self-reported data. As a result, only one carrier – AT&T – submitted current tower holding data. According to AT&T, it now owns 10,399 towers in comparison to the 9,185 towers reported for 2008. *Compare id. with By the Numbers: Top 10 Tower Companies*, RCR WIRELESS NEWS, Sept. 23, 2009, <http://www.rcrwireless.com/article/20090923/FRONTPAGE/909239996/by-the-numbers-top-10-tower-companies>.

<sup>347</sup> MACQUARIE RESEARCH EQUITIES (USA), US INFRASTRUCTURE PRIMER 322 (May 2009).

## U.S. Tower Ownership



Source: MCG GTP Presentation  
Macquarie Capital (USA), March 2008

The infrastructure marketplace is rounded out by the many owners of non-tower structures, including buildings, utility poles, water towers, bridges, and the like, that are used to support collocated facilities. All of these infrastructure owners and siting options underscore the competitive nature of the infrastructure segment.

As tower company executives recently confirmed in comments at PCIA's 2009 Wireless Infrastructure Show, tower providers "compete fiercely" with each other and bring "competition to this segment of the wireless industry."<sup>348</sup> Carriers routinely co-locate their facilities on the towers of competing infrastructure providers both as a matter of necessity and, in some cases,

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<sup>348</sup> Tracy Ford, *@PCIA: Tower Execs Optimistic on Broadband Buildout*, RCR WIRELESS NEWS, Sept. 23, 2009 (citing Richard Byrne, CEO, TowerCo), <http://www.rcrwireless.com/article/20090923/FRONTPAGE/909239991/-pcia-tower-execs-optimistic-on-broadband-buildout>.

due to local zoning conditions. In Verizon Wireless's case, slightly more than half of its cell sites are on company-owned towers, with the remainder located on other companies' towers, buildings, and other structures. Verizon Wireless allows for collocations on its towers where practical (*e.g.*, from a structural, interference, or space planning perspective).

Indeed, it is not the number of infrastructure providers or diversity of sites that limits the growth and new entry in the wireless ecosystem, but zoning approval delays at the state and local level. As discussed in more detail in Verizon Wireless's *Innovation NOI* comments in GN Docket No. 09-157, before a site can be utilized for a wireless facility, zoning approval is generally required at the local level, which can be extremely time-consuming and delay critical competition and service.<sup>349</sup>

### **3. Spectrum**

As noted above, the AWS-1 and 700 MHz auctions, as well as the BRS/EBS modernization, are bringing hundreds of megahertz of spectrum into the mobile wireless market, along with scores of new providers. These providers are continuing the nationwide trend of deploying mobile wireless systems that use the spectral resource more efficiently to maximize the consumer experience, as documented in Verizon Wireless's *Innovation NOI* comments in GN Docket No. 09-157. These technological developments, including frequency reuse, antenna sectorization, cell splitting, and the migration from analog to digital technologies and next generation services, have enabled the wireless industry to drive significant efficiencies in spectrum use. The results have been remarkable – greater voice capacity and increasingly sophisticated data products and services.

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<sup>349</sup> See Comments of CTIA, GN Docket No. 09-51, 15 (filed June 8, 2009).

None of these technology improvements have been mandated by government action. Rather, the wireless industry, and Verizon Wireless in particular, have made constant changes to network architecture in response to consumer demand and competitive market pressures. This network investment in the wireless ecosystem has been enabled by the Commission's commitment to the exclusive use, flexible rights licensing model. As discussed more fully in Verizon Wireless's *Innovation NOI* comments, the Commission should continue that model, and resist calls for new spectrum usage paradigms that undermine investments that would otherwise be made in response to consumer demand and competitive market pressures.

Notably, to ensure sufficient spectrum is available, the Commission should also initiate immediately a targeted process to identify and allocate additional spectrum for exclusive use, as discussed in greater detail in Verizon Wireless's *Innovation NOI* comments.

**B. The Mobile Wireless Ecosystem Offers Diversity in the Device, Application, and Content Segments**

The downstream and "edge" markets for products that rely on mobile wireless services – including devices, applications, and content – are also characterized by healthy competition, growing diversity, and increasing product differentiation. By any measure the market for devices is competitive, whether it be the number or types of devices, the number of manufacturers, price, or otherwise. There already are enormous numbers of applications available, and that number continues to explode. Moreover, wireless providers are responding to consumer demands for more application options via the Internet directly or through a carrier portal, and a wide and expanding variety of content is entering the wireless ecosystem.

## **1. Devices**

### **a. Number of Devices Available**

The abundance of wireless devices (handsets, smartphones, netbooks, and modem/aircards) available demonstrates the vibrant competition in this aspect of the market. There are more types of handsets available in the U.S. than in any other country of the world. As CTIA recently noted, U.S. consumers have access to more than 630 different wireless handsets and devices, compared to, for example, fewer than 150 in the U.K.<sup>350</sup> In fact, according to a recent study comparing handset attitudes in four different countries – the U.S., the U.K., Spain, and Japan – the United States has the highest utilization rates of the four nations for smartphones and PDAs.<sup>351</sup>

These products should all be considered when assessing competition in the wireless device segment because there is no set boundary on what functions a mobile device must include, or on how a device can be built. Trying to parcel out various segments of the market by function would be an exercise in futility, as next year's, next month's or even next week's devices could break down any perceived boundaries.<sup>352</sup>

### **b. Number of Device Manufacturers**

The number of manufacturers in the market further bolsters the case that the device segment of the wireless market is highly competitive. There are at least 32 well-established and newer manufacturers, including Apple, Motorola, Nokia, LG, Samsung, Research in Motion, Palm, Sony Ericsson, Kyocera, Sanyo and HTC, manufacturing wireless devices for the U.S.

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<sup>350</sup> CTIA, WIRELESS MARKETS at 11.

<sup>351</sup> See WHAT CONSUMERS WANT.

<sup>352</sup> See NOI ¶¶ 15-16.

market.<sup>353</sup> It also bears noting that no wireless service provider in the U.S. manufactures wireless devices itself, or owns equity in any of the major handset manufacturers.<sup>354</sup>

No single manufacturer or service provider has sufficient market power in its respective market to control the wholesale or retail distribution chain or prevent a handset manufacturer from working with its wireless carrier competitors. Indeed, Nokia, the global leader in wireless devices, has a market share of around 40% globally, but less than 10% in the U.S. At least 11 other major independent handset original equipment manufacturers (OEMs) have a measurable domestic share: LG, Samsung, Motorola, Kyocera, Sony-Ericsson, RIM, Palm, Apple, HTC, Pantech, and Sanyo.<sup>355</sup> In short, the market is characterized by robust competition that renders anticompetitive behavior extremely difficult.<sup>356</sup>

Historical trends further illustrate the lack of market power in the handset industry. In the second quarter of 1999, the top five mobile handset manufacturers in the U.S., by sales, were Nokia (32%), Motorola (22%), QUALCOMM (12.2%), Audiovox (10.3%), and Ericsson (10.2%).<sup>357</sup> Less than 10 years later, only two of those companies – Motorola and Nokia – remain significant handset vendors, and their market share has dropped from a collective 54% to

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<sup>353</sup> See CTIA, WIRELESS MARKETS at 11. Other manufacturers include Alcatel, ASUS, Axxesstel, BandRich, BenQ, Cal-Comp, Casio, Firefly, HP, Huawei, Jitterbug, Novatel Wireless, Option, Pantech & Curitel, PCD, Sharp, Siemens, Sierra Wireless, Uniden, Waxess USA and ZTE. *Id.*; see also LOWENSTEIN at 7-8.

<sup>354</sup> Verizon Wireless Handset Exclusivity Comments at 12; ROBERT W. HAHN ET AL., AEI-BROOKINGS JOINT CENTER FOR REGULATORY STUDIES, THE ECONOMICS OF ‘WIRELESS NET NEUTRALITY,’ at 31 (Apr. 2007) (“THE ECONOMICS OF ‘WIRELESS NET NEUTRALITY’”), attached as Attachment E to Opposition of CTIA, RM-11361 (filed Apr. 30, 2007).

<sup>355</sup> LOWENSTEIN at 7.

<sup>356</sup> MICHAEL L. KATZ, AN ECONOMIC ANALYSIS OF THE RURAL CELLULAR ASSOCIATION’S PETITION FOR RULEMAKING REGARDING EXCLUSIVITY ARRANGEMENTS 18-19 ¶ 34 (Feb. 2, 2009), attached as Declaration to Comments of AT&T Inc., RM-11497 (filed Feb. 2, 2009).

<sup>357</sup> Press Release, GartnerGroup Inc., GartnerGroup’s Dataquest Says U.S. Mobile Handset Sales Exceeded 10 Million Units in Second Quarter 1999 (Sept. 28, 1999), [http://www.gartner.com/5\\_about/press\\_room/pr19990928c.html](http://www.gartner.com/5_about/press_room/pr19990928c.html).

only 30%.<sup>358</sup> That dynamic trend continues with significant changes in market share among manufacturers even within a one year period:

<b>Manufacturer</b>	<b>2008Q2</b>	<b>2008Q1</b>	<b>20073Q</b>	<b>20072Q</b>
Motorola	21%	27%	31%	32%
Samsung	20%	18%	16%	18%
LG	20%	17%	17%	17%
Nokia	9%	8%	11%	10%
RIM BlackBerry	7%	5%	Not available	Not available
Sanyo	Not available	Not available	4%	4%
Source: The NPD Group. <sup>359</sup>				

Further, device manufacturers typically distribute their equipment broadly.<sup>360</sup> For example, a review of handset availability for various manufacturers shows that Research In Motion distributes its products through 28 U.S. providers,<sup>361</sup> Nokia 13 or more,<sup>362</sup> Kyocera 15,<sup>363</sup> and Samsung 15.<sup>364</sup> On its website, Verizon Wireless offers consumers more than 70 device choices. These include phones, feature phones, smartphones and PDAs, push-to-talk phones,

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<sup>358</sup> Press Release, The NPD Group, Inc., U.S. Consumer Mobile Phone Unit-Sales Declined 13 Percent Year-over-Year in Q2 2008 (Aug. 19, 2008), [http://www.npd.com/press/releases/press\\_080819.html](http://www.npd.com/press/releases/press_080819.html) (showing 2Q08 market shares as follows: Motorola, 21%; Samsung, 20%; LG, 20%; Nokia, 9%; and RIM BlackBerry, 7%).

<sup>359</sup> *Id.*; Press Release, The NPD Group, U.S. Mobile Phone Unit-Sales Declined 22 Percent Year-over-Year in First Quarter 2008 (May 20, 2008), [http://www.npd.com/press/releases/press\\_080520.html](http://www.npd.com/press/releases/press_080520.html); Press Release, The NPD Group, Year-Over-Year U.S. Mobile Phone Sales Revenue Increased 47 Percent in Third Quarter 2007 (Nov. 20, 2007), [http://www.npd.com/press/releases/press\\_071120a.html](http://www.npd.com/press/releases/press_071120a.html); Press Release, The NPD Group, Year-Over-Year U.S. Mobile Phone Sales Increased 14 Percent in Second Quarter (Aug. 15, 2007), [http://www.npd.com/press/releases/press\\_070815.html](http://www.npd.com/press/releases/press_070815.html).

<sup>360</sup> Verizon Wireless Handset Exclusivity Comments at 13.

<sup>361</sup> See Research In Motion Limited, Where to Buy (showing 28 separate vendors in the dropdown selection list for the United States region), <http://na.blackberry.com/eng/purchase/?regionId=2> (last visited Sept. 26, 2009).

<sup>362</sup> See Nokia Corp., Compare Phones, <http://www.nokiausa.com/find-products> (last visited Sept. 26, 2009). Nokia lists many more providers but specific phones are associated only with the 13 listed on Sept. 26, 2009.

<sup>363</sup> See Kyocera, Phones, <http://tools.kyocera-wireless.com/phonesthowsite.do> (last visited Sept. 26, 2009).

<sup>364</sup> See Samsung, More Carriers, <http://www.samsung.com/us/consumer/mobile/mobile-phones/more-carriers/index.idx?pagetype=subtype> (last visited Sept. 26, 2009).

and aircards from a wide range of manufacturers, such as Research in Motion (BlackBerry®), Motorola, Nokia, Samsung, LG, Casio, and HTC.

Amidst such competition, there are few (if any) impediments to prospective entrants. For example, MetroPCS worked with a Chinese manufacturer, ZTE, to introduce a new handset.<sup>365</sup> Indeed, Apple had never sold a wireless handset before introducing the iPhone through AT&T in mid-2007. That device is particularly notable because it quickly overtook the RAZR, developed by established manufacturer Motorola, to become the top selling device in the country.<sup>366</sup> Such shifts are based on the competitive introduction of new and innovative devices due to consumer demand and technological advances, and not market dominance by any one manufacturer.

### **c. Variety of Devices Available**

The sheer variety of wireless devices demonstrates the competitive nature of the device market. As the Commission has noted, “consumers have a variety of wireless devices in the market from which to choose.”<sup>367</sup> This is true because providers use wireless devices and features as a means to differentiate themselves in the extremely competitive wireless market.<sup>368</sup> According to one study, the proportion of consumers choosing a wireless carrier based on devices has grown by 51% since 2004.<sup>369</sup> These devices are incredibly diverse, ranging from

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<sup>365</sup> See Brad Smith, *The Changing U.S. Handset Market*, WIRELESS WEEK, Mar. 2, 2008, <http://www.wirelessweek.com/Articles/2008/03/The-Changing-U-S--Handset-Market/>.

<sup>366</sup> Compare Press Release, The NPD Group, iPhone 3G Leads U.S. Consumer Mobile Phone Purchases in the Third Quarter of 2008 (Nov. 10, 2008), [http://www.npd.com/press/releases/press\\_081110.html](http://www.npd.com/press/releases/press_081110.html), with Press Release, Wirefly.com, Wirefly Announces the Ten Most Popular Cell Phones of 2006 (Jan. 10, 2007), [http://www.wirefly.com/learn/company\\_news/wirefly-announces-the-ten-most-popular-cell-phones-of-2006/](http://www.wirefly.com/learn/company_news/wirefly-announces-the-ten-most-popular-cell-phones-of-2006/). Motorola is an OEM with a long history in the U.S. cellular market, including the ground-breaking StarTac prior to the RAZR.

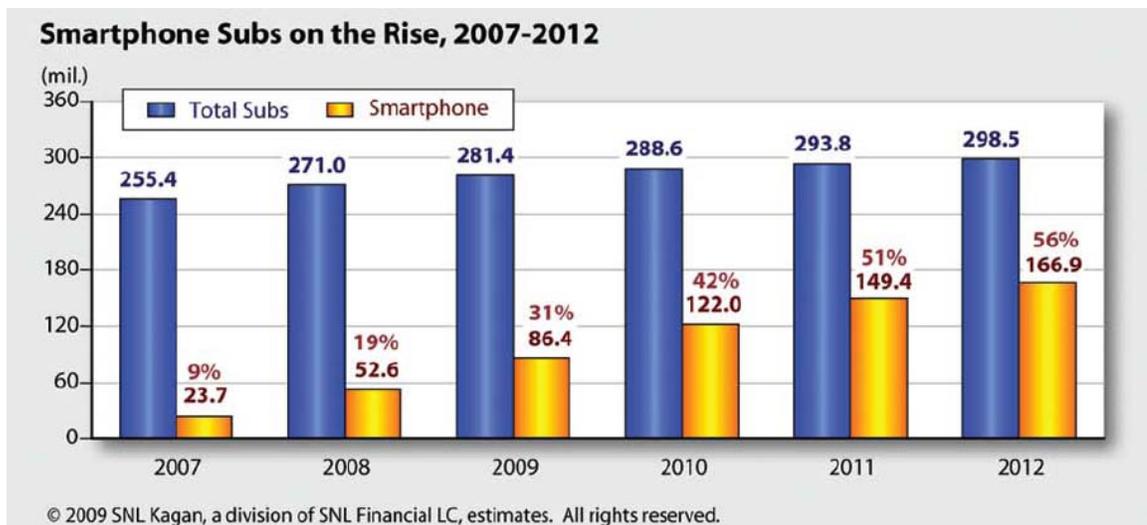
<sup>367</sup> *NOI* ¶ 16.

<sup>368</sup> See, e.g., *Cellphones: Our Tests of 70 Standard and Smart Models Show They're Sharing Many More Features*, CONSUMER REPORTS, Jan. 2009, at 34-39; LOWENSTEIN at 4-5.

<sup>369</sup> *Id.* at 6 (citing MCKINSEY & COMPANY, NORTH AMERICAN WIRELESS PANEL, 2008).

simple, voice-only devices to complex smartphones that more closely resemble a handheld computer.<sup>370</sup>

**Smartphones.** Today, the fastest-growing segment of the competitive device market is the smartphone.<sup>371</sup> These devices also function as mini-computers that allow users to surf the Internet and run non-branded applications and services just as though a user were sitting in front of a desktop computer.<sup>372</sup> A competitive market creates further incentives to invest the substantial time and cost needed to develop smartphones and bring them to market. Analysts predict that smartphone penetration in the U.S. will increase from 15% in 2009 to 35% by 2013,<sup>373</sup> as smartphone subscribership continues to rise:



<sup>370</sup> CTIA, WIRELESS MARKETS at 11.

<sup>371</sup> Marin Perez, *U.S. Smartphone Sales Grew 47 percent in Q2*, INFORMATIONWEEK, Aug. 20, 2009, <http://www.informationweek.com/news/mobility/business/showArticle.jhtml?articleID=219400891&subSection=Mobility>; see also Press Release, The NPD Group, Feature Phones Comprise Overwhelming Majority of Mobile Phone Sales in Q2 2009 (Aug 19, 2009), [http://www.npd.com/press/releases/press\\_090819.html](http://www.npd.com/press/releases/press_090819.html); MACQUARIE RESEARCH EQUITIES (USA), WIRELESS EMERGING DEVICES (Mar. 30, 2009) (“WIRELESS EMERGING DEVICES”).

<sup>372</sup> *Id.* at 3 (“[T]he most common definition of a smartphone is a mobile phone that runs an independent operating system such as RIM, Windows Mobile, Linux, Symbian, Palm or Apple and allows for application expansion”).

<sup>373</sup> *Id.* at 2.

Fueling this shift is an array of competing smartphones from multiple manufacturers.

Some examples that appeared in 2008 and 2009 include:

- Verizon Wireless: BlackBerry Tour 9630; Samsung Omnia; HTC TouchPro
- AT&T: Apple iPhone 3GS; Motorola Karma QA1; BlackBerry Bold
- T-Mobile: Motorola Cliq; myTouch 3G; G1; BlackBerry Pearl Flip
- Sprint: HTC Touch Pro2; Palm Pre; HTC Hero; Samsung Exclaim
- Leap: Cricket TXTM8; Motorola Evoke QA4; Samsung JetSet
- MetroPCS: Motorola Hint; Samsung Finesse; Samsung Messenger
- U.S. Cellular: LG Tritan; Samsung TwoStep; LG Rhythm

The following chart compares capabilities across a variety of carrier device offerings:

Carrier	Smartphone Capabilities				
	Touch Screen	QWERTY-Style	Slider	Flip	WiFi
Verizon	6	12	3	1	7
AT&T	6	11	4	0	12
T-Mobile	6	10	1	1	7
Sprint	7	16	3	1	7
US Cellular	2	3	1	1	1
Leap /Cricket	1	1	1	0	0
MetroPCS	1	2	2	0	0

Phone counts derived from visiting carrier websites as of Sept 21, 2009

The simple fact is that manufacturers and service providers are rapidly developing many variations on the smartphone concept to attract consumers.<sup>374</sup> Moreover, this trend is not limited

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<sup>374</sup> Verizon Wireless customers can choose smartphones with an extraordinary range of different interfaces, software platforms, and capabilities. For instance, Verizon Wireless offers (1) touch screen smartphones (*e.g.*, BlackBerry Storm, Verizon Wireless XV6900, Samsung Omnia, Samsung Saga, HTC Touch Diamond, HTC Touch Pro), (2) Qwerty-style smartphones (*e.g.*, Motorola Rival, BlackBerry Tour 9630), (3) slider smartphones (*e.g.*, Verizon Wireless SMT5800), and (4) flip smartphones (*e.g.*, BlackBerry Pearl Flip). Verizon Wireless customers also can choose between different software platforms: Windows Mobile and BlackBerry. Certain smartphones have WiFi capabilities and access to a variety of Verizon Wireless’s signature services, including VZ Navigator(SM), Visual Voice Mail, and V CAST Music with Rhapsody. *See generally*, Verizon Wireless, Phones & Accessories, <http://www.verizonwireless.com/b2c/store/controller?item=phoneFirst&action=viewStoreIndex&lid=//global//phones+and+accessories> (last visited Sept 26, 2009).

to the larger nationwide carriers. Smaller wireless carriers offer similar products. Katz recently noted that, among 51 members of the Rural Cellular Association, “all offer one or more phones with Internet access, and 38 offer one or more phones with touch screens.”<sup>375</sup>

Because competing smartphones are continually being introduced, smartphone prices declined 26% from the summer of 2007 to the summer of 2008.<sup>376</sup> This has fueled an increasing use of smartphones across all demographics, including low income households. For example, among households earning between \$25,000 and \$50,000, iPhone ownership increased almost 50% from the beginning of June 2008 to the end of August 2008.<sup>377</sup>

*Aircards.* Smartphones are only one part of the story, however. All major national wireless carriers and many regional carriers offer equipment and wireless broadband service plans to connect customers’ computers to the Internet.<sup>378</sup> These services use USB devices or similar technologies (known as “aircards”), which are inserted into to the customer’s computer

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<sup>375</sup> KATZ, ECONOMIC ANALYSIS OF RCA PETITION at 20.

<sup>376</sup> *Id.* at 18-19 (citing Dylan McGrath, *iPhone Leads U.S. Smartphone Sales*, EE TIMES, Oct. 6, 2008, <http://www.eetimes.com/showArticle.jhtml?articleID=210700311>). See also Press Release, The NPD Group, One In Three iPhone 3G Buyers Switched From Other Carriers to Join AT&T (Oct. 6, 2008), [http://www.npd.com/press/releases/press\\_081006.html](http://www.npd.com/press/releases/press_081006.html). Recently, several industry trends have emerged to accelerate the growth of smartphone adoption: affordable device prices (from upwards of \$400 to a price range of \$100-\$200); unlimited data pricing; simplified user interfaces and enhanced mobile browsers create a more intuitive and friendlier experience; and mounting competitive pressures from iPhone-like devices, including Samsung’s Instinct, LG’s Voyager and HTC’s Mogul. WIRELESS EMERGING DEVICES at 4-5.

<sup>377</sup> WIRELESS EMERGING DEVICES at 2.

<sup>378</sup> See Verizon Wireless, Mobile Broadband Plans for Wireless Internet Access, <http://www.verizonwireless.com/b2c/mobilebroadband/?page=plans> (last visited Sept. 26, 2009); AT&T, DataConnect Plans, <http://www.wireless.att.com/cell-phone-service/cell-phone-plans/data-connect-plans.jsp> (last visited Sept. 26, 2009); Sprint Nextel, Plans, <http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/DisplayPlans> (last visited Sept. 26, 2009); T-Mobile USA, Inc., T-Mobile webConnect Data Plan Details, <http://www.t-mobile.com/shop/plans/cell-phone-plans-detail.aspx?tp=tb1&rateplan=T-Mobile-webConnect-Data> (last visited Sept. 26, 2009); Cricket Communications, Inc., Plans, <http://www.mycricket.com/cricketplans/details/broadband> (last visited Sept. 26, 2009); U.S. Cellular, Wireless Modems, [http://www.uscc.com/uscellular/SilverStream/Pages/x\\_page.html?p=wirelessmodems](http://www.uscc.com/uscellular/SilverStream/Pages/x_page.html?p=wirelessmodems), (last visited Sept. 26, 2009).

and connect the computer to the carriers' wireless network with no limits on connectivity.<sup>379</sup>

Sales of aircards have exploded in the last five years. For example, Verizon Wireless's aircard sales more than doubled from 2007 to 2008.

**Netbooks.** Carriers in the past year have introduced small, ultraportable netbook devices which have built-in wireless receivers connecting them to carriers' networks.<sup>380</sup> These devices combine the power of a computer with the portability of a wireless phone. Like high-end smartphones, the costs of these netbooks are partly or wholly subsidized by the carriers with the purchase of a 1- or 2-year service plan. As an example, Verizon Wireless offers the lightweight HP Mini 1151NR, which allows customers to access the Internet, use e-mail and browse the Web quickly.<sup>381</sup> AT&T offers the Acer® Aspire One, Dell™ Mini 10 and the Lenovo® IdeaPad S10 netbooks.<sup>382</sup> Best Buy sells the HP Mini 110-1045DX netbook and laptops with embedded mobile broadband service from either AT&T, Sprint, or Verizon Wireless.<sup>383</sup>

**Other Devices.** A wide variety of other devices are beginning to enter the wireless ecosystem. These include, for example, personal indoor broadband wireless phone range extension systems. All major carriers now offer devices that provide this service, although the

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<sup>379</sup> Verizon Wireless does not restrict use of broadband access for VoIP, streaming video or streaming audio, although there are specific restrictions identified as prohibited uses that relate to protection of the network in the terms and conditions. *See infra* note 460 (discussing prohibited uses).

<sup>380</sup> *See, e.g.*, Verizon Wireless, HP Mini 1151NR Netbook, <http://www.verizonwireless.com/b2c/hpnetbook/overview.jsp> (last visited Sept. 26, 2009); AT&T, Netbook Center, <http://www.wireless.att.com/cell-phone-service/specials/netbooks.jsp?wtSlotClick=1-0027Y0-0-1&WT.svl=calltoaction> (last visited Sept. 26, 2009); *see also* Agam Shah, *Netbooks Offered Virtually Free With Mobile Contracts*, PC WORLD, July 6, 2009, [http://www.pcworld.com/businesscenter/article/167929/netbooks\\_offered\\_virtually\\_free\\_with\\_mobile\\_contracts.html](http://www.pcworld.com/businesscenter/article/167929/netbooks_offered_virtually_free_with_mobile_contracts.html)

<sup>381</sup> Press Release, Verizon Wireless, Netbooks Hit Verizon Wireless Communications Stores May 17 (May 14, 2009), <http://news.vzw.com/news/2009/05/pr2009-05-14.html>.

<sup>382</sup> *See* AT&T, Netbook Center, <http://www.wireless.att.com/cell-phone-service/specials/netbooks.jsp?wtSlotClick=1-0027Y0-0-1&WT.svl=calltoaction> (last visited Sept. 26, 2009).

<sup>383</sup> *See* Best Buy, Laptops and Netbooks with Embedded Mobile Broadband (offering the HP Mini 110-1045DX), <http://www.bestbuy.com/site/olspage.jsp?id=pcmcat186200050014&type=category> (last visited Sept. 26, 2009).

approaches differ. T-Mobile's @Home service uses VoIP to connect the consumer's WiFi-capable handset to T-Mobile's network through the consumer's existing Internet service.<sup>384</sup>

Taking a different approach, Verizon Wireless's Network Extender acts as a miniature wireless tower, able to connect with any Verizon Wireless phone.<sup>385</sup> AT&T and Sprint offer similar devices.<sup>386</sup>

Another innovative and newly popular type of wireless device is the MiFi, offered by both Verizon and Sprint.<sup>387</sup> The MiFi is a small device, slightly larger than a credit card, which creates a personal WiFi hotspot, allowing up to five devices to connect to the Internet over the carrier's network.

Furthermore, there are a growing number of consumer electronics goods sold by non-carrier third parties but designed to connect to wireless networks. Perhaps the most well-known example is the Amazon Kindle, which has a built-in wireless connection that allows consumers to purchase and download new electronic books, and interface with the worldwide web. Unlike many of the devices described above, the Kindle does not require a broadband wireless service plan – instead, the cost of the wireless service is part of the Kindle's single-payment price structure. On September 23, Verizon Wireless announced that it would provide EV-DO network

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<sup>384</sup> See T-Mobile, T-Mobile @ Home, <http://www.t-mobileathome.com/> (last visited Sept. 26, 2009).

<sup>385</sup> See Verizon Wireless, Verizon Wireless Network Extender, <http://www.verizonwireless.com/b2c/store/accessory?action=gotoFemtoCell> (last visited Sept. 26, 2009).

<sup>386</sup> AT&T, AT&T 3G Microcell, <http://www.wireless.att.com/learn/why/3gmicrocell/> (last visited Sept. 26, 2009); Sprint Nextel, Sprint AIRAVE, <http://www.nextel.com/en/services/airave/index.shtml> (last visited Sept. 26, 2009).

<sup>387</sup> See Verizon Wireless, Intelligent Mobile Hotspot, [http://www.verizonwireless.com/b2c/mobilebroadband/?page=products\\_mifi](http://www.verizonwireless.com/b2c/mobilebroadband/?page=products_mifi) (last visited Sept. 26, 2009); Sprint Nextel, MiFi 2200 by Novatel Wireless, <http://nextelonline.nextel.com/NASApp/onlinestore/en/Action/DisplayPhones?phoneSKU=NV2200WFDO> (last visited Sept. 26, 2009).

support for the forthcoming iRex DR800SG, a touch-screen e-reader with an 8.1-inch display that will permit users to download electronic content from Barnes & Noble.<sup>388</sup>

U.S. consumers also have access to a number of wireless devices able to leverage other wireless platforms, such as WiFi. Nationwide, at least 29 handsets featuring WiFi are being offered by both national and regional carriers, with many more on the way.<sup>389</sup> These devices are able to access any WiFi hotspot, whether carrier-branded or otherwise. Independent WiFi operators are providing data (and sometimes voice) services around the country, and quite often these systems possess some limited mobility.<sup>390</sup> Several mobile telephone providers also have entered the WiFi operation business through acquisitions, partnerships, or independent deployments, allowing them to extend their competitive wireless networks even further to indoor locations and other areas with poor wireless coverage.<sup>391</sup> The U.S. is also a world leader in the provision of handsets that allow the seamless switching of voice and data sessions from the

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<sup>388</sup> See, e.g., Press Release, Verizon Wireless, IREX Technologies Turns The Page On eReaders With New 8.1-Inch Consumer Device (Sept. 23, 2009), <http://news.vzw.com/news/2009/09/pr2009-09-23b.html>; *Verizon Wireless to support e-book reader* MSNBC, (Sept. 23, 2009), [http://www.msnbc.msn.com/id/32985733/ns/technology\\_and\\_science-wireless/](http://www.msnbc.msn.com/id/32985733/ns/technology_and_science-wireless/).

<sup>389</sup> CTIA, WIRELESS MARKETS at 12.

<sup>390</sup> See, e.g., Boingo Wireless, Inc., What is Boingo?, <http://www.boingo.com/what-is-boingo.php> (last visited Sept. 26, 2009) (describing Boingo's international Wi-Fi service). As the Commission has noted, estimates on the number of hotspots "vary considerably." *Thirteenth Report*, 24 FCC Rcd at 6296 ¶ 234. According to one survey, there were over 60,000 public WiFi hotspots across the U.S. in June 2009. JiWire, Inc., Insights: JiWire Mobile Audience Insights Reports, January – June 2009 at 2, [http://www.jiwire.com/downloads/pdf/JiWire\\_MobileAudienceInsights\\_1H09.pdf](http://www.jiwire.com/downloads/pdf/JiWire_MobileAudienceInsights_1H09.pdf) (last visited Sept. 21, 2009). Indeed, this number is likely very conservative, as providers such as T-Mobile and AT&T alone provide tens of thousands of hot spots. T-Mobile USA, Inc., US Locations (stating that T-Mobile offers connections at more than 45,000 locations world wide, including 10,000 in the U.S.), <https://selfcare.hotspot.t-mobile.com/locations/viewLocationMap.do>; Matt Hamblen, *AT&T Notes Surge in Wi-Fi Usage*, COMPUTERWORLD, Apr. 23, 2009, (noting that AT&T began supporting nearly 20,000 new U.S. hot spots last year), [http://www.computerworld.com/s/article/9132057/AT\\_T\\_notes\\_huge\\_surge\\_in\\_Wi\\_Fi\\_usage](http://www.computerworld.com/s/article/9132057/AT_T_notes_huge_surge_in_Wi_Fi_usage). In any case, it is clear that hot spot use is growing – it is reported that AT&T facilitated 10.5 million hot spot connections in the first quarter 2009, more than triple the amount for the same period in 2008. *Id.*

<sup>391</sup> *Thirteenth Report*, 24 FCC Rcd at 6296-98 ¶¶ 233-239.

commercial wireless network. As of May 2009, 12 of the 26 of these innovative dual-mode handsets available worldwide were sold in the U.S.<sup>392</sup>

Finally, as set forth above, MVNOs often offer service and devices tailored to customers with particular needs and interests, such as parents of teens or pre-teens, the young and hip, seniors, and immigrants from particular regions. This customization extends to devices. For example, Jitterbug caters to seniors and others desiring simple, easy-to-use phones, while Firefly and Bratz Mobile offer kid-friendly phones with extensive parental controls.<sup>393</sup> In short, consumers have many device choices, and they can and do make device and service selections based on what devices and/or features and functions they find attractive.

#### **d. Number of Distribution Outlets**

The number and diversity of competing distribution outlets for devices is extraordinary. Equipment manufacturers offer their products to consumers through a range of retail channels, including big box stores, wireless provider stores, the manufacturers' own websites, and online retail providers, which allow rural customers to access the state-of-the-art handset technology and many of the most popular new models available.<sup>394</sup>

For example, e-tailer J&R has an extensive online catalog and phone ordering service that can be easily accessed by customers anywhere. At J&R's website,<sup>395</sup> consumers can choose from and purchase over 200 handset models that will operate on various carriers' networks. The website includes descriptive information about each handset for sale and also includes a

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<sup>392</sup> CTIA, WIRELESS MARKETS at 12.

<sup>393</sup> See Jitterbug, Home Page, <http://www.jitterbug.com/> (last visited Sept. 26, 2009); Firefly Communications, Inc., Home Page, <http://www.fireflymobile.com/> (last visited Sept. 26, 2009); kajeet, <http://www.kajeet.com/>; MGA Entertainment, Inc., Bratz Mobile Home Page, <http://www.bratzmobile.com/> (last visited Sept. 26, 2009).

<sup>394</sup> CTIA CMRS Comments at 33-34.

<sup>395</sup> J&R, Phones, <http://www.jr.com/category/office/cellular-phones/> (last visited Sept. 26, 2009).

“Cellular Phones Product Guide,” with information regarding services, phone types, and various features, to assist customers in making purchasing decisions.<sup>396</sup> Best Buy’s website offers a similar selection of handsets.<sup>397</sup>

**e. Pricing**

There is also a healthy choice of pricing options among wireless devices generally. For example, according to one analyst, the retail (non-subsidized) price of devices in a few recent store checks ranged from \$49 to \$500.<sup>398</sup> Competition also drives down the prices of existing handsets. One analyst reviewed the changes in price for handsets available through the period from October 2008 to March 2009.<sup>399</sup> The prices for the 35 handsets that Verizon Wireless offered throughout that period dropped by an average of \$22 each. Average prices for other carriers’ handsets offered throughout the same period also declined.<sup>400</sup> These price reductions are summarized in the following chart:

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<sup>396</sup> J&R, Cellular Phones Product Guide, <http://www.jr.com/product/productGuide.jsp?contentPath=/Content/media/html/productGuides/Office/cellularPhones.html> (last visited Sept. 26, 2009).

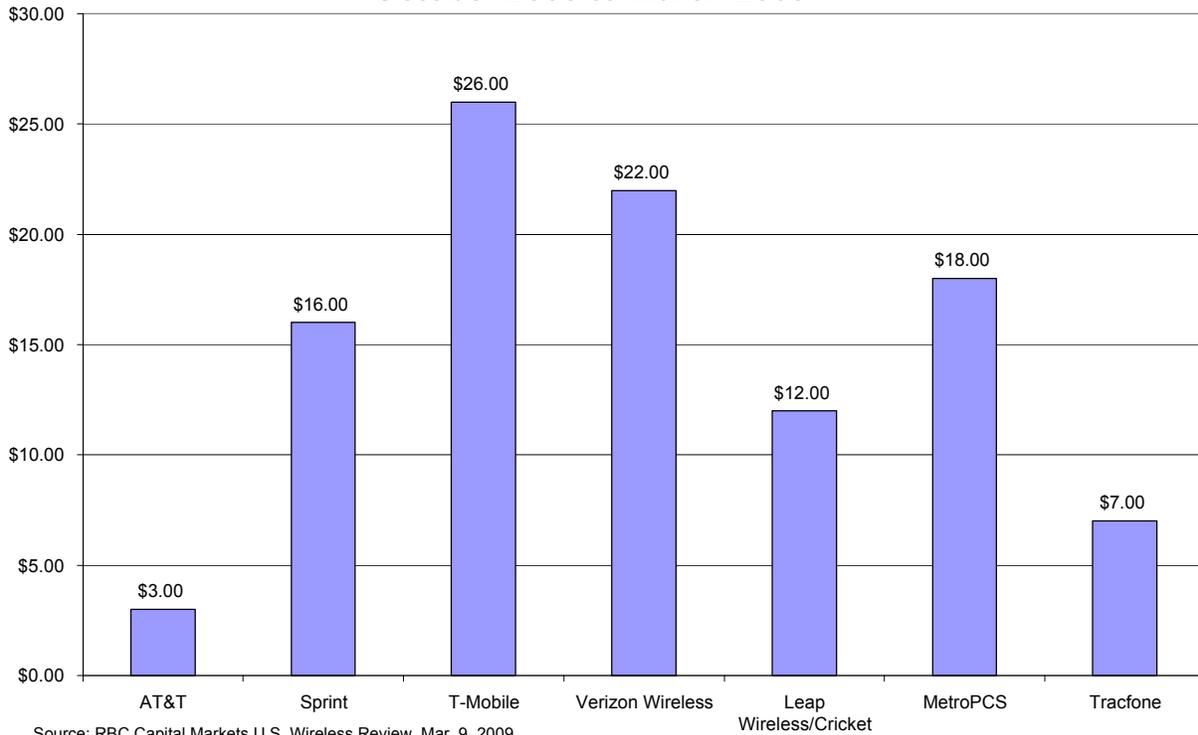
<sup>397</sup> Best Buy, Inc., Phones, <http://www.bestbuy.com/site/olspage.jsp?id=abcat0801000&type=category> (last visited Sept. 26, 2009).

<sup>398</sup> LOWENSTEIN at 7.

<sup>399</sup> RBC CAPITAL MARKETS, U.S. WIRELESS REVIEW at 21 Exhibit 15.

<sup>400</sup> *Id.* at 24.

### Average Handset Price Decrease Per Carrier October 2008 to March 2009



Of course, some handsets drop more in price than others. For example, Sprint's BlackBerry 8350i sold for \$150 less in March 2009 than it did in October 2008.<sup>401</sup> In March 2009, T-Mobile was selling the Nokia 5310 cameraphone for \$50 less than it had in October 2008.<sup>402</sup> Verizon Wireless's XV6900 smartphone was \$100 cheaper in March 2009 than in October 2008, and Cricket's Samsung MyShot and Messenger were each \$50 cheaper over the relevant period.<sup>403</sup>

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<sup>401</sup> *Id.* at 22.

<sup>402</sup> *Id.* at 23.

<sup>403</sup> *Id.* at 24, 25.

## **f. Diverse Business Models**

Finally, the competitive nature of the device market is increasingly reflected in the diverse business models being adopted by carriers with respect to wireless devices. Verizon Wireless's announcement of the Open Development Initiative ("ODI") enables additional devices to be used on the Verizon Wireless network as long as they meet the company's published technical standards.<sup>404</sup> ODI is the company's program designed to allow and encourage the development community to create new products, applications, and services, beyond what Verizon Wireless offers in its portfolio and bring these to the marketplace on the Verizon Wireless network. It is designed to stimulate the creation of new and non-traditional wireless devices. Independent developers have targeted market segments including machine-to-machine (M2M) devices (transportation, utilities, vending, security, and health care), traditional handsets (low cost, smartphones), and specialty consumer electronics (eBook devices, notebooks, digital cameras, navigation devices and gaming devices). To date, 60 devices have been certified for use on the Verizon Wireless network, from remote inventory and offender compliance monitors to smart grid devices and industrial strength wireless routers.<sup>405</sup> Dozens more devices are in process, including fleet tracking systems, portable gaming devices, health status tracking meters, senior citizen phones, mobile wallets, and high-end smartphones. To

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<sup>404</sup> Press Release, Verizon Wireless, Verizon Wireless to Introduce 'Any Apps, Any Device' Option for Customers in 2008 (Nov. 27, 2007), <http://news.vzw.com/news/2007/11/pr2007-11-27.html>; see also LOWENSTEIN at 8.

<sup>405</sup> Press Release, SupplyNet Communications, SupplyNet's Wireless Telemetry Device for Vendor Managed Inventory is First Certified Under New Open Development Program From Verizon Wireless (July 1, 2008), [http://www.supplynetsolutionsonline.com/news\\_details.aspx?id=448](http://www.supplynetsolutionsonline.com/news_details.aspx?id=448); Press Release, CalAmp Corp., CalAmp's WiMetry™ Platform for Meter Reading and Smart Grid Communications Certified for Use on the Verizon Wireless Network Device Brought to Market under Verizon Wireless' Open Development Program (Feb. 3, 2009), <http://investor.calamp.com/phoenix.zhtml?c=80120&p=irol-newsArticle&ID=1251146&highlight=>; Press Release, Verizon Wireless, Verizon Wireless And Itron Combine Forces To Harness The Power Of Wireless Technology In Advanced Metering And Smart Grid Market (Apr. 1, 2009), <http://news.vzw.com/news/2009/04/pr2009-04-01a.html>.

ensure that the certification process moves quickly, Verizon Wireless has adopted streamlined approval procedures that typically take only about three weeks to complete, and the company continues to approve additional devices.

Verizon Wireless also is developing the LTE Innovation Center,<sup>406</sup> which will leverage Verizon Wireless's experience to help developers assess what types of new products and services may best succeed in the marketplace. Three product areas are expected to see significant activity: consumer electronics and appliances; M2M products in the areas of healthcare, security and utility metering; and telematics. Once a product is ready to come to market, Verizon Wireless can help the developer quickly access the most appropriate sales channels.

Verizon Wireless is a Core member of the LiMo Foundation, a global consortium of mobile leaders delivering an open handset platform for the whole mobile industry.<sup>407</sup> The LiMo Foundation is open to all vendors and service providers in the mobile communications marketplace. Working with the Foundation's other 39 members, Verizon Wireless is shaping the evolution of the LiMo Platform™, while simultaneously continuing to deliver its own compelling and differentiated services to mobile customers.

Verizon Wireless is not alone in opening its network to greater device diversity. For example, AT&T has stated that it already allows customers to use any GSM handset on its network.<sup>408</sup> Additionally, Clearwire "will permit consumers to use any lawful device so long as

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<sup>406</sup> Press Release, Verizon Wireless, Verizon Wireless LTE Innovation Center to Drive 4G Next Generation Wireless Product Development (Apr. 1, 2009), <http://news.vzw.com/news/2009/04/pr2009-03-31d.html> ("Verizon Wireless LTE Innovation Center Press Release").

<sup>407</sup> Press Release, Verizon Wireless, Verizon Joins LiMo Foundation, (May 14, 2008), <http://news.vzw.com/news/2008/05/pr2008-05-14.html>.

<sup>408</sup> Leslie Cauley, *AT&T Flings Cellphone Network Wide Open*, USA TODAY (Dec. 5, 2007), [http://www.usatoday.com/tech/wireless/phones/2007-12-05-att\\_N.htm](http://www.usatoday.com/tech/wireless/phones/2007-12-05-att_N.htm).

it is compatible with and not harmful to the network.”<sup>409</sup> Certain industry members have also formed the Open Handset Alliance.<sup>410</sup> The group’s focus has been on the deployment of the Google-developed Android operating system for handsets and other devices.<sup>411</sup> The first Android device, the G1, launched in September 2008, and the following month T-Mobile became the first U.S. provider to launch a handset that uses the Android operating system. Sprint has also endorsed Android and has announced the upcoming launch of the HTC Hero, an Android device that will be available for purchase in October 2009.<sup>412</sup>

**g. Exclusivity**

Even with this broad-based distribution of devices, equipment manufacturers and carriers do invest in some exclusive arrangements because those arrangements can generate significant consumer benefits and drive additional subscribers to the carrier.<sup>413</sup> During the 2008 holiday season, for example, AT&T offered the iPhone, Verizon Wireless introduced the BlackBerry Storm, and T-Mobile competed with the G1 (Google).<sup>414</sup> In addition, Sprint is distributing

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<sup>409</sup> Joint Opposition to Petitions to Deny and Reply Comments of Sprint Nextel Corp. and Clearwire Corp., WT Docket. No. 08-94, 36 (filed Aug. 4, 2008).

<sup>410</sup> In November 2007, the Open Handset Alliance was formed by an alliance of 34 handset makers, wireless providers and other technology companies led by Google, T-Mobile, High Tech Computer Corporation, Qualcomm, and Motorola. *See* Press Release, Open Handset Alliance, Industry Leaders Announce Open Platform for Mobile Devices (Nov. 5, 2007), [http://www.openhandsetalliance.com/press\\_110507.html](http://www.openhandsetalliance.com/press_110507.html).

<sup>411</sup> Android provides a platform to support a marketplace for applications made by other companies. The system also allows wireless service providers to customize the Android software to promote their own data services and content. The operating software is available free of charge to handset manufactures and wireless service providers in order to encourage the development and deployment of handsets based on Android. *See* Open Handset Alliance, Android, [http://www.openhandsetalliance.com/android\\_overview.html](http://www.openhandsetalliance.com/android_overview.html) (last visited Sept. 26, 2009).

<sup>412</sup> Press Release, Sprint Nextel, The Innovation and Openness of a True Mobile Internet Experience Coming Soon to America’s Most Dependable 3G Network from Sprint on HTC Hero with Google (Sept. 3, 2009), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1327394](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1327394).

<sup>413</sup> Verizon Wireless Handset Exclusivity Comments at 20-28; Comments of Verizon Wireless, WT Docket. No. 09-66, 14-18 (filed June 15, 2009); Comments of Verizon Wireless, GN Docket. No 09-51, 36-37 (filed June 8, 2009).

<sup>414</sup> LOWENSTEIN at 6.

Palm's new Pre handset.<sup>415</sup> This scenario is replicated among a diverse group of operators, including smaller providers, and among a wide variety of devices. Helio, for example, offers the exclusive Ocean.<sup>416</sup> Many of these device launches are seen as responses to the competition posed by AT&T and the iPhone.<sup>417</sup> Notably, all of these devices compete with other devices that may or may not be exclusive – including devices offered by the smaller providers<sup>418</sup> – and not all exclusive arrangements are successful.

These arrangements, including time-to-market based arrangements, promote innovation and consumer choice. A volume purchase order that encourages sales promotions is certainly one reason for an exclusive arrangement.<sup>419</sup> Exclusive handset arrangements can significantly benefit manufacturers because sales of their products sometimes ride on the marketing and promotional efforts of the provider.<sup>420</sup> Consumers benefit because they obtain lower prices for

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<sup>415</sup> KATZ, ECONOMIC ANALYSIS OF RCA PETITION at 7-8; Press Release, Palm, Inc., Palm Unveils All-new webOS (Jan. 8, 2009), <http://investor.palm.com/releasedetail.cfm?ReleaseID=358392>.

<sup>416</sup> LOWENSTEIN at 6.

<sup>417</sup> KATZ, ECONOMIC ANALYSIS OF RCA PETITION at 7-8.

<sup>418</sup> Carriers like Leap, US Cellular and MetroPCS provide diverse handset offerings from a variety of manufacturers. Such handset offerings include devices with features like touch screens, QWERTY keyboards and multimedia functions. *See, e.g.*, Press Release, Leap Wireless International, Inc., Cricket Adds 3G Textastic Samsung Messenger II(R) to Device Lineup (Aug. 26, 2009), <http://phx.corporate-ir.net/phoenix.zhtml?c=191722&p=irol-newsArticle&ID=1324425>; Press Release, Leap Wireless International, Inc., Cricket Debuts Feature-Packed, Full Touch-Screen Motorola Evoke(TM) QA4 (June 11, 2009), <http://phx.corporate-ir.net/phoenix.zhtml?c=191722&p=irol-newsArticle&ID=1298231>; Press Release, U.S. Cellular Life's Bliss™ with the Newest Addition from LG Mobile Phones and U.S. Cellular (Sept. 3, 2009), [http://www.uscc.com/uscellular/SilverStream/Pages/x\\_page.html?p=a\\_press090903](http://www.uscc.com/uscellular/SilverStream/Pages/x_page.html?p=a_press090903); Press Release, U.S. Cellular, Samsung and U.S. Cellular® Introduce Samsung Gloss™ (May 26, 2009), [http://www.uscc.com/uscellular/SilverStream/Pages/x\\_page.html?p=a\\_press090526](http://www.uscc.com/uscellular/SilverStream/Pages/x_page.html?p=a_press090526); Press Release, MetroPCS Wireless, Inc., MetroPCS to Offer Limited Edition Mister Cartoon Designed Handset (Aug. 3, 2009), <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1315567>; Press Release, MetroPCS Wireless, Inc., MetroPCS Introduces Its First Touch Screen Handset - the Samsung Finesse(TM) (Apr. 1, 2009), <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1272139&highlight=>.

<sup>419</sup> HAHN ET AL., THE ECONOMICS OF 'WIRELESS NET NEUTRALITY' at 22 ("The goal of vertical restraints generally is to align the incentives of the retailer with those of its suppliers. One way to think about such restraints is to imagine how a vertically integrated firm would behave in the same circumstances. In the case of wireless service, vertical restraints are used to encourage wireless operators to promote the handset aggressively and discount the price of handsets.") (footnotes omitted).

<sup>420</sup> *Id.*

equipment, usually through subsidies from the carrier to the manufacturer, additional subsidies to the consumer (in the form of discounted device pricing), and cost savings from the provider's promotional and branding efforts and need to meet volume commitments.<sup>421</sup> Consumers also benefit because the investment by carriers and manufacturers into research and development leads to more innovative device offerings. Moreover, devices made available "exclusively" at first generally are later offered to all carriers, ensuring that consumers have access to devices that may never have been developed absent the exclusive deal.

Conversely, a ban on exclusive handset arrangements in supply contracts between wireless service providers and equipment manufacturers, advocated by some parties,<sup>422</sup> would undercut the competition for handsets that has driven innovation in the market. First, because no U.S. wireless carrier has sufficient market power to foreclose a handset manufacturer from entering the U.S. market and working with various providers,<sup>423</sup> lesser restrictions, such as exclusivity agreements, cannot cause anticompetitive harm.<sup>424</sup> All wireless carriers have dozens of manufacturers to work with, and limiting access to one for a specific device does not prevent

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<sup>421</sup> *Id.* ("Handset makers like Nokia and Samsung enter into exclusive contracts with wireless operators to ensure that the operators are properly motivated to market the handset. In the absence of exclusivity, a wireless operator might lack the incentive to invest sufficiently in brand development because other operators would free-ride on the efforts of the investing operator. That is, the benefits from the investment would have to be shared with other, non-investing operators.").

<sup>422</sup> *See, e.g.*, Rural Cellular Association, Petition for Rulemaking Regarding Exclusivity Arrangements Between Commercial Wireless Carriers and Handset Manufacturers, RM-11497 (filed May 20, 2008).

<sup>423</sup> HAHN ET AL., THE ECONOMICS OF 'WIRELESS NET NEUTRALITY' at 21 ("[C]omplete foreclosure by a single wireless operator would not likely prevent a handset maker from achieving the requisite economies of scale (that is, the cost of making the handset would be no higher). Because the targeted handset maker could supply at a minimum the other U.S. wireless operators', there would be no foreclosure. And, without foreclosure, there is no prospect of higher prices for consumers, as higher prices require higher costs of rival handset makers. Thus, without foreclosure, there can be no anticompetitive harm.").

<sup>424</sup> BERNARD A. NIGRO AND MICHAEL P. TRAHAR, WILLKIE FARR & GALLAGHER LLP, AN ANTITRUST PERSPECTIVE IN RESPONSE TO SKYPE'S PETITION 3-4 (explaining that "any consumer harm in a vertical case requires market power in at least one market," and noting that no monopoly exists in wireless service or handset market) attached as Attachment D to Opposition of CTIA, RM-11361 (filed Apr. 30, 2007).

developing a similar device through another.<sup>425</sup> To the contrary, use of exclusive contracts promotes competition and benefits consumers by strengthening incentives of other carriers and manufacturers to develop new competitive devices, as the iPhone example makes clear.<sup>426</sup>

In addition, restricting exclusive arrangements would, by contrast, mean that service provider efforts putting resources at risk for research and development and new devices would have *zero* value, because a competitor could immediately market the same device, without investing any capital or incurring any risk. Just as patent and copyright laws safeguard and encourage innovation, so does device exclusivity promote investment and innovation, which in turn benefits consumers.

Verizon Wireless notes, however, that it has voluntarily committed to steps meant to ease small carriers' access to new devices. Specifically, any new exclusivity arrangement into which the company enters with a handset manufacturer will limit exclusivity vis-à-vis carriers with 500,000 customers or less to no longer than six months.<sup>427</sup> The company further made clear that it has "no objection to small carriers having full access to any manufacturer's portfolio of prototypes and products in development, without being informed which may have been selected by Verizon Wireless."<sup>428</sup>

## **2. Applications**

The wireless application market is characterized by healthy competition and greater access options than ever before. The application segment is exploding in response to consumer

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<sup>425</sup> See, e.g., Smith, *The Changing U.S. Handset Market* (describing MetroPCS' deal with Chinese manufacturer ZTE).

<sup>426</sup> KATZ, ECONOMIC ANALYSIS OF RCA PETITION at 2.

<sup>427</sup> See *Ex Parte* Letter from John T. Scott, Verizon Wireless, to Marlene H. Dortch, FCC, RM-11497, WT Docket No. 09-66 (filed July 17, 2009).

<sup>428</sup> *Id.*

demand for “on-the-go” access to the full range of Internet options and greater mobile capabilities.<sup>429</sup> Today there are staggering numbers of applications available to wireless consumers, and the number increases every day.<sup>430</sup> Industry-wide, at least one observer forecasts that there will be 10 million separate applications available by 2020.<sup>431</sup> All told, The Yankee Group estimates that U.S. smartphone owners will download nearly a billion applications this year worth \$342 million in revenue, and forecasts 6.7 billion downloads worth \$4.2 billion in revenue by 2013.<sup>432</sup>

Some of the most popular applications are games, educational and reference tools, mobile music services such as Pandora (the most popular iPhone download of 2008,<sup>433</sup> also available on BlackBerry and Android), social networking (Facebook is a top mobile app for all smartphone platforms), productivity and personal finance tools, weather services, and even medical applications. And of course users’ phones already come with certain provider-specific applications, such as caller ID, call waiting, and voicemail, that once were sources of revenue and have become so popular they are often a part of even the most basic wireless package.

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<sup>429</sup> See CTIA, APPLICATION INNOVATION, attached to *Ex Parte* Notice from Christopher Guttman-McCabe, CTIA, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-51 *et al.* (filed Aug. 14, 2009).

<sup>430</sup> See, e.g., Handango.com., Press Release, Handango and LG CNS Announce Deal to Bring Top Smartphone Apps to All New LG Smartphone App Stores Worldwide (Sept. 15, 2009), [http://corp.handango.com/PressRelease.jsp?siteId=1&CKey=1\\_PRESSRELEASE\\_091509](http://corp.handango.com/PressRelease.jsp?siteId=1&CKey=1_PRESSRELEASE_091509); Dan Moren, *Apple Announces iPhone 3.1*, PC WORLD, Sept. 9, 2009, [http://www.pcworld.com/article/171668/apple\\_announces\\_iphone\\_31.html](http://www.pcworld.com/article/171668/apple_announces_iphone_31.html); Robin Wauters, *Android Market: 10,000+ Applications Strong Today*, WASHINGTON POST.COM TECHCRUNCH, Sept. 7, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/08/AR2009090802799.html>.

<sup>431</sup> Jason Ankeny, *GetJar Forecasts 100,000 Mobile Apps By End of 2009*, FIERCE MOBILE CONTENT, <http://www.fiercemobilecontent.com/story/getjar-forecasts-100-000-mobile-apps-end-2009/2009-07-20>.

<sup>432</sup> See CARL HOWE AND ANDY CASTONGUAY, YANKEE GROUP, FORECASTING THE U.S. MOBILE APP GOLD RUSH (Sept. 10, 2009), summary available at <http://www.yankeegroup.com/ResearchDocument.do?id=52164> (last visited Sept. 26, 2009).

<sup>433</sup> MG Seigler, *Pandora solidifies its place as the top iPhone app with its 2 millionth user*, DIGITALBEAT.COM (Dec. 2, 2008), <http://digital.venturebeat.com/2008/12/02/pandora-solidifies-its-place-as-the-top-iphone-app-with-its-2-millionth-user/>.

Other popular handset-based applications include text messaging, photo and video messaging, and ringtones.<sup>434</sup>

The multitude and diversity of applications is rivaled only by the speed at which consumers are adopting them. One example is the recently launched Palm Pre. On June 6, 2009, there were over 93,000 downloads from Palm Pre's menu of 18 applications.<sup>435</sup> Within eleven days, by June 17, 2009, the menu of available Palm Pre applications had increased to 30, and Palm Pre users had completed over 660,000 downloads.<sup>436</sup> Likewise, Apple customers have downloaded over 2 billion apps in the 14 months since its app store opened.<sup>437</sup> (To put this in perspective, the iTunes store did not sell its billionth song until it was almost 3 years old.<sup>438</sup>) The typical iPhone or Android user downloads approximately 10 applications per month.<sup>439</sup>

In short, there is a powerful market trend away from carriers providing "walled gardens" in which consumers downloaded so-called "on deck" applications from a carrier's proprietary menu, to providing consumers open access to third-party applications available on the Internet.

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<sup>434</sup> In the second quarter of 2009, Verizon Wireless customers sent and received more than 146 billion text messages. Verizon Wireless, Best Network, Network Facts, [http://aboutus.vzw.com/bestnetwork/network\\_facts.html](http://aboutus.vzw.com/bestnetwork/network_facts.html) (last visited Sept. 26, 2009). In addition, between April and June 2009, customers exchanged 2.5 billion picture and video messages over its nationwide network. *Id.*

<sup>435</sup> See Donald Melanson, *Close to 700,000 Palm Pre apps downloaded to date*, ENGADGET, June 20, 2009, <http://www.engadget.com/2009/06/20/close-to-700-000-palm-pre-apps-downloaded-to-date>.

<sup>436</sup> *Id.*

<sup>437</sup> See Press Release, Apple's App Store Downloads Top Two Billion (Sept. 28, 2009), <http://www.apple.com/pr/library/2009/09/28appstore.html> ("Apple Sept. 28 Press Release").

<sup>438</sup> Jonathan Silverstein, *iTunes: 1 Billion Served*, ABCNEWS.COM, Feb. 23, 2006, <http://abcnews.go.com/Technology/story?id=1653881>.

<sup>439</sup> AdMob, AdMob Mobile Metrics Report (July 2009), <http://metrics.admob.com/wp-content/uploads/2009/08/AdMob-Mobile-Metrics-July-09.pdf>.

Off-deck traffic has reportedly grown from less than 1% of total traffic in 2004 to over 35% in 2008.<sup>440</sup>

This competition is evident both in the proliferation of apps stores and greater ease in accessing applications of choice. As CTIA recently reported, Apple's iTunes, Google's Android, Nokia's Symbian platform, Palm's PalmOS platform, Palm's WebOS platform, and Research in Motion's BlackBerry® platform all have online stores that provide users with access to applications for their wireless devices.<sup>441</sup> Other independent online stores like Handango and GetJar have sold thousands of mobile apps for years,<sup>442</sup> and were joined in 2008 by PocketGear<sup>443</sup> – adding further competitive outlets to the application segment. The following provides a snapshot of a few of the application stores from which U.S. consumers may choose and the approximate number of applications available at each:

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<sup>440</sup> WIRELESS EMERGING DEVICES at 8-9 (“In the battle for mobile application revenue, carriers’ traditional advantage was realized by their control of the walled garden. As those controls are significantly reduced, carriers will have to compete with a variety of players for their piece of the pie.”).

<sup>441</sup> See CTIA, APPLICATION INNOVATION; see also Apple, App Store and Applications for iPhone, <http://www.apple.com/iphone/appstore/> (last visited Sept. 27, 2008); Elizabeth Woyke, *Nokia's Gigantic App Store*, May 7, 2009, FORBES.COM, <http://www.forbes.com/2009/05/07/nokia-ovi-store-technology-wireless-nokia.html>; Palm, Inc., The Palm Software Store has gone mobile, <http://appstore.pocketgear.com/palm/> (last visited Sept. 27, 2009); Palm, Inc., webOSdev Overview, [http://developer.palm.com/index.php?option=com\\_content&view=article&id=1642](http://developer.palm.com/index.php?option=com_content&view=article&id=1642) (last visited Sept. 27, 2009); Research In Motion Limited, BlackBerry App World, <http://na.blackberry.com/eng/services/appworld/> (last visited Sept. 27, 2009).

<sup>442</sup> See, e.g., Handango Inc., Handango Yardstick, First Half 2009, [http://www.handango.com/marketing/Yardstick/Yardstick\\_2009\\_1H.pdf](http://www.handango.com/marketing/Yardstick/Yardstick_2009_1H.pdf) (last visited Sept. 27, 2009); GetJar.com, About GetJar, <http://www.getjar.com/site/info> (last visited Sept. 27, 2009).

<sup>443</sup> See PocketGear.com, About PocketGear, <http://corp.pocketgear.com/> (last visited Sept. 27, 2009).

Application Store	Number of Apps Available
Handango	> 140,000 <sup>444</sup>
iTunes App Store	> 85,000 <sup>445</sup>
PocketGear	> 70,000 <sup>446</sup>
GetJar	> 54,000 <sup>447</sup>
Android Market	> 10,000 <sup>448</sup>
Palm Software Store	> 5,000 <sup>449</sup>
BlackBerry® App World	> 2,500 <sup>450</sup>
Nokia Ovi Store	~ 20,000 <sup>451</sup>
Palm webOS App Catalog	45 <sup>452</sup>
Windows Mobile Marketplace	~ 600 <sup>453</sup>

Press reports also indicate that Microsoft plans to launch a store for its Windows Mobile platform.

Wireless providers are also responding to consumer demands for more options to access third-party applications.<sup>454</sup> For example, Google and T-Mobile USA's G1 device uses the Android open development software for its operating system, essentially allowing any third party

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<sup>444</sup> See Press Release, Handango and LG CNS Announce Deal to Bring Top Smartphone Apps to All New LG Smartphone App Stores Worldwide (Sept. 15, 2009), [http://corp.handango.com/PressRelease.jsp?siteId=1&CKey=1\\_PRESSRELEASE\\_091509](http://corp.handango.com/PressRelease.jsp?siteId=1&CKey=1_PRESSRELEASE_091509).

<sup>445</sup> See Apple Sept. 28 Press Release.

<sup>446</sup> See PocketGear.com, About PocketGear, <http://corp.pocketgear.com/> (last visited Sept. 27, 2009).

<sup>447</sup> GetJar.com, About GetJar, <http://www.getjar.com/site/info> (last visited Sept 27, 2009).

<sup>448</sup> Robin Wauters, *Android Market: 10,000+ Applications Strong Today*, WASHINGTON POST.COM TECHCRUNCH, Sept. 7, 2009, <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/08/AR2009090802799.html>.

<sup>449</sup> Palm, Inc., The Palm Software Store has gone mobile, <http://appstore.pocketgear.com/palm/> (last visited Sept. 27, 2009).

<sup>450</sup> Research In Motion Limited, BlackBerry App World, <http://na.blackberry.com/eng/services/appworld/> (last visited Sept. 27, 2009).

<sup>451</sup> Elizabeth Woyke, *Nokia's Gigantic App Store*, May 7, 2009, FORBES.COM, <http://www.forbes.com/2009/05/07/nokia-ovi-store-technology-wireless-nokia.html>.

<sup>452</sup> James Falconer, *Four New Apps Arrive in the App Catalog*, INTOMOBILE, August 28, 2009, <http://www.intomobile.com/2009/08/28/four-new-apps-arrive-in-the-app-catalog.html> (last visited Sept. 27, 2009).

<sup>453</sup> Nicholas Kolakowski, *Microsoft Windows Mobile 6.5 Will Debut in 3 LG Electronics Smartphones*, EWEK.COM, Sept. 3, 2009, <http://www.eweek.com/c/a/Mobile-and-Wireless/Microsoft-Windows-Mobile-65-Will-Debut-on-3-LG-Electronics-Smartphones-120351/>; see also David M Williams, *Windows Mobile app store coming, iPhone developers wanted*, ITWIRE, Sept. 9, 2009, <http://www.itwire.com/content/view/27584/53/>.

<sup>454</sup> ROSSTON-TOPPER at 27.

developer to write programs and applications for the device.<sup>455</sup> Non-network operators, such as Nokia,<sup>456</sup> Qualcomm,<sup>457</sup> and Ericsson,<sup>458</sup> also offer platforms for developers to market their applications for mobile devices.

Verizon Wireless too has taken a number of steps to foster the development of and access to applications. First, as noted above, Verizon Wireless initiated ODI to provide consumers with open access to its wireless network using not only devices, but also third-party applications.<sup>459</sup> Second, Verizon Wireless subscribers with smartphones and data plans, as well as subscribers with aircards or embedded wireless modems in netbooks, can download the compatible applications of their choice from the Internet, subject to certain terms of their contracts<sup>460</sup> that are reasonably related to protecting the network and maintaining the quality of service to all users.<sup>461</sup>

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<sup>455</sup> See T-Mobile USA, Inc., Frequently Asked Questions about the T-Mobile G1™ with Google, <http://www.t-mobilel.com/g1-learn-faqs-phone.aspx> (last visited Sept. 27, 2009); Open Handset Alliance, Android Developers, <http://developer.android.com/index.html> (last visited Sept. 27, 2009).

<sup>456</sup> See Nokia, OVI Homepage, <https://store.oivi.com/> (last visited Sept. 27, 2009).

<sup>457</sup> See Press Release, Qualcomm Inc., App Store Pioneer to Take Mobile Retailing to Any Device on Any Network with Plaza Retail (May 18, 2009), [http://www.qualcomm.com/news/releases/2009/090518\\_App\\_Store\\_Pioneer\\_to\\_Take\\_Mobile.html](http://www.qualcomm.com/news/releases/2009/090518_App_Store_Pioneer_to_Take_Mobile.html).

<sup>458</sup> See Kevin Fitchard, *Ericsson rolling out mobile app store without Sony*, TELEPHONY ONLINE, June 26, 2009, <http://telephonyonline.com/wireless/news/ericsson-app-store-0625/index.html>. See also Kerry Capell, *Sony Ericsson Joins the App Store Crowd*, BUSINESSWEEK, June 3, 2009, [http://www.businessweek.com/globalbiz/content/jun2009/gb2009063\\_319267.htm?chan=globalbiz\\_europe+index+page\\_top+stories](http://www.businessweek.com/globalbiz/content/jun2009/gb2009063_319267.htm?chan=globalbiz_europe+index+page_top+stories) (discussing the Sony Ericsson mobile app store, which is different than the Ericsson mobile app store).

<sup>459</sup> See *infra* Section IV(B)(1)(f).

<sup>460</sup> See Verizon Wireless, Mobile Broadband Terms & Conditions, [http://b2b.vzw.com/broadband/bba\\_terms.html](http://b2b.vzw.com/broadband/bba_terms.html) (last visited Sept. 27, 2009). Prohibited uses include illegal acts, infringing upon others' intellectual property rights, interfering with other users' service or the network's ability to fairly allocate capacity among users, or degrading service quality for other users. For example, generating spam or generating or disseminating viruses, malware, or "denial of service" attacks are prohibited.

<sup>461</sup> See *Competition in the Wireless Industry: Hearing Before the Subcommittee on Communications, Technology, and the Internet, of the H. Comm. On Energy and Commerce*, 111<sup>th</sup> Cong., 1<sup>st</sup> Sess. 11 (May 7, 2009) (written Statement of George S. Ford, Ph.D., Chief Economist, Phoenix Center for Advanced Legal & Economic Public Policy Studies) ("The capacity of the wireless networks are limited, far more so than landline networks. These limitations are put under even greater strain with the advent of bandwidth hogging applications such as 'peer to peer' or 'P2P' applications such as BitTorrent and Skype. As such, operators must sometimes limit the use or operation of particular applications on their networks. The aim of such network management efforts is typically to (continued on next page)

In addition, by the end of 2009, Verizon Wireless smartphone subscribers and application developers will have an additional choice. Verizon Wireless recently announced the creation of an open developer portal (<http://developer.verizon.com>). At the portal, developers can find information on writing applications for Verizon Wireless smartphones, and can submit their proposals and software. Specifically, the developer portal is open for developers who want to write applications for handsets that use the BlackBerry® wireless platform, Microsoft Windows Mobile, and BREW operating systems. Links to software development kits (SDKs) for BREW, BlackBerry and Windows Mobile operating systems are available at the portal.

All applications that successfully complete the application and certification process will be posted in the V CAST App Store. Verizon Wireless anticipates launching its new “V CAST Apps” storefront by late this year.<sup>462</sup> The V CAST App store will be available to customers who purchase smartphones operating on the EV-DO Rev. A network.<sup>463</sup>

Verizon Wireless’s LTE Innovation Center will also assist third-party device and application developers to create innovative new products and services for Verizon Wireless’s upcoming fourth-generation wireless network.<sup>464</sup> In addition, the company has selected Nokia Siemens Networks and Alcatel-Lucent as key suppliers for the IP Multi-Media Subsystem

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maintain quality of service to all users. It is not possible to exclude the potential for anticompetitive motivations, but such limitations are not, in and of themselves, anticompetitive in intent.”)

<sup>462</sup> Press Release, Verizon Wireless, Verizon Developer Community Is Open for Business (July 28, 2009), <http://news.vzw.com/news/2009/07/pr2009-07-28f.html>.

<sup>463</sup> While the V CAST App store represents a substantial step toward giving consumers even more options, customers also still have the option to purchase a more traditional feature phone that can access the on-deck applications available currently in the Verizon Wireless Media Center. *See* Verizon Wireless, Features and Download, <http://products.vzw.com/index.aspx?id=fnd&lid=//global//features+and+downloads>, (last visited Sept. 27, 2009). A feature phone may include an Internet browser, but feature phone applications in the Media Center are all BREW-based. This means they have been optimized for operation on the Verizon Wireless network, providing a managed experience that many customers still prefer. Developers can write BREW applications by working through Qualcomm Incorporated and Verizon Wireless.

<sup>464</sup> Verizon Wireless LTE Innovation Center Press Release.

network, which will enable consumers to access rich multimedia applications regardless of access technology.

Access to unique applications is also an area where MVNOs have sought to establish a market niche. For example, Virgin Mobile offers its customers the ability to create their own ringtones and wallpapers and to sell their creations on its website; its phones also feature easy access to social networking sites, chatrooms, and dating sites.<sup>465</sup>

There are also no barriers to entry for third party application developers. Handset manufacturers, software purveyors, and wireless carriers all want to target customers with a wide variety of applications that will operate on their varying devices and operating systems. Moreover, there are multiple operating systems in use and available for developers to work with (*e.g.*, Windows Mobile, BlackBerry, Palm, Android, Symbian, BREW).<sup>466</sup> Developers need only comply with certification standards and secure license agreements for distribution of content. These practices ensure that applications do not interfere with wireless networks and are compliant with copyright law. The benefits to application developers – and consumers – are sizable. Developers get distribution channels, billing arrangements, and access to millions of

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<sup>465</sup> See Virgin Mobile USA, Inc., Studio V, <http://www.virginmobileusa.com/mobile-features/studio-v.html> (last visited Sept. 27, 2009); Virgin Mobile USA, Inc., Connect, <http://www.virginmobileusa.com/mobile-features/mobile-social-network.html> (last visited Sept. 27, 2009); Virgin Mobile USA, Inc., Chat and Date, <http://www.virginmobileusa.com/mobile-features/chat-mobile.html> (last visited Sept. 27, 2009).

<sup>466</sup> The operating system of a wireless device determines how the user interacts with that device, and what applications the user can install on the device. As such, the operating system is one of the major distinguishing features of wireless devices. Six of the most popular smartphone operating systems in the United States are BlackBerry OS, Windows Mobile, AppleOS X, Android, webOS from Palm, and Nokia's Symbian OS. There is strong evidence of vibrant competition for handset operating systems. One need only realize that three of the six operating systems discussed above have been introduced within the past two years – the Apple OS X, Android, and webOS. See Press Release, Apple, iPhone Premieres This Friday Night at Apple Retail Stores, (June 28, 2007), <http://www.apple.com/pr/library/2007/06/28iphone.html>; Press Release, T-Mobile USA, Inc., T-Mobile Launches the Highly Anticipated T-Mobile G1 (Oct. 22, 2008), [http://www.t-mobile.com/company/PressReleases/Article.aspx?assetName=Prs\\_Prs\\_20081022](http://www.t-mobile.com/company/PressReleases/Article.aspx?assetName=Prs_Prs_20081022); Press Release, Sprint, Sprint to Offer Palm Pre Nationwide on June 6 (May 19, 2009), [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1289761](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1289761). And as these newcomers excel, the more established operating systems continue to compete and innovate.

browsing consumers. Because barriers to entry are low and the potential for returns is high, smaller developers generally stand on equal footing with larger ones. Notably, this open environment for application development was accomplished without regulatory intervention.

### 3. Content

Consistent with the trend toward off-deck applications, off-deck content is proliferating and is another sign of healthy competition in the wireless ecosystem.<sup>467</sup> Consumers are increasingly using their wireless devices to access advanced content and sophisticated information services in addition to simple voice and data. Providers of all shapes and sizes use unique content as a product differentiator that will attract new wireless customers and keep them.

For many Americans, a mobile device is a primary source for video programming and Internet content, such as news and social networking sites. In addition to real-time streaming, music or video content is often loaded directly from the consumer's computer, portable player, or digital video recorder ("DVR") into a smartphone for convenient viewing.<sup>468</sup> Again, these trends have been driven by consumer demand, in this case for branded content as leading Internet portals such as Microsoft and Google entered the space.<sup>469</sup> Notably, neither Microsoft nor any of the other top Internet content sites, such as eBay, Yahoo!, AOL, or Amazon, are affiliated with mobile wireless network providers.<sup>470</sup>

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<sup>467</sup> See WIRELESS EMERGING DEVICES at 8.

<sup>468</sup> *Id.*

<sup>469</sup> *Id.*

<sup>470</sup> See ROSSTON-TOPPER at 26-27. Verizon Wireless has partnered with Qualcomm Incorporated to bring consumers V CAST Mobile TV over Qualcomm's MediaFLO network in selected markets. Mobile TV subscribers can receive high quality streaming video content with channels such as Fox Mobile, CBS Mobile, Comedy Central, MTV, NBC, Nickelodeon, and ESPN. See Press Release, Verizon Wireless, Verizon Revolutionizes TV at Home and On Mobile Phones (Jan. 7, 2007), <http://news.vzw.com/news/2007/01/pr2007-01-07c.html>; CNET, Verizon Wireless V CAST Mobile TV, [http://reviews.cnet.com/cell-phones/verizon-wireless-v-cast/4505-6454\\_7-32399887.html](http://reviews.cnet.com/cell-phones/verizon-wireless-v-cast/4505-6454_7-32399887.html) (last visited Sept. 27, 2009).

Verizon Wireless customers with devices capable of reaching the Internet have access to the unlimited off-deck content available that can be downloaded onto a customer's wireless device. Verizon Wireless is constantly working to improve its subscribers' wireless Internet experience and access to content. For example, Verizon Wireless has implemented technology from Novarra into its Mobile Web that allows customers to access the majority of websites in full HTML view, regardless of whether their mobile device supports a full HTML web browser.<sup>471</sup> Similarly, Verizon Wireless has incorporated Microsoft's Live Search capabilities into its wireless data services.<sup>472</sup> As a result, Verizon Wireless customers now have easier access to context-relevant search results. Specifically, customers now can use voice commands, typed queries, and/or location information to receive highly relevant search results, including maps, directions, traffic information, information on local businesses, movie theatres and show times, gas prices, and weather. Verizon Wireless itself also offers a wide range of video, music, gaming, and other content through V CAST.

Other wireless providers also make a wide diversity of content available to their subscribers as a way to attract new customers. For example, AT&T offers CV, which includes access to programming including newscasts and episodes from all the major networks and some cable channels.<sup>473</sup> Sprint's offerings include the exclusive NFL Mobile Live, which provides

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<sup>471</sup> Press Release, Verizon Wireless, Mobile Web from Verizon Wireless Now Optimized to Give Customers Access to More Full-HTML Web Sites on their Wireless Phones (Feb. 16, 2009), <http://news.vzw.com/news/2009/02/pr2009-02-16.html>.

<sup>472</sup> Press Release, Verizon Wireless, Verizon Wireless Selects Microsoft for Mobile Search and Advertising (Jan. 7, 2009), <http://news.vzw.com/news/2009/01/pr2009-01-07a.html>.

<sup>473</sup> See AT&T, CV: Get Video on Your Cellphone, <http://www.wireless.att.com/learn/messaging-internet/media-entertainment/video.jsp?wtSlotClick=1-0019TW-0-1&WT.svl=title> (last visited Sept. 27, 2009).

live audio broadcasts of every regular season NFL game, video content from the NFL Network, and customizable “Red Zone alerts,”<sup>474</sup> as well as exclusive NASCAR Sprint Cup Mobile.<sup>475</sup>

Regional carriers and resellers/MVNOs also offer innovative on-deck and off-deck content. For example, U.S. Cellular offers Music Sync, which allows a sync between mobile phone and computer to turn the phone into a music player.<sup>476</sup> U.S. Cellular also offers mSpot Radio, which includes access to music, news, entertainment, and talk radio stations, as well as podcasts.<sup>477</sup> MetroPCS offers Pocket Express, which optimizes news, sports, weather, and maps for mobile handsets.<sup>478</sup> TracFone offers graphics and ringtones,<sup>479</sup> and Virgin Mobile has a variety of music videos.<sup>480</sup>

With greater access, many consumers seek ways to protect themselves and their children from offensive content. As a result, CTIA and the wireless industry have developed a set of content guidelines for content delivered over mobile devices.<sup>481</sup> These guidelines require that wireless operators deploy access controls, such as content filters or parent controls, before offering “Restricted” content. These content guidelines were developed in response to concerns

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<sup>474</sup> See Sprint, NFL Mobile Live, <http://www.sprint.com/nfl> (last visited Sept. 27, 2009).

<sup>475</sup> See Sprint, Sprint TV, [http://www.nextel.com/en/services/power\\_vision/sprint\\_tv.shtml](http://www.nextel.com/en/services/power_vision/sprint_tv.shtml) (last visited Sept. 27, 2009).

<sup>476</sup> See US Cellular, Music, [http://www.uscc.com/usccellular/SilverStream/Pages/x\\_page.html?p=music](http://www.uscc.com/usccellular/SilverStream/Pages/x_page.html?p=music) (last visited Sept. 27, 2009).

<sup>477</sup> *Id.*

<sup>478</sup> See Metro PCS Wireless, Inc. Introducing Pocket Express, <http://www.metropcs.com/pocketexpress/> (last visited Sept. 27, 2009).

<sup>479</sup> See TracFone, Download Ringtones, <http://tracfoneblog.blogspot.com/2007/09/download-ringtones.html> (last visited Sept. 27, 2009).

<sup>480</sup> See Virgin Mobile, Downloads, <http://downloads.virginmobileusa.com> (last visited Sept. 27, 2009).

<sup>481</sup> See CTIA, Content Guidelines, [http://www.ctia.org/advocacy/policy\\_topics/topic.cfm/TID/36](http://www.ctia.org/advocacy/policy_topics/topic.cfm/TID/36) (last visited Sept. 27, 2009); CTIA, Rating of Content to Mobile Phones: The Wireless Industry Initiative, [http://www.ctia.org/advocacy/position\\_papers/index.cfm/AID/10299](http://www.ctia.org/advocacy/position_papers/index.cfm/AID/10299) (“CTIA Content Position Paper”) (last visited Sept. 27, 2009).

from customers about the need to be able to restrict content on mobile devices, particularly the devices used by customers' children. In fact, the Commission staff itself urged the wireless industry to adopt such content guidances.<sup>482</sup>

Currently, all major carriers give consumers the ability to completely block Internet access on their devices. As CTIA notes, “[a]lthough carriers have no control over content generally available on the Internet, providing filters and tools is an important step intended to give consumers, particularly parents, the ability to limit the Internet content that can be accessed through their family’s wireless devices. Wireless companies are aggressively researching technological solutions to empower parents further and are implementing them on a carrier-by-carrier basis.”<sup>483</sup> Consistent with these guidelines, Verizon Wireless allows its subscribers to apply content filters. For example, the company has created an enhanced website that allows parents to manage how their children use Verizon Wireless’s service.<sup>484</sup> From this website, parents can create content filters that block materials that may be inappropriate for their children. This is yet another example of how wireless carriers endeavor to serve their subscribers’ interests.

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<sup>482</sup> See Letter from John Muleta, Chief, Wireless Telecommunications Bureau, FCC, to Steve Largent, President, CTIA (Feb. 14, 2005), [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-256795A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-256795A1.pdf) (also appended to Comments of Verizon Wireless, WT Docket No. 08-7, App. F (filed Mar. 14, 2008)).

<sup>483</sup> See CTIA Content Position Paper.

<sup>484</sup> Press Release, Verizon and Verizon Wireless, Verizon Enhances Parental Control Resource Center for TV, Wireless and Online Services (Dec. 11, 2008), <http://news.vzw.com/news/2008/12/pr2008-12-11.html>.

## V. THE COMMISSION SHOULD MAINTAIN ITS MARKET-BASED PARADIGM FOR WIRELESS SERVICES BECAUSE IT BEST ENABLES INNOVATION AND COMPETITION

In the Omnibus Budget Reconciliation Act of 1993 (“OBRA”),<sup>485</sup> Congress mandated a deregulatory paradigm for wireless services. As the Commission has declared, the “overarching congressional goal” in OBRA was to “promot[e] opportunities for economic forces – not regulation – to shape the development of the CMRS market.”<sup>486</sup> The Commission has followed Congress’s mandate for nearly twenty years, through Democratic as well as Republican administrations. Time and again it has found that regulation should be used sparingly and only to correct, in the narrowest effective way, a demonstrated problem that adversely impacted customers.

As the discussion above makes clear, the mobile wireless sector is competitive in all of its myriad aspects. Nevertheless, some parties may use these proceedings to advocate for a return to a regulatory model, or to press for government intervention through specific new rules that will benefit some players in the wireless ecosystem. The Commission should resist these requests, not only because it is not the agency’s job to protect or assist particular competitors, but because, more fundamentally, the Commission’s longstanding market-based paradigm has gone hand in glove with the robust competition and innovation that has distinguished the wireless industry. The wisdom of that paradigm is demonstrated by the indisputable – and accelerating – wireless competition and innovation. Given the overwhelming evidence that competition and innovation

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<sup>485</sup> See Pub. L. No. 103-66, Title VI, § 6002(b) (1993).

<sup>486</sup> Implementation of Sections 3(n) and 332 of the Communications Act, *Third Report and Order*, 9 FCC Rcd 7988, 8004 ¶ 29 (1994) (“*Third CMRS Report and Order*”); see also, e.g., Petition of New York State Public Service Commission to Extend Regulation, *Report and Order*, 10 FCC Rcd 8187, 8190 ¶ 18 (1995) (noting Congress’s actions were designed to implement its “general preference in favor of reliance on market forces rather than regulation”).

are thriving in a minimally regulated environment, changing course now would clearly be unjustified.

Returning to regulation would not only be unwarranted, but would also be affirmatively harmful to the very goals of promoting competition and innovation that the Commission says it wants to pursue. The economics literature is replete with analyses demonstrating the harms of regulation.<sup>487</sup> The literature also confirms that the mere *prospect* of regulation injects harmful uncertainty into markets, disincenting investment and frustrating long-term planning. It would be a signal mistake to pull back from continued fidelity to the deregulatory policy that has spurred the wireless industry's growth and success.

Moreover, there are serious legal hurdles the Commission would face in changing course, either to move away from its longstanding policy or to adopt discrete new rules at the behest of some parties. The Commission must, for example, comply with the Administrative Procedure Act ("APA"), the limits Congress has imposed on the FCC's authority, and its own numerous precedents repealing regulation and finding that the market-based paradigm best serves the public interest.

**A. Congress Has Mandated a Market-Based Approach to Wireless and the Internet**

As an administrative agency, the Commission must hew its actions to both the plain language of its statutory mandate and to statutory purpose.<sup>488</sup> Thus, as it considers the various proposals parties may submit in this proceeding or the related *Innovation NOI* in GN Docket No. 09-157, the Commission should remain mindful of statutory directives regarding wireless and

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<sup>487</sup> See Comments of Verizon Wireless, GN Docket No. 09-157, at Section IV.C (filed Sept. 30, 2009).

<sup>488</sup> See, e.g., *American Financial Services Ass'n v. FTC*, 767 F.2d 957, 968 (D.C. Cir. 1985) (recognizing that the judiciary must "reject administrative agency actions which exceed the agency's statutory mandate or frustrate congressional intent").

Internet regulation. Here, Congress has clearly mandated – and the Commission has consistently followed – a deregulatory approach to both wireless providers and the Internet. Accordingly, the FCC’s authority to take a different approach “must come specifically from Congress.”<sup>489</sup>

In the OBRA,<sup>490</sup> Congress directed the FCC to take a deregulatory approach to the wireless industry. Prior to 1993, the Commission had heavily regulated wireless providers, subjecting them to the same Title II common carrier regulations as it applied to traditional wireline providers.<sup>491</sup> OBRA rejected that paradigm. OBRA “dramatically revise[d] the regulation of the wireless telecommunications industry.”<sup>492</sup> In the Commission’s own words, “the statutory plan is clear.”<sup>493</sup> The “overarching congressional goal” in OBRA was to “promot[e] opportunities for economic forces – not regulation – to shape the development of the CMRS market.”<sup>494</sup> Indeed, Congress specifically amended the Act to implement its “general preference in favor of reliance on market forces rather than regulation,”<sup>495</sup> and to permit the mobile wireless market to develop subject only to the degree of regulation “for which the Commission and the states demonstrate a clear-cut need.”<sup>496</sup> Not surprisingly, then, the FCC has interpreted Congress’s deregulatory mandate as setting out a requirement that regulatory authorities “clear substantial hurdles” before imposing new regulatory requirements on the

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<sup>489</sup> *FCC v. Midwest Video Corp.*, 440 U.S. 689, 709 (1979) (“*Midwest Video II*”).

<sup>490</sup> Pub. L. No. 103-66, Title VI, 6002(b) (1993).

<sup>491</sup> See Implementation of Sections 3(n) and 332 of the Communications Act, *Second Report and Order*, 9 FCC Rcd 1411, 1414 ¶ 3 (1994) (“*Second CMRS Report and Order*”).

<sup>492</sup> *Cellnet*, 149 F.3d at 433.

<sup>493</sup> Petition on Behalf of the State of Hawaii, *Report and Order*, 10 FCC Rcd 7872, 7874 ¶ 10 (1995) (“*Hawaii R&O*”).

<sup>494</sup> Implementation of Sections 3(n) and 332 of the Communications Act, *Third Report and Order*, 9 FCC Rcd 7988, 8004 ¶ 29 (1994) (“*Third CMRS Report and Order*”).

<sup>495</sup> Petition of New York State Public Service Commission, 10 FCC Rcd at 8190 ¶ 18.

<sup>496</sup> *Hawaii R&O*, 10 FCC Rcd at 7874 ¶ 10.

wireless industry.<sup>497</sup> Thus, the Commission itself has interpreted OBRA to place a higher burden of justification on regulation than would normally adhere under baseline principles of administrative law.

Congress further embraced deregulation for the wireless industry and the Internet in the Telecommunications Act of 1996 (“1996 Act”). The 1996 Act was enacted 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.”<sup>498</sup> Congress also directed the Commission to take a hands-off approach to the Internet. When Congress amended the Act in 1996, it understood even at that early stage that the Internet was “flourish[ing] ... with a minimum of government regulation.”<sup>499</sup> Accordingly, Congress declared it “the policy of the United States... to preserve the vibrant and competitive free market that presently exists for the Internet... *unfettered* by Federal or State regulation.”<sup>500</sup> This statement in Section 230(b) is an express limitation on the FCC’s jurisdiction over the Internet and a clear declaration of deregulatory congressional intent.

In Section 706 of the 1996 Act, Congress further directed the FCC to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capabilities” – including broadband offerings – by, *inter alia*, “regulatory forbearance” and “methods that remove barriers to infrastructure investment.”<sup>501</sup> Section 706 confirms Congress’ intent that

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<sup>497</sup> Petition of the Connecticut Department Public Utility Control To Regulate Control of the Rates of Wholesale Cellular Service Providers in the State of Connecticut, *Report and Order*, 10 FCC Rcd 7025, 7027 ¶ 4 (1995) (“*DPUC Connecticut*”).

<sup>498</sup> 1996 Act, Preamble.

<sup>499</sup> 47 U.S.C. § 230(a)(4).

<sup>500</sup> *Id.* § 230(b) (emphasis added).

<sup>501</sup> 1996 Act, § 706(a)-(b).

market forces be the primary regulator of the Internet. In sum, the 1996 Act “was an unusually important legislative enactment... [whose] *primary purpose was to reduce regulation*....”<sup>502</sup>

Indeed, the FCC has described the 1996 Act as “a clarion call for promoting competition and reducing regulation in all markets when competitive conditions exist.”<sup>503</sup>

**B. The Commission Has Followed This Market-Based Paradigm and Has Consistently Found That It Promotes Competition and Innovation.**

In recognition of “the clear and powerful directives from Congress,”<sup>504</sup> the Commission embraced deregulation for CMRS providers and has “systematically removed regulatory barriers.”<sup>505</sup> In a long line of precedents, adopted during Democratic as well as Republican administrations, the Commission has repeatedly emphasized that “[t]he framework of... [its] CMRS regulatory policy [is] – moderate regulation... and a preference for curing market imperfections by lowering entry barriers in order to encourage competition rather than by regulating existing licensees....”<sup>506</sup> The FCC has also expressed a “commitment to rectify ... [any imperfect market] conditions as quickly as possible by strengthening and expanding cellular competition rather than by resorting to heavy-handed regulation.”<sup>507</sup>

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<sup>502</sup> *Reno v. ACLU*, 521 U.S. 844, 857 (1997) (emphasis added) (quotation marks omitted).

<sup>503</sup> Brief for Respondents, *Orloff v. FCC*, 352 F.3d 415 (No. 02-1189), 2003 WL 25588065, at \*29 (D.C. Cir. Jan. 21, 2003) (“*Orloff v. FCC* Respondents Brief”).

<sup>504</sup> *Orloff v. FCC* Respondents Brief, 2003 WL 25588065, at \*29.

<sup>505</sup> Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, *First Report*, 10 FCC Rcd 8844, 8846 ¶ 5 (1995).

<sup>506</sup> *DPUC Connecticut* at 7033-34 ¶ 14; *see also Second CMRS Report and Order*, 9 FCC Rcd at 1418 ¶ 15 (“establish[ing], as a principal objective, the goal of ensuring that unwarranted regulatory burdens are not imposed upon any mobile radio licensees who are classified as CMRS providers”).

<sup>507</sup> *DPUC Connecticut* at 7033 ¶ 13.

The Commission has, on a non-partisan basis, taken numerous other actions based on its repeated finding that reducing regulation will promote competition, innovation, and investment that will in turn serve wireless consumers. For example:

- *Treatment of Wireless as a Nationwide Service.* The FCC has moved toward licensing wireless services on a broad geographic basis over the years, finding that geographic licensing fosters efficient utilization of the spectrum,<sup>508</sup> provides licensees with greater flexibility to respond to market demands without the need for additional licensing by the Commission,<sup>509</sup> facilitates aggregation by licensees of smaller service areas into seamless regional and national service areas, and provides licensees with greater build-out flexibility, all of which contribute to significant investment and innovation.<sup>510</sup>
- *Preemption of State Regulation.* Consistent with its findings that wireless services are national in nature, the FCC has preempted certain state and local regulation as required by OBRA.<sup>511</sup> In doing so, the agency noted that state regulation could burden the development of competition and preemption was not only consistent with the federal mandate for regulatory parity, but would also promote investment in wireless infrastructure.<sup>512</sup> The FCC has also preempted state regulation of wireless technical standards.<sup>513</sup> The FCC additionally has prohibited state and local governments from regulating the placement,

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<sup>508</sup> See Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended, *Report and Order and Further Notice of Proposed Rule Making*, 15 FCC Rcd 22709, 22724 ¶ 29 (2000) (“*Section 332 R&O and FNPRM*”); Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands, *Report and Order and Second Notice of Further Rule Making*, 12 FCC Rcd 18600, 18647 ¶ 101 (1997); Amendment of Part 90 of the Commission’s Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band, *Second Report and Order*, 12 FCC Rcd 19079, 19087 ¶ 10 (1997).

<sup>509</sup> Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum-Based Services; 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services; Increasing Flexibility To Promote Access to and the Efficient and Intensive Use of Spectrum and the Widespread Deployment of Wireless Services, and to Facilitate Capital Formation, *Report and Order and Further Notice of Proposed Rule Making*, 19 FCC Rcd 19078 (2004).

<sup>510</sup> See *Section 332 R&O and FNPRM*, 15 FCC Rcd at 22724 ¶ 29.

<sup>511</sup> *Second CMRS Report and Order*, 9 FCC Rcd at 1418-19 ¶ 16.

<sup>512</sup> *Id.* at 1421 ¶ 23.

<sup>513</sup> An Inquiry Into the Use of the Bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems; and Amendment of Parts 2 and 22 of the Commission’s Rules Relative to Cellular Communications Systems, 50 RR 2d 1673, 89 FCC 2d 58 ¶ 81 (1982) (“We affirm our preemption over the technical standards for cellular systems. We continue to regard this as being essential to the ‘assurance of compatible operation of equipment on both local and national levels.’ We have carefully developed the technical requirements essential for efficient spectrum re-use and nationwide compatibility, while providing sufficient flexibility to accommodate new technological innovations. It is imperative that no additional requirements be imposed by the states which could conflict with our standards and frustrate the federal scheme for the provision of nationwide cellular service.”) (internal citation omitted).

construction, modification, and operation of wireless facilities based on radio frequency (“RF”) emissions.<sup>514</sup>

- *Removal of Technical Mandates.* The FCC has rejected calls to require wireless providers to use specific technologies. For example, it permitted cellular carriers to utilize digital technology without specifying a digital standard.<sup>515</sup> In 2002, the Commission established a five-year transition period after which the analog standard would not be required, noting that market forces, and not government regulation, should determine whether and when analog service should be discontinued.<sup>516</sup> Under Chairman Hundt, the Commission similarly refused to adopt any interoperability standards for CMRS, finding that competition in the market “provides sufficient incentives for CMRS licensees to develop interoperable technology.”<sup>517</sup> As a result, wireless providers offer a variety of technologies today and consumers can choose the one that best meets their needs.
- *Removal of Limitations on Business Operations.* The FCC has removed a variety of prior limitations on how wireless providers must provide service. For example, in 1992, the Commission allowed cellular carriers to bundle customer premises equipment (“CPE”) with cellular service.<sup>518</sup> As expected, this decision provided the foundation for the way carriers provide service today by allowing for the sale of discounted CPE to customers, particularly low income consumers, promoting efficient spectrum utilization, allowing greater penetration of wireless services in lower-income communities, and encouraging innovation in the handset market.<sup>519</sup> Then, in 1994, the Commission chose to forbear from imposing any tariff filing

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<sup>514</sup> Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation, *Report and Order*, 11 FCC Rcd 15123, 15183 ¶ 166 (1996); Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934, *Second Memorandum Opinion and Order and Notice of Proposed Rulemaking*, 12 FCC Rcd 13494, 13529 ¶ 89 (1997), *aff’d sub nom. Cellular Phone Task Force v. FCC*, 205 F.3d 82 (2d Cir. 2000); *see also* 47 C.F.R. § 1.1307(e).

<sup>515</sup> *See* Amendment of Parts 2 and 22 of the Commission’s Rules to Permit Liberalization of Technology and Auxiliary Service Offerings in the Domestic Public Cellular Radio Telecommunications Service, *Report and Order*, 3 FCC Rcd 7033, 7040 ¶ 51-52 (1988).

<sup>516</sup> Year 2000 Biennial Regulatory Review – Amendment of Part 22 of the Commission’s Rules to Modify or Eliminate Outdated Rules Affecting the Cellular Radiotelephone Service and other Commercial Mobile Radio Services, *Report and Order*, 17 FCC Rcd 18401, 18410-11 ¶ 15 (2002).

<sup>517</sup> Implementation of Sections 3(N) and 332 of the Communications Act--Regulatory Treatment of Mobile Services; Amendment of Part 90 of the Commission’s Rules to Facilitate Future Development of SMR Systems in the 800 MHz Frequency Band; Amendment of Parts 2 and 90 of the Commission’s Rules to Provide For the Use of 200 Channels Outside the Designated Filing Areas in the 896-901 MHz and 935-940 MHz Band Allotted to the Specialized Mobile Radio Pool, *Third CMRS Report and Order*, 9 FCC Rcd at 8069-70 ¶ 165-168.

<sup>518</sup> Bundling of Cellular Customer Premises Equipment and Cellular Service, *Report and Order*, 7 FCC Rcd 4028 (1992).

<sup>519</sup> *Id.* at 4028-29 ¶ 7.

obligations and other Title II requirements on CMRS providers.<sup>520</sup> This decision resulted from the agency's determination that tariff filings and other Title II obligations would impede competition and price discounting. Noting that the competitive development of broadband PCS service would obviate the need for a resale prohibition, the FCC also eliminated the restrictions on resale by cellular, broadband PCS, and geographic area SMR providers in 1996.<sup>521</sup>

The agency's deregulatory trend continued into this decade as well. In 2001, the Commission eliminated the *per se* limit on the aggregation of CMRS spectrum, which restricted the amount of broadband spectrum that an entity could hold or have attributed to itself in a particular geographic area to 45 MHz (or 55 MHz in rural areas).<sup>522</sup> This decision was based on a finding that that mobile telephony markets had experienced and continued to experience strong growth, increased competition and active innovation, and that consumers had realized the benefits of competition in the form of increased output, lower prices, and increased diversity of service offerings.<sup>523</sup> Finally, in 2007, the Commission classified wireless broadband Internet access service as an information service.<sup>524</sup> The agency noted that this action established not only a minimal regulatory environment for wireless broadband Internet access service, but also a consistent regulatory framework across broadband platforms by regulating like services in a similar manner.<sup>525</sup>

- *Additional Flexibility in How Carriers Provide Service.* Over the years, the Commission has increasingly accorded wireless licensees additional flexibility to provide service in the most effective and efficient way they see fit. For example, in 1996, the Commission allowed CMRS licensees to provide fixed wireless services on a co-primary basis with commercial mobile services.<sup>526</sup> In doing so, the Commission noted that, “regulatory restrictions on use of the spectrum could

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<sup>520</sup> *Second CMRS Report and Order*, 9 FCC Rcd at 1418 ¶ 16, 1475-81 ¶¶ 165-182, 1482-85 ¶¶ 188-197 (exercising its forbearance authority with respect to tariff filing requirements and Sections 214, 204, 205, 211, and 212 of the Communications Act).

<sup>521</sup> *Resale First Report and Order*, 11 FCC Rcd at 18468-69 ¶¶ 23-24; *see also* Commencement of Five-Year Period Preceding Termination of Resale Rule Applicable to Certain Covered Commercial Mobile Radio Service Providers, *Public Notice*, 13 FCC Rcd 17427 (1998). The wireless resale rule sunset in November 2002.

<sup>522</sup> 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, *Report and Order*, 16 FCC Rcd 22668 (2001). The Commission also eliminated the cellular cross-interest rule in Metropolitan Statistical Areas (MSAs), which limited the ability of parties to have interests in cellular carriers on different channel blocks in a single geographic area. *Id.* at 22706-08 ¶¶ 82-87.

<sup>523</sup> *Id.* at 22681-82 ¶ 30, 22685 ¶ 35.

<sup>524</sup> Appropriate Regulatory Treatment for Broadband Access to the Internet Over Wireless Networks, *Declaratory Ruling*, 22 FCC Rcd 5901, 5909-11 ¶¶ 22-28 (2007) (“*Wireless Broadband Declaratory Ruling*”).

<sup>525</sup> *Id.* at 5902 ¶ 2.

<sup>526</sup> Amendment of the Commission's Rules to Permit Flexible Service Offerings in the Commercial Mobile Radio Services, *First Report and Order and Further Notice of Proposed Rulemaking*, 11 FCC Rcd 8965 (1996).

impede carriers from anticipating what services customers most need, and could result in inefficient spectrum use and reduced technological innovation.”<sup>527</sup>

Summarizing its consistently deregulatory approach to CMRS providers, the Commission has stated that it relies “on market forces, rather than regulation, except when there is market failure.”<sup>528</sup> This light regulatory approach has worked, most importantly by preserving the incentives for wireless providers to invest in their networks, knowing that their own competitive decisions will determine their success or failure.<sup>529</sup>

FCC precedent firmly establishes that it will also take a deregulatory approach to broadband offerings. Faithfully implementing its statutory mandate, the Commission has stated that “broadband services should exist in a minimal regulatory environment”<sup>530</sup> and has declared that “[i]n no respect are we considering regulating the Internet.”<sup>531</sup> Indeed, in a ruling affirmed by the Supreme Court, the Commission determined that cable modem service should be classified as an information service – and thus left largely unregulated – and not treated as a heavily-regulated common carrier service.<sup>532</sup> In the years since that decision, the Commission has extended its deregulatory approach to a number of other broadband platforms, including

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<sup>527</sup> *Id.* ¶ 22.

<sup>528</sup> *Orloff v. Vodafone Airtouch Licenses LLC, d/b/a Verizon Wireless*, 17 FCC Rcd 8987, 8998 n.69 ¶ 22.

<sup>529</sup> *Innovation NOI* ¶ 11 (seeking comment on the Commission’s role in supporting and encouraging innovation and investment and asking what elements of its rules and policies have been successful in stimulating and promoting innovation and investment).

<sup>530</sup> *See, e.g., Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities Internet Over Cable Declaratory Ruling Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities*, 17 FCC Rcd 4798, 4802 ¶ 5 (2002) (quotation marks omitted) (“*Cable Modem Declaratory Ruling*”).

<sup>531</sup> *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, First Report*, 14 FCC Rcd 2398, 2405 ¶ 18 (1999).

<sup>532</sup> *See Cable Modem Declaratory Ruling*, 17 FCC Rcd at 4802 ¶ 7; *see also Nat’l Cable & Telecomms. Ass’n v. Brand X Internet Services*, 545 U.S. 967 (2005).

wireline broadband, broadband over power line, and wireless broadband services.<sup>533</sup> In summarizing its approach to these offerings, the Commission recently stated that it has “adopt[ed] a pro-competitive, deregulatory regime for these services.”<sup>534</sup> In each instance, the Commission recognized that Congress intended the agency to pursue a deregulatory approach to broadband offerings by classifying them as information services – a category of services that Congress itself has determined should be lightly regulated, if at all.<sup>535</sup>

### **C. New Regulation and Regulatory Uncertainty Risk Stifling Competition, Innovation and Investment.**

Increased regulation or regulatory uncertainty will constrain future wireless competition, innovation and investment. The dynamic wireless marketplace has thrived, and consumers have benefited, under the watchful, but relatively deregulatory, eye of the FCC. As demonstrated throughout these comments, network, handset, and application competition and innovation have exploded. The mobile industry has revolutionized how consumers interact with one another, gather information, and view content, and these new paradigms are directly related to the deregulatory approach Congress and the FCC have undertaken. Tinkering with this successful regime would hinder the further development of competition in the wireless market, deter future investment and stifle innovation.

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<sup>533</sup> Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, *Report and Order and Further Notice of Proposed Rulemaking*, 20 FCC Rcd 14853, 14855 ¶ 1 (2005) (“establish[ing] a minimal regulatory environment for wireline broadband Internet access services”) (“*Wireline Broadband Internet Access Order*”); United Power Line Council’s Petition for Declaratory Ruling Regarding the Classification of Broadband Over Power Line Internet Access Service as an Information Service, 21 FCC Rcd 13281, 13281 ¶ 2 (2006) (“establish[ing] a minimal regulatory environment for BPL-enabled Internet access service”) (“*BPL Internet Access Order*”); *Wireless Broadband Declaratory Ruling*, 22 FCC Rcd at 5902 ¶ 2 (“establish[ing] a minimal regulatory environment for wireless broadband Internet access service”).

<sup>534</sup> *Id.* at 5903 ¶ 4.

<sup>535</sup> See 47 U.S.C. § 153(20) (defining offerings that should be regulated as “information services”). See also *Brand X*, 545 U.S. at 975-76 (recognizing that Congress has determined that information services should be subjected to a lighter regulatory touch than telecommunications services).

It is axiomatic that where there is no demonstrable market failure and/or consumer harm, there is no justification for regulation.<sup>536</sup> It is likewise axiomatic that regulations adopted in the absence of market failure or regulations not narrowly tailored to redress identifiable harms only serve to impose costs, alter incentives, and distort competition to the detriment of consumers.<sup>537</sup>

Indeed, “it is by now well appreciated that even well meaning regulation is a blunt instrument, which can impose its own considerable harm... [and] unacceptable collateral damage.”<sup>538</sup> “Regulations create costs and constraints for market participants.”<sup>539</sup> And “[r]egulation diminishes entrepreneurial incentives to lower costs, improve quality, and develop new products and services.”<sup>540</sup> When compared with regulation, “[d]eregulation can achieve greater efficiency in entry and investment decisions, lower administrative costs, elimination of

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<sup>536</sup> See, e.g., Julian Epstein, *A Lite Touch on Broadband: Achieving the Optimal Regulatory Efficiency in the Internet Broadband Market*, 38 HARV. J. ON LEGIS. 37 (Winter, 2001) (“Premature regulation where no market failure exists could prove counterproductive by deterring investment in competing networks, and by establishing inefficient price regulations whose terms would be subject to intense controversy and arbitrariness. Such a heavy-handed approach could also, ironically, create undesirable “network effects” by fostering a single industry standard in an industry where competing architectures are likely to spawn more innovation than a single standard.”); HAHN ET AL., THE ECONOMICS OF ‘WIRELESS NET NEUTRALITY’ at 6, 9 (noting that “[i]n the absence of direct or indirect evidence of a market failure, it is generally not prudent to interfere with a well-functioning market” and that “[i]n dynamically competitive markets ... the government should be very reluctant to regulate”); see also Comments of Center for Technology Freedom, Institute for Policy Innovation, WC Docket No. 07-52, 3 (filed Feb. 13, 2008) (“Institute for Policy Innovation Comments”) (“Regulatory bodies should restrain themselves to only those instances where public health and safety requires it, or rarely, to strengthen competition when new entry into the market is impaired by some factor other than normal costs, and perhaps in some other rare circumstances.”).

<sup>537</sup> See, e.g., William R. Drexel, *Telecom Public Policy Schizophrenia: Schumpeterian Destruction Versus Managed Competition*, 9 VA. J.L. & TECH. 5 (Spring, 2004) (“competition managed by regulation is handicapped by a regulatory lag driven both by traditional due process notions as well as a desire for accurate market data, the collection of which significantly lags market reality. This regulatory lag is particularly acute and imposes high societal costs in an environment of rapid technological change that has permeated the telecommunications industry since the adoption of the FTA in 1996.”).

<sup>538</sup> Marius Schwartz, Professor of Economics, Georgetown University, and Federico Mini, Senior Consultant, Bates White LLC, *Hanging up on Carterfone: The Economic Case Against Access Regulation in Mobile Wireless* at 2 (May, 2, 2007).

<sup>539</sup> J. Gregory Sidak, and Daniel F. Spulber, *Deregulation and Managed Competition in Networked Industries*, 15 YALE J. ON REG. 117, 125 (1998).

<sup>540</sup> Jerry Ellig, *Costs and Consequences of Federal Telecommunications Regulations*, 58 FED. COMM. L.J. 37, 43 (2006) (explaining that regulation may not in practice deliver intended benefits to consumers and estimating that the total cost of regulation to providers and consumers is as much as \$118 billion per year).

pricing distortions, increased innovation, and greater opportunities for customer choice.”<sup>541</sup>

Indeed, “regulation can discourage innovation and capital investments,” whereas “[d]eregulation promotes innovation.”<sup>542</sup>

Professor Thomas Hazlett has stated that “[t]o revive regulatory mandates long ago abandoned would disrupt the ability of wireless networks to craft their packages, organizing investments, technologies, infrastructure, equipment, applications, business models, and customer service.”<sup>543</sup> He further noted that such regulation “would [indeed] render impossible the high degree of economic development that is on display in the wireless marketplace.”<sup>544</sup>

The Commission has long recognized these regulatory externalities. In the broadband context, the Commission has made clear that regulatory intervention may interfere with consumers’ ability to access to new and innovative offerings.<sup>545</sup> Indeed, the Commission has stated that imposing “heightened regulatory obligations could lead [broadband providers]... to raise their prices and postpone or forego plans to deploy new broadband infrastructure, particularly in rural or other underserved areas... [and] could also discourage investment in

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<sup>541</sup> Sidak & Spulber, *Deregulation*, 15 YALE J. REG. at 120.

<sup>542</sup> *Id.* at 121, 140.

<sup>543</sup> See, e.g., THOMAS W. HAZLETT, PROFESSOR OF LAW AND ECONOMICS, GEORGE MASON UNIVERSITY, WIRELESS CARTERPHONE: AN ECONOMIC ANALYSIS 20-21 (April 30, 2007).

<sup>544</sup> *Id.*; see also Institute for Policy Innovation Comments at 3 (“The goal [in regulation] should be to find ways to allow innovation and competition to proceed without government intrusion.”).

<sup>545</sup> *Cable Modem Declaratory Ruling*, 17 FCC Rcd at 4802 ¶ 5 (determining that “broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market”) (quotation marks omitted); *Wireline Broadband Internet Access Order*, 20 FCC Rcd at 14855 ¶ 1 (“establish[ing] a minimal regulatory environment for wireline broadband Internet access services to benefit American consumers and promote innovative and efficient communications”); *BPL Internet Access Order*, 21 FCC Rcd at 13281 ¶ 2 (“establish[ing] a minimal regulatory environment for BPL-enabled Internet access service that promotes our goal of ubiquitous availability of broadband to all Americans”); *Wireless Broadband Declaratory Ruling*, 22 FCC Rcd at 5902 ¶ 2 (“establish[ing] a minimal regulatory environment for wireless broadband Internet access service that promotes our goal of ubiquitous availability of broadband to all Americans”).

facilities.”<sup>546</sup> In the wireless arena, the Commission has recognized that regulation can interfere with the deployment of advanced services and the ability of consumers to reap the benefits of robust competition. For example, the Commission concluded that “tariffs can harm consumers” because “in a competitive environment” tariffs can “(1) take away carriers’ ability to make rapid, efficient responses to changes in demand and cost, and remove incentives for carriers to introduce new offerings; (2) impede and remove incentives for competitive price discounting, since all price changes are public, which can therefore be quickly matched by competitors; and (3) impose costs on carriers that attempt to make new offerings.”<sup>547</sup> Indeed, the FCC has noted “Congress’s recognition that the marketplace rather than extensive regulation would better promote continued investment in wireless infrastructure, while at the same time ensuring that consumers enjoy reasonable rates and high quality services.”<sup>548</sup>

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<sup>546</sup> Brief of the Federal Petitioners at 31, *Brand X*, 545 U.S. 967; see also Reply Brief of the Federal Petitioners at 18, *Brand X*, 545 U.S. 967 (emphasizing that the broadband market “has shown enormous growth under a hands-off regulatory regime”); *Wireless Broadband Declaratory Ruling*, 22 FCC Rcd at 5903 ¶ 4 (rejecting calls for imposing greater regulatory requirements because imposing them “could have slowed development of these broadband services”); *Wireline Broadband Internet Access Order*, 20 FCC Rcd at 14891 ¶ 72 (finding that reduced regulation of the wireline broadband industry will make it “more likely that wireline network operators will take more risks in investing and deploying new technologies than they are willing and able to take under the existing regime”). The Commission should be especially careful not to stifle investment in broadband Internet access services because doing so would be antithetical to Congress’s and the FCC’s desire to expand broadband services to unserved and underserved areas. See, e.g., American Recovery and Reinvestment Act of 2009, § 6001(k)(2), Pub. L. No. 111-5, 123 Stat. 115 (2009) (charging the Commission with developing a national broadband plan that “shall seek to ensure that all people of the United States have access to broadband capability and shall establish benchmarks for meeting that goal”); Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, *Notice of Inquiry*, FCC 09-65 (rel. Aug. 7, 2009) (discussing Congress’s directive that the FCC encourage the deployment of broadband offerings); see also A National Broadband Plan for Our Future, *Notice of Inquiry*, 24 FCC Rcd 4342 (2009); *Wireless Broadband Declaratory Ruling*, 22 FCC Rcd at 5911 ¶ 27 (“Through this classification, we provide the regulatory certainty needed to help spur growth and deployment of [wireless broadband] services. Particularly, the regulatory certainty we provide through this classification will encourage broadband deployment in rural and underserved areas, where wireless broadband may be the most efficient broadband option.”).

<sup>547</sup> *Orloff v. FCC Respondents Brief*, 2003 WL 25588065, at \*7 (citing *CMRS Second Report and Order*, 9 FCC Rcd at 1479 ¶ 177).

<sup>548</sup> *Id.* at \*5.

The obvious conclusion that regulation imposes costs is not new or unique to the wireless and Internet contexts. Decades ago, “the Commission determined that regulation imposes costs on common carriers and the public, and that a regulation should be eliminated when its costs outweigh its benefits.”<sup>549</sup> The FCC has also made it clear that “regulation imposes costs on consumers to the extent it denies [a provider the] ... flexibility it needs to react to market conditions and customer demands.”<sup>550</sup>

Courts also have long recognized the costs of regulation, the importance of competition, and the need for agencies properly to balance those tradeoffs, particularly in the communications context. Justice Breyer, for example, looked askance at the Commission’s attempts to impose shared access of facilities, reminding the Commission that “rules that go too far ... risk costs that, in terms of the Act’s objectives, may make the game not worth the candle.”<sup>551</sup> In a context – wireline unbundling – that offers some lessons for today’s FCC, Justice Breyer was concerned about the “significant administrative and social costs”<sup>552</sup> imposed by regulation. And he noted that “a sharing requirement” would “diminish the original owner’s incentive” to “undertake the investment necessary to produce complex technological innovations knowing that any

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<sup>549</sup> Access Charge Reform, *Fifth Report and Order and FNPRM*, 14 FCC Rcd 14221, 14297 ¶ 144 (1999) (citing Policy and Rules Concerning Rates for Competitive Common Carrier Services and Facilities Authorizations Therefor, *First Report and Order*, 85 FCC 2d 1, 3 (1980) (“*Competitive Carrier First Report and Order*”)); *see also id.* (“[T]he new service rules currently in effect limit incumbents’ incentives to innovate” and “respon[d] to market forces,” thus “impos[ing] costs on society by perpetuating inefficiencies in the market for interstate access services.”); *Competitive Carrier First Report and Order*, 85 FCC 2d at 5 ¶ 11 (“[E]nforcement of a system of regulation of business conduct imposes costs. These costs can be identified in two classes. There are the less significant administrative costs of compiling, maintaining, and distributing information necessary to comply with agency licensing and reporting requirements. More significant costs, however, are inflicted on society by the loss of dynamism which can result from regulation. Indeed, regulation sometimes creates what can only be called perverse incentives for the regulated firms.”).

<sup>550</sup> Revisions to Price Cap Rules for AT&T Corp., *Report and Order*, 10 FCC Rcd 3009, 3018 ¶ 27 (1995).

<sup>551</sup> *AT&T v. Iowa Utils. Bd.*, 525 U.S. 366, 430 (1998) (Breyer, J., concurring in part and dissenting in part).

<sup>552</sup> *Id.* at 428.

competitive advantage deriving from those innovations will be dissipated by the sharing requirement.”<sup>553</sup> He explained that “[i]ncreased sharing by itself does not automatically mean increased competition. It is in the *un* shared, not in the shared, portions of the enterprise that meaningful competition would likely emerge.”<sup>554</sup> He was rightly concerned that extensive obligations would “create not competition, but pervasive regulation, for the regulators, not the marketplace, would set the relevant terms.”<sup>555</sup> Because of these costs and the inconsistency between heavy-handed regulation and Congress’s “emphasi[s]” on “the importance of competition,” the rules went “too far ... [were] inconsistent with Congress’ approach ... [and were not] adequately justified in terms of the statute’s mandate, read in light of its purposes.”<sup>556</sup>

The D.C. Circuit has similarly reminded the FCC of the need to recognize the costs of regulation and tread lightly. In rejecting the FCC’s uniform national impairment standard for wireline unbundling, the court criticized the Commission for its “indifference to petitioners’ contentions about the state of competition in the market”<sup>557</sup> and concluded that “nothing in the Act appears a license to the Commission to inflict on the economy the sort of costs noted by

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<sup>553</sup> *Id.* at 429. Justice Breyer reiterated these concerns in his partial concurrence and partial dissent in *Verizon Commc’ns, Inc. v. FCC*, 535 U.S. 467, 551 (2002), addressing the FCC’s pricing methodology for unbundled network elements, which Justice Breyer concluded sufficiently undermined the statutory goal and prescribed means—competition through deregulation—that they should be deemed arbitrary and capricious. “The rules seem to say that the incumbent will share with competitors the cost-reducing benefits of a successful innovation, while leaving the incumbent to bear the costs of most unsuccessful investments on its own. Why would investment not then stagnate?” *See, e.g.,* Jorde, Sidak, & Teece, *Innovation, Investment, and Unbundling*, 17 *YALE J. REG.* 1, 8 (2000) (“It makes no economic sense for the [incumbent] to invest in technologies that lower its own marginal costs, so long as competitors can achieve the identical cost savings by regulatory fiat”); Sidak & Spulber, *Deregulation*, 15 *YALE J. REG.* at 124-125 (“If deprived of a return to capital facilities after capital has been sunk in irreversible investments, or if faced with reduced returns to investments already made, any economically rational company will eliminate or reduce similar capital investments in the future”).

<sup>554</sup> *Id.* at 429.

<sup>555</sup> *Id.*

<sup>556</sup> *Id.* at 430-31.

<sup>557</sup> *USTA v. FCC*, 290 F.3d at 429.

Justice Breyer under conditions where it had no reason to think doing so would bring on a significant enhancement of competition.”<sup>558</sup> The D.C. Circuit later explained that the Act’s purpose “is to stimulate competition – preferably genuine, facilities-based competition. Where competitors have access to necessary inputs at rates that allow competition not only to survive but to flourish, it is hard to see any need for the Commission to impose the costs of mandatory unbundling.”<sup>559</sup> While the Commission enjoyed a statutory mandate to order unbundling in the wireline context, no such mandate exists with respect to wireless broadband offerings.

Accordingly, the Commission cannot gloss over the enormous costs of regulation. Nor should it assume it can deftly regulate to tweak or improve upon the success stories already written about the wireless and Internet markets, without harming consumers, competition and innovation.

As deregulation proceeds, some urge regulators to take an activist role, to manage the transition so as to ‘promote’ or ‘protect’ competition. That view is misguided. Regulation should recede as competition progresses.... Indeed, an attempt to manage competition not only entails administrative costs, but can also prevent the market from achieving the benefits of competition that regulators wish to attain for consumers.<sup>560</sup>

This is particularly so in highly technical and dynamic fields such as the wireless, broadband, and Internet markets, where innovation and growth move substantially faster than administrative and regulatory processes.<sup>561</sup> Here, the true costs of regulation may be invisible

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<sup>558</sup> *Id.* at 430.

<sup>559</sup> *USTA v. FCC*, 359 F.3d at 576.

<sup>560</sup> J. Gregory Sidak, and Daniel F. Spulber, *Deregulation and Managed Competition in Networked Industries*, 15 *YALE J. ON REG.* 117, 120 (1998).

<sup>561</sup> *See, e.g.*, In the Matter of Advanced Television Systems and Their Impact Upon the Existing Television Broadcast Service, 11 FCC Rcd 6235, 6272 (1996) (“Given the rapid pace of technological change, isn’t it inevitable that there will be innovations that even the flexible ATSC Standard cannot accommodate?”) (Separate Statement of Chairman Reed E. Hundt).

precisely because they come in the form of potential innovations stifled. As it proceeds to evaluate and promote innovation, and implement what it deems sound “competition policy,”<sup>562</sup> the Commission must remain mindful of the substantial costs associated with imposing new regulations and how those costs will inhibit competition, and reduce innovation.

Regulation is especially problematic in today’s economic climate because access to capital is increasingly difficult. Regulatory mandates, even well-intentioned regulations meant to spur innovation, could create highly counterproductive and unintended consequences, such as disincenting wireless carriers and others from investing in critical last-mile development. The FCC’s failed D Block auction is a case-in-point. There, the many regulatory requirements to be imposed on the D Block licensee and uncertainty regarding possible additional regulatory requirements completely chilled interest in bidding for these licenses. Similarly, additional mandates on the wireless industry would undoubtedly stifle broadband expansion and would be antithetical to the FCC’s oft-mentioned goal of widespread ubiquitous broadband deployment, as well as the agency’s charge to develop a national broadband plan.<sup>563</sup> Carriers, including Verizon Wireless, are currently investing billions of dollars in order to achieve widespread deployment of 4G next generation technologies within a short timeframe.

Unnecessary regulation, or uncertainty in regulatory oversight, will be perceived by investors as increasing risk, thereby undermining confidence that their investments will result in a reasonable and timely return, and could limit the availability of capital for necessary

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<sup>562</sup> *NOI* at 15 (Statement of Chairman Genachowski) (stating that the Commission is laying a “foundation” for “predictable, fact-based competition policy in the wireless sector”).

<sup>563</sup> *See* ARRA § 6001(k)(2) (charging the Commission with developing a national broadband plan that “shall seek to ensure that all people of the United States have access to broadband capability and shall establish benchmarks for meeting that goal”);

infrastructure improvements.<sup>564</sup> Indeed, regulatory uncertainty of the type engendered by vague rules or the threat of changes in longstanding policy also imposes costs and harms competition.<sup>565</sup> As Professor Hazlett has written:

Where firms – entrants or incumbents – have been allowed wide latitude in constructing new networks, robust investment incentives have resulted and consumer gains have been realized. Where regulators have, alternatively, ambitiously regulated incumbents through network sharing obligations designed to ease entry barriers, an unsustainable level of entry has occurred that has resulted in widespread losses across the industry without countervailing consumer benefits.<sup>566</sup>

Moreover, as the Commission under Chairman Hundt long ago noted, in the absence of “burdensome” regulations in the wireless industry, “investors will be able to make funding decisions based upon their assessment of market forces and their analysis of the strengths and weaknesses of the various telecommunications companies competing in the mobile services marketplace.”<sup>567</sup> Lauding its regulatory treatment of CMRS, the FCC noted that it was creating “a stable and predictable federal regulatory environment ... [which] is conducive to continued

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<sup>564</sup> HAHN ET AL., THE ECONOMICS OF ‘WIRELESS NET NEUTRALITY’ at 9 (“The problem for regulators is that dynamic incentives to invest are important to wireless operators. Inefficient regulation threatens to jeopardize the investment needed to upgrade the existing third generation (3G) wireless platform to support broadband services and to launch the fourth generation (4G) network to support real-time applications such as mobile video, remote monitoring, and mobile commerce.”).

<sup>565</sup> See, e.g., *AT&T Inc. v. FCC*, 452 F.3d 830, 836 (D.C. Cir. 2006) (noting that “even the Commission recognizes that ‘regulatory uncertainty ... in itself may discourage investment and innovation’”) (quoting *Cable Modem Declaratory Ruling*, 17 FCC Rcd at 4802 ¶ 5); Amendment of the Commission’s Space Station Licensing Rules and Policies, *First Report and Order and Further Notice of Proposed Rulemaking in IB Docket No. 02-34 First Report and Order in IB Docket No. 02-54*, 8 FCC Rcd 10760, 10781 ¶ 45 n. 115 (2003) (“The Commission has noted on several occasions that regulatory uncertainty can discourage investment, and so unnecessary regulatory uncertainty should be avoided.”).

<sup>566</sup> *Id.* ¶ 4.

<sup>567</sup> *Second CMRS Report and Order*, 9 FCC Rcd at 1421 ¶ 24.

investment in the wireless infrastructure”<sup>568</sup> and “minimiz[ed] regulatory uncertainty and any consequent chilling of investment activity.”<sup>569</sup>

The FCC bears the burden of justifying any new regulation it seeks to impose on these dynamic and functioning markets. Given the risk that regulation will stifle competition, stunt investment, and stymie innovation, Congress’ deregulatory approach that wireless services, as well as the Internet, remain free from government regulation,<sup>570</sup> and the Commission’s own holding that, under OBRA, any regulation of the wireless industry be minimal and only adopted where there is a “clear-cut need,”<sup>571</sup> the FCC will have severe difficulties justifying new regulation. Given the extensive evidence of robust and intensifying competition and innovation, there is, in any event, no reason for it to embark on a re-regulatory path.

#### **D. The APA Limits the FCC’s Ability to Change Past Policy and Regulate in These Competitive and Innovative Areas**

In addition to following Congress’ deregulatory mandates, the FCC must adhere to the APA and the limits it imposes on the agency.<sup>572</sup> As noted above, the FCC has a number of established precedents that affect wireless and broadband providers, and the APA limits the

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<sup>568</sup> *Id.* ¶ 25.

<sup>569</sup> *Id.*

<sup>570</sup> See 47 U.S.C. § 230(b). Congress “found that the Internet and interactive computer services ‘have flourished, to the benefit of all Americans, with a minimum of government regulation.’ Congress further stated that it is ‘the policy of the United States ... to preserve the vibrant and competitive free market that presently exists for the Internet and other interactive computer services, unfettered by Federal or state regulation.’ [...] Congress acted to *keep government regulation of the internet to a minimum* [...]” *Zeran v. America Online, Inc.*, 129 F.3d 327, 330 (1997) (citing 47 U.S.C. Section 230(a)(3), (a)(4), and (b)(2)) (emphasis added); see also *America Online, Inc. v. GreatDeals.Net*, 49 F.Supp.2d 851, 856 (E.D. Va. 1999) (noting that “the Telecommunications Act sets forth Congress’s explicit desire to have the Internet remain without regulation by federal or state government,” and noting that “FCC Chairman William Kennard as well as other FCC representatives have all stated that the Internet will not be regulated by the FCC.”) (citations omitted)).

<sup>571</sup> *Hawaii R&O*, 10 FCC Rcd at 7874.

<sup>572</sup> See 5 U.S.C. § 706(2)(A) (requiring a reviewing court to set aside agency action that is “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law”).

FCC’s ability to depart from these precedents. In particular, “[i]f the FCC changes course, it ‘must supply a reasoned analysis’ establishing that prior policies and standards are being deliberately changed”<sup>573</sup> because “a rational person acts consistently, and therefore changes course only if something has changed.”<sup>574</sup> “Indeed, where an agency departs from established precedent without a reasoned explanation, its decision will be vacated as arbitrary and capricious.”<sup>575</sup> The Supreme Court’s recent decision in *FCC v. Fox Television Stations, Inc.*,<sup>576</sup> underscores the importance of this APA requirement. There, the Court made it clear that the FCC must “display awareness that it *is* changing position” and that it may not “depart from a prior policy *sub silentio* or simply disregard rules that are still on the books”; otherwise, its actions will not survive APA review.<sup>577</sup> *Fox* also makes it clear that the Commission would have to provide a “more detailed justification” for departing from agency precedent in this case than it would in other instances.<sup>578</sup> As the D.C. Circuit has explained most recently, “[i]f the FCC changes course, it ‘must supply a reasoned analysis’ establishing that prior policies and standards

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<sup>573</sup> *Verizon Tel. Cos. v. FCC*, 570 F.3d 294, 301 (D.C. Cir. 2009) (quoting *Motor Vehicle Mfrs. Ass’n, Inc. v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29, 57 (1983); see also *Wisc. Valley Improvement v. FERC*, 236 F.3d 738, 748 (D.C. Cir. 2001) (“[A]n agency acts arbitrarily and capriciously when it abruptly departs from a position it previously held without satisfactorily explaining its reason for doing so.”); *Telecomms. Research and Action Ctr. v. FCC*, 800 F.2d 1181, 1184 (D.C. Cir. 1986) (“When an agency undertakes to change or depart from existing policies, it must set forth and articulate a reasoned explanation for its departure from prior norms.”).

<sup>574</sup> *Schurz Commc’ns, Inc. v. FCC*, 982 F.2d 1043, 1053 (7th Cir. 1992).

<sup>575</sup> *ANR Pipeline Co. v. FERC*, 71 F.3d 897, 901 (D.C. Cir. 1995); *Verizon Tel. Cos.*, 570 F.3d at 304 (“[I]t is arbitrary and capricious for the FCC to apply such new approaches without providing a satisfactory explanation when it has not followed such approaches in the past.”).

<sup>576</sup> *FCC v. Fox Television Stations*, 129 S. Ct. 1800 (2009).

<sup>577</sup> *Id.* at 1810-12. In *Fox*, the Court determined that the FCC satisfied these requirements because “the Commission forthrightly acknowledged that its recent actions have broken new ground” and supplied a sufficiently reasoned basis for doing so. *Id.* at 1812-13.

<sup>578</sup> See *id.* at 1811 (stating that an agency must provide a “more detailed justification” for its new policy when the “new policy rests upon factual findings that contradict those which underlay its prior policy; or when its prior policy has engendered serious reliance interests that must be taken into account”). In this case, if the FCC were to depart from its applicable precedents, doing so would require the agency to contradict prior factual findings and upset reasonable reliance interests, thus triggering both prongs of heightened scrutiny under *Fox*.

are being deliberately changed.”<sup>579</sup> It is clear then that “an agency acts arbitrarily and capriciously when it abruptly departs from a position it previously held without satisfactorily explaining its reason for doing so.”<sup>580</sup>

As detailed above, a long line of Commission precedents establish that the agency will rely on competition – rather than regulation – to shape the wireless market and regulate only where there is a clear-cut need. Similarly, and also as noted above, Commission precedent firmly establishes that “broadband services should exist in a minimal regulatory environment that promotes investment and innovation in a competitive market.”<sup>581</sup> There would be no basis to depart from these precedents now given the evidence of robust, increasing competition and innovation that characterize the wireless ecosystem today. In fact, there is significantly more competition, investment and innovation today than when the Commission first determined that it would rely on market forces instead of regulation.<sup>582</sup> Therefore, changing the Commission’s

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<sup>579</sup> *Verizon Tel. Cos.*, 570 F.3d at 301 (quoting *State Farm*, 463 U.S. at 57). The agency must provide a “principled explanation” for departures from its longstanding practices. *National Black Media Coalition v. FCC*, 775 F.2d 342 (D.C. Cir. 1985). There, Judge Wald observed, “an agency may not repudiate precedent simply to conform with a shifting political mood. Rather, the agency must demonstrate that its new policy is consistent with the mandate with which Congress has charged it.... While an agency may properly rely on an ‘incumbent administration’s views of wise policy to inform its judgments,’ it may not casually substitute those considerations for a rational evaluation of the merit and efficacy of its policies.” *Id.* at 356 n.17.

<sup>580</sup> *Id.* (quoting in a parenthetical *Wisc. Valley Improvement*, 236 F.3d at 748). So too must the Commission be mindful of its obligations to respect its previous practices and approaches in evaluating calls to change its methodologies or conclusions on competition in the wireless industry. “[I]t is arbitrary and capricious for the FCC to apply such new approaches without providing a satisfactory explanation when it has not followed such approaches in the past.” *Verizon Tel. Cos.*, 570 F.3d at 304 (finding arbitrary and capricious the agency’s inadequately explained departure from its precedents setting forth the agency’s approach to market share evaluations, which had relied on actual *and* potential competition).

<sup>581</sup> *Cable Modem Declaratory Ruling*, 17 FCC Rcd at 4802 ¶ 5 (quotation marks omitted).

<sup>582</sup> In 1994, for example, when there were only two cellular licensees operating in each market, the Commission decided to deregulate the industry because “market forces are generally sufficient,” and “[d]espite the fact that the cellular service market [at that time] ha[d] not been found to be fully competitive, there [wa]s no record evidence that indicate[d] a need for full-scale regulation of cellular or any other CMRS offerings.” *Second CMRS Report and Order*, 9 FCC Rcd at 1478 ¶¶ 173-74.

deregulatory paradigm – whether for traditional or broadband wireless services – would constitute an unjustifiable change of course that would not withstand APA review.

In addition to its limits on the FCC’s ability to abandon past policies, the APA constrains the FCC in other important ways. For example, it requires the Commission to justify any regulations on the basis of record evidence of a problem in need of solution, and to demonstrate that its solution is rationally connected to that problem and promotes – rather than undermines – the Commission’s statutory and stated objectives.

As a threshold matter, the APA prohibits the Commission from adopting new regulations unless its decision is supported by substantial record evidence.<sup>583</sup> The FCC must identify substantial record evidence of a market failure or some other problem in need of regulatory solution.<sup>584</sup> As the D.C. Circuit has explained, “review would be a relatively futile exercise in formalism if no inquiry were permissible into the existence or nonexistence of the condition which the Commission advances as the predicate for its regulatory action. A regulation perfectly reasonable and appropriate in the face of a given problem may be highly capricious if that problem does not exist.”<sup>585</sup> When reviewing the factual basis for an agency’s action under this standard, the “lodestar is the question whether the record as a whole provides substantial evidence to support the agency action.”<sup>586</sup> Here, there is substantial evidence that these markets

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<sup>583</sup> See, e.g., *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962) (“The agency must make findings that support its decision, and those findings must be supported by substantial evidence.”).

<sup>584</sup> See, e.g., *Eagle Broad. Group, Ltd. v. FCC*, 563 F.3d 543, 551 (D.C. Cir. 2009) (noting the applicability of the substantial evidence standard to agency factfinding). Substantial evidence is “more than a mere scintilla. It means such relevant evidence as a reasonable mind might accept as adequate to support a conclusion.” *Universal Camera Corp. v. NLRB*, 340 U.S. 474, 477 (1951) (quotation marks omitted).

<sup>585</sup> *City of Chicago v. Fed. Power Comm’n*, 458 F.2d 731, 742 (D.C. Cir. 1972); see also *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 36 (D.C. Cir. 1977).

<sup>586</sup> *Morall v. DEA*, 412 F.3d 165, 178 (D.C. Cir. 2005); *Safe Extensions, Inc. v. FAA*, 509 F.3d 593, 606 (D.C. Cir. 2007) (“In sum, because the agency’s decision ... finds no support in the evidence the agency considered, we find it (continued on next page)

are thriving, marked by robust competition, and rapid innovation, which evidence the FCC cannot simply ignore.<sup>587</sup> There is no evidence of market failure that, under the FCC’s own approach, would support a decision to impose new regulation.<sup>588</sup> Indeed, not only is there no evidence justifying a regulatory solution, there is evidence that regulation here would impose costs of its own and undermine the Commission’s statutory goal of encouraging competition as well as its stated goal of promoting innovation.<sup>589</sup>

## **VI. THE COMMISSION SHOULD TAKE STEPS TO ENHANCE COMPETITION AND INNOVATION BY REMOVING BARRIERS TO INVESTMENT, NEW SERVICES, AND NETWORK GROWTH**

As demonstrated by the facts set out above, the highly competitive wireless industry has developed a consumer-driven, robust, and dynamic track record. As discussed in Verizon Wireless’s *Innovation NOI* comments, the Commission should take a series of steps that would enhance competition and innovation by all providers by removing barriers that deter investment, slow the introduction of new services, and/or stifle the growth of capacity-rich networks.

Specifically, the Commission should take the following actions:

- identify additional spectrum suitable for wireless broadband services;

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arbitrary and capricious.”). Indeed, the agency may not find substantial evidence for its position by focusing solely on the evidence that supports its decision. See *Lakeland Bus Lines, Inc. v. NLRB*, 347 F.3d 955, 962 (D.C. Cir. 2003).

<sup>587</sup> See, e.g., *Ill. Pub. Telecomms. Ass’n v. FCC*, 117 F.3d 555, 563-64 (D.C. Cir. 1997) (holding that the FCC acted arbitrarily and capriciously in adopting a rule unsupported by the evidence and without acknowledging contradictory evidence).

<sup>588</sup> See, e.g., *Orloff v. Vodafone Airtouch Licenses LLC, d/b/a/ Verizon Wireless, Memorandum Opinion and Order*, 17 FCC Rcd 8987, 8998 n.69 (2002) (stating that the Commission will generally “rel[y] on market forces, rather than regulation, except when there is a market failure”); see also *Second CMRS Report and Order*, 9 FCC Rcd at 1478 ¶ 173 (“[I]n a competitive market, market forces are generally sufficient to ensure the lawfulness of ... terms and conditions of service by carriers who lack market power.”).

<sup>589</sup> See, e.g., *Office of Comm’n of United Church of Christ v. FCC*, 779 F.2d 702, 707 (D.C. Cir. 1985) (“Rational decisionmaking also dictates that the agency simply cannot employ means that actually undercut its own purported goals.”).

- work with Congress to enact a national framework for wireless consumers;
- help to streamline tower siting to expedite investment in wireless infrastructure;
- support congressional efforts to eliminate unnecessary taxes and fees on wireless services;
- address remaining questions affecting the use of the 700 MHz spectrum; and
- commit to expediting the review process for applications.

With these reforms, the FCC will help to secure a continued bright future for wireless consumers.

## CONCLUSION

For the reasons discussed herein, the Commission should find that the mobile wireless market and adjacent markets subject to this review are effectively competitive and are producing substantial – and growing – consumer benefits.

Respectfully submitted,

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