

**Before The  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

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In the Matter of	)	
	)	
Wireless Telecommunications Bureau Seeks	)	WT Docket No. 09-66
Comment On Commercial Mobile Radio	)	
Services Market Competition	)	
_____	)	

**COMMENTS OF AT&T INC.**

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Pursuant to the Public Notice (“*Notice*”) released by the Wireless Telecommunications Bureau (“Bureau”) on May 14, 2009,<sup>1</sup> AT&T Inc. (“AT&T”) submits the following comments.

**INTRODUCTION AND SUMMARY**

In 1993, Congress enacted § 332(c)(1)(C) of the Communications Act, which directs the Commission to “review competitive market conditions” with respect to CMRS services and report annually, *inter alia*, “whether or not there is effective competition.”<sup>2</sup> When the Commission issued its first report in 1995, the wireless marketplace was still characterized by the facilities-based duopolies created when the first CMRS licenses were granted. There were 24 million wireless subscribers nationwide – and the Commission marveled at the service’s “ten percent penetration rate,” noting that “no one [had] predicted that the service would be as popular as it has become.”<sup>3</sup> Cellular phones were unwieldy bricks that, in rather limited coverage areas, allowed only basic voice calls and nothing else. Although cellular service had

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<sup>1</sup> Public Notice, Wireless Telecommunications Bureau Seeks Comment On Commercial Mobile Radio Services Market Competition, DA 09-1070, WT Docket No. 09-66 (released May 14, 2009) (“*Notice*”).

<sup>2</sup> 47 U.S.C. § 332(c)(1)(C).

<sup>3</sup> First Report, *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*, 10 FCC Rcd. 8844, ¶ 2 (1995) (“*First Report*”).

“become a universally recognized business tool,” providers had only “recently begun to target their marketing strategies towards the mass consumer market.”<sup>4</sup> The Commission was in the process of auctioning PCS licenses for new digital services, however, and the central finding of the first report was that the imminent entry of additional facilities-based carriers “appears to be influencing incumbent wireless providers to lower prices and increase features.”<sup>5</sup>

The wireless marketplace of today has progressed light years from where it was in 1995, far outpacing even the rosier projections. Today there are 270 million U.S. wireless subscribers.<sup>6</sup> Most Americans can choose from among at least five facilities-based carriers, almost all can choose from among at least three, and soaring demand and rapid technology evolution continue to spur entry and expansion. For a small fraction of what they paid in 1995 to make a few relatively low quality voice calls, today’s wireless consumers talk for hours, send text messages, surf the Internet, download and listen to music, send e-mails, edit documents, obtain turn-by-turn GPS-enabled directions, watch sporting events, play games, take and share photographs, shoot video and much more. The market is awash with innovative handsets, operating systems and applications to satisfy every interest and budget, with new offerings appearing daily.

Today’s wireless experience is so rich that *a fifth* of consumers have cut the wireline telephone cord, and many now meet *all* of their telephone and Internet (and music and photography and many other) needs entirely over their wireless devices. And this is just the beginning. Carriers are now poised to invest tens of billions of dollars to upgrade their networks

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<sup>4</sup> *Id.* ¶ 3.

<sup>5</sup> *Id.* ¶ 4.

<sup>6</sup> CTIA Press Release, *CTIA – The Wireless Association® Announces Semi-Annual Wireless Industry Survey Results* (April 1, 2009), available at <http://www.ctia.org/media/press/body.cfm/prid/1811>.

to support the next wave of revolutionary new broadband devices and applications, including the wireless chips that will be embedded in hundreds of millions of new devices that will do just about everything *but* provide plain old telephone service.

In short, as anyone who is not sleep-walking through life knows, competition, investment, and innovation in the wireless industry are at a fever pitch. Consumers are constantly reminded of the many choices available to them and of the relentless push by each carrier to one-up its competitors with lower prices, better quality and more robust offerings. Indeed, former Vice President Al Gore recently noted that the United States has “the most competitive wireless industry of any nation in the world” and that “because of competition, we are seeing a continued pulse of investment to expand the capacity of [broadband] networks.”<sup>7</sup>

It is no surprise then that the Commission has had little difficulty in recent years concluding that “effective competition” exists in the U.S. wireless marketplace. Basing its analysis on the four broad categories of economic indicators that economists, regulatory agencies and antitrust courts have traditionally viewed as relevant to effective competition determinations – market structure, provider conduct, consumer behavior, and market performance – the Commission has found that the wireless marketplace is not just effectively, but extremely, competitive.

That has never been more clear than it is today. The U.S. wireless marketplace is the least concentrated of any of the 26 major industrialized countries followed by the Organisation for Economic Co-Operation and Development (“OECD”),<sup>8</sup> and new well-funded companies (such as Clearwire and Cox) continue to enter the marketplace. At the same time, the market

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<sup>7</sup> The transcript of this speech is available at <http://www.ctia.org/media/press/body.cfm/prid/1816>.

<sup>8</sup> Letter from Christopher Guttman-McCabe, CTIA, to Marlene Dortch, FCC, RM-11361, GN Docket No. 09-51 & WC Docket No. 07-52, at 6-7 (May 12, 2009) (“*CTIA Study*”).

structure remains wide open and permits the rivalrous behavior that produces the consumer benefits that are the hallmarks of effective competition. Indeed, as in past years, that behavior and the benefits it is bringing to consumers provides the most compelling proof of all of effective competition in the marketplace. All of the market performance and provider and consumer conduct indicators have been trending in a strongly positive direction for years, and this year is no exception. U.S. wireless prices remain much lower than in any of the 26 major industrialized countries tracked by the OECD, and prices continue to fall.<sup>9</sup> In addition, non-price rivalry also remains intense, as providers are falling all over each other to offer customers the most attractive terms and choices. At the same time, output is increasing sharply, and planned investment is at near record levels. It is no wonder that customer satisfaction has reached all time highs. And customers have never been better informed in their choices to switch providers.

But the real story this year is the quantum leap in the pace of innovation. 2008 ushered in an era of unprecedented creativity – and rivalry – as carriers, device manufacturers and software developers compete furiously to deliver one cutting-edge network capability, device and application after another. Carriers are investing billions to upgrade network capabilities. AT&T's wireless capital expenditures this year alone will be several billion dollars.<sup>10</sup> Manufacturers are churning out new and better wireless handsets at a truly dizzying pace. And consumers now enjoy a worldwide cottage industry of applications designers – from amateurs in garages to the most sophisticated software companies – making applications for every conceivable purpose for a wide variety of devices and operating systems and distributed through

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<sup>9</sup> *CTIA Study* at 3.

<sup>10</sup> AT&T's total capital expenditures this year alone will top \$17 billion – more than any other company in America in *any* industry. AT&T Press Release, AT&T to Invest More Than \$17 Billion in 2009 to Drive Economic Growth (Mar. 10, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26597>.

online applications stores that are rapidly proliferating.<sup>11</sup> As the more than one *billion* application downloads from Apple's iTunes online store has made clear: whatever the need, there really is "an app for that."

And this revolution is increasingly moving beyond phones and even smartphones to "embedded" non-phone devices that use wireless connections. The most well known example is the Amazon Kindle, a reading device that runs on an ordinary wireless Internet connection and does not support voice calling. But the products and services that wireless connectivity can enable and transform are as varied as the imaginations of America's entrepreneurs, and analysts predict that there could be as many as 350 million embedded devices deployed within the next few years.<sup>12</sup>

Accordingly, although the *Notice* asks whether the Bureau should adopt a more precise definition of "effective competition," there has never been less of a need for one. Given that wireless competition today is so clearly "effective" under any rational definition, the Commission can easily fulfill its duties under § 332 without the distraction of academic debates on the proper definitional phrasing. In all events, the Commission's existing approach, in which it examines all of the standard economic indicators, is its most thoughtful characterization of effective competition: "competition among service providers in a market that benefits

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<sup>11</sup> See, e.g., Nokia Press Release, Ovi Store opens for business (May 26, 2009), available at <http://www.nokia.com/press/press-releases/showpressrelease?newsid=1317441>; Palm Press Release, Palm Unveils More webOS Details: Palm Media Sync, Twitter Integration, App Catalog (May 28, 2009), available at <http://investor.palm.com/releasedetail.cfm?ReleaseID=386488>; RIM Press Release, RIM Launches BlackBerry App World Users Able to Easily Discover and Download a Wide Range of Applications Directly From Their BlackBerry Smartphone (April 1, 2009), available at <http://press.rim.com/release.jsp?id=2223>.

<sup>12</sup> Sue Marek, *Preparing for Embedded Wireless' Impending Growth*, Fierce Wireless, May 29, 2009, available at <http://www.fiercewireless.com/story/preparing-embedded-wireless-implementing-growth/2009-05-29>.

consumers by expanding service offerings, promoting development of innovative technology, and lowering prices.”<sup>13</sup> This formulation has the proper focus, asking whether rivalry between multiple firms is creating positive, observable benefits for consumers.

The other general economic definitions of “effective competition” proposed in the *Notice* would be especially poor fits here. Each reflects standards that are universally recognized to be inapplicable to growing network industries or lacks any content that could rationally guide the Commission’s analysis (or both). Nor could it serve the public interest to embroil the industry in a search for the “perfect” bright-line effective competition “formula,” for it simply does not exist, as economists, courts and policymakers have recognized for the better part of a century. The *Notice* cites § 623 and its bright line tests for cable rate deregulation, but Congress fashioned those tests for a specific context in which there was a need for quick, administratively feasible determinations on a local franchise-by-franchise basis whether competitive entry eliminated the need for rate regulation of former monopolies. Congress therefore made a predictive judgment that the mere entry of a single wireline new entrant would be sufficient to constrain incumbent cable operator prices. History has vindicated Congress’s judgment in that specific context, and that approach would unquestionably compel a finding of effective wireless competition, but there is simply no need for such short-cuts here, where there is a wealth of data that *directly* demonstrates competitive vigor and consumer benefits.

The *Notice* also asks whether the Bureau should modify its current approach to gather and draw inferences from additional types of data. The *Notice* discusses carrier profits at some length, but fails to note that the Commission considered this very question in its *first* annual report. The Commission concluded there that (1) the relevant measure of profits would be

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<sup>13</sup> *Market Entry and Regulation of Foreign-Affiliated Entities*, Report & Order, 11 FCC Rcd. 3873, ¶ 1 (1995).

economic profits, (2) it had no reliable way to measure economic profits, and (3) economic profit metrics would be uninformative, in any event, in an industry experiencing high rates of growth, and in which economic profits are not only expected but necessary to fund investments required to meet growing demand.<sup>14</sup> The Commission has never looked back, and in subsequent reports it has properly focused on established indicators that are both ascertainable and informative.

Moreover, all eight of the Notice’s current proposals for measuring profits are unusable. Seven of the eight are not measures of economic profits, but of accounting profits. Economists, courts and regulators have long agreed that accounting profits are irrelevant to any reasoned analysis of whether a market is competitive.<sup>15</sup> The remaining proposal – the Lerner index – is an economic metric, but it measures profits only in relation to marginal costs. And economists universally agree that such a measure is useless for industries like wireless that have very high fixed costs and where pricing at marginal cost is thus a recipe for insolvency.

The *Notice* also asks whether measures of market shares and concentration should play a larger role in the assessment of wireless broadband competition. It has been “many years since anyone knowledgeable about” competitive analysis “thought that concentration by itself imported a diminution in competition.”<sup>16</sup> Data regarding market concentration at a particular

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<sup>14</sup> *First Report* ¶¶ 75-78.

<sup>15</sup> E.g., Franklin M. Fisher, *Economic Analysis And “Bright-Line” Tests*, J. of Competition L. & Econ., 129, 139 (2008) (A “fatal misconception is that accounting rates of return can be used to measure economic rates of return, so that a persistent high accounting rate of return indicates a high economic rate (and hence non-competitive profits). . . . [But] accounting rates of return bear almost no necessary relation to true economic rates of return. This has been known for more than 20 years”).

<sup>16</sup> *Capital Cities/ABC, Inc. v. FCC*, 29 F.3d 309, 315 (7<sup>th</sup> Cir. 1994); *United States v. Syufy Enters*, 903 F.2d 659, 665-66 (9<sup>th</sup> Cir. 1990) (“In evaluating monopoly power, it is not market share that counts, but the ability to *maintain* market share”) (emphasis in original).

point in time is of especially limited utility in gauging competition for a nascent, rapidly growing service.

In short, through Democratic and Republican administrations alike, the Commission has wisely recognized that competitive forces are powerfully and irreversibly in play, and that the best way to maximize consumer welfare is to allow those competitive forces to flourish – as the Clinton-era Commission did when it adopted a policy of mandatory detariffing of wireless services in 1994. As carriers are poised to invest billions more dollars in wireless broadband capabilities, this would thus be the worst possible time to change course. Year after year, the Commission has analyzed competition in the wireless industry with reference to established and widely recognized indicators of competitive performance. There is no deficiency in that analysis to correct, and there is no basis for concluding that the industry continues to be anything but vigorously competitive. To the contrary, because of the far-sighted policies of Congress and previous Commissions, competition is undeniably providing enormous benefits today to wireless consumers – and the Commission should so find in its 14th annual report.

**I. THE COMMISSION SHOULD CONTINUE TO EMPLOY THE ESTABLISHED AND WIDELY ACCEPTED INDICATORS THAT HAVE BEEN USED BY DEMOCRATIC AND REPUBLICAN COMMISSIONS FOR THE ASSESSMENT OF EFFECTIVE COMPETITION.**

In each of its past annual wireless competition proceedings under Section 332(c)(1)(C), the Commission has looked to the full range of well-established economic indicators commonly used for the assessment of competition in a wide variety of contexts. As the wireless marketplace has developed, the Commission has organized its assessment of these economic indicators into four broad categories: market structure, provider conduct, consumer behavior,

and market performance.<sup>17</sup> Each year, the Commission has collected a large amount of data, taken advantage of constantly improving methods of collecting and analyzing relevant data, and produced an extraordinarily thorough and informative review of the totality of marketplace conditions, performance and evolution.

Although the Commission has never attempted to define with any specificity the statutory term “effective competition,” this has never posed an obstacle to the Commission’s review. For many years, the numerous economic indicators have all unambiguously pointed in the same direction – that the wireless marketplace is robustly competitive and providing substantial benefits to consumers. That has never been clearer than it is in today’s dynamic wireless marketplace. Today, any objective examination of the wealth of information available under the Commission’s “Structure-Conduct-Performance” framework will conclude that the wireless marketplace is characterized by “effective competition” under *any* reasonable definition of that term.

The Notice asks “whether the Commission should continue to consider a range of indicators” in determining whether there is effective competition in the wireless marketplace, or whether it should “define effective competition in a more specific manner.” *Notice* at 3. The short answer is that the Commission should continue to consider the full range of established economic indicators.

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<sup>17</sup> The Commission has previously referred to this as the “Structure-Conduct-Performance framework.” See Thirteenth Report, *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*, WT Docket No. 08-27, ¶ 5 (January 16, 2009) (“*Thirteenth Report*”) (citing *Ninth Report* ¶¶ 8, 17); see also *id.* (“[a]s stated in earlier reports, the framework proceeds from the premise that indicators of market structure such as the number of competitors and their market shares are not, by themselves, a sufficient basis for determining whether there is effective competition,” but rather focuses on both the “structural and behavioral characteristics of the CMRS marketplace”).

“Effective competition” judgments are commonplace in antitrust and regulatory proceedings. But Congress, the antitrust authorities, and the Commission have typically thought it unnecessary to define the term or to specify how those judgments are to be made, because there is a well-established framework for measuring effective competition. It employs a variety of commonly used economic indicators and recognizes that individual determinations of effective competition will necessarily turn on the particular marketplace circumstances and dynamics and on the available data and observations about that marketplace.

Although many have wished for an analytical “silver bullet” to replace the necessarily more *ad hoc* consideration of all relevant economic indicators, economists, courts and policymakers have recognized for the better part of a century that the search for a tidy formula, or a simple bright-line test, for determining whether a market is effectively competitive is not just futile, but affirmatively counterproductive.<sup>18</sup> There is no hard-and-fast rule or special criterion that can be treated as dispositive for assessing effective competition in this context. Almost any single factor standing alone can be perfectly consistent with effective competition – depending on what the other characteristics of the market may be. The simple fact is that real world markets are extraordinarily complex and dynamic and are not susceptible to description through rigid formulas.

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<sup>18</sup> See, e.g., DOJ/FTC Horizontal Merger Guidelines at 15 (“market share and concentration data provide only the starting point for analyzing the competitive impact of a merger. Before determining whether to challenge a merger, the Agency also will assess the other market factors that pertain to competitive effects, as well as entry, efficiencies and failure.”); Franklin M. Fisher, *supra* n.12, at 139 (“Is there any ‘bright-line’ test for power? I think not.”); Herbert Hovenkamp, *Exclusive Joint Ventures And Antitrust Policy*, 1995 Colum. Bus. L. Rev. 1, 72 (1995) (“Measuring market power is a highly inexact and expensive science . . .”); Lawrence H. Eiger, *Antitrust: Decisions Concerning Supplier-Dealer Relations And The Rule Of Reason*, 58 Chi.-Kent L. Rev. 251, 267 (1982) (“Market power is a function of many factors . . .”).

Naturally, this does not mean that the Commission cannot provide additional guidance on the question of when markets are effectively competitive, or that it should not continue to look for ways to improve its data collection and analysis. As mentioned in the *Notice* (at 3), the Commission gave especially pertinent guidance in its 1995 *Foreign Carrier Entry Order*: “[e]ffective competition means competition among service providers in a market that benefits consumers by expanding service offerings, promoting development of innovative technology, and lowering prices.”<sup>19</sup> This formulation has the proper focus, because it asks whether multiple firms are competing with one another in ways that create positive, observable benefits for consumers.

In fact, by examining the full range of standard indicators and placing particular emphasis on the observable benefits that wireless competition is delivering to consumers, the Commission has essentially already adopted this test under § 332, because there is no material difference between that standard approach and the *Foreign Carrier Entry Order*’s articulation of what is at issue. Under the current approach, the Commission asks: (1) Is the market structured to allow rivalrous behavior, with multiple providers that compete with one another, and does the regulatory environment permit entry and expansion? (2) Are providers innovating and improving their offerings, to try harder to attract and retain customers? (3) Are consumers informed about their choices and able freely to exercise their right to switch among providers? and (4) Do directly observable market performance factors such as price, output, service quality, and investment show positive pro-consumer trends? The Commission’s current practice of providing detailed answers to those questions tracks the *Foreign Carrier Entry Order* test, because it is a

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<sup>19</sup> *Market Entry and Regulation of Foreign-Affiliated Entities*, 11 FCC Rcd. 3873, at ¶ 1.

determination of whether competition is resulting in concrete benefits for consumers in the form of expanded offerings, technological innovation, and competitive prices.

The Notice also correctly observes that economists have long recognized that what constitutes effective competition as a matter of economics may differ depending on the underlying characteristics of the market at issue *See Notice* at 3. As the *Notice* recognizes, a “market can be deemed competitive when a few price-setting firms compete vigorously for sales, and the rivalry between firms affects market price.” *Id.* The conduct and performance record in the wireless industry in which virtually all consumers can choose among 3 or more vigorously competing suppliers unquestionably confirms that it is characterized by just such rivalry. The *Notice* also sets forth an “alternative meaning” of effective competition: a “market with many firms that are price takers and with free entry and exit” – in other words, the textbook definition of “perfect competition,”<sup>20</sup> *Notice* at 3-4. But that “definition” has no application here. “Perfect” competition generally exists *only* in textbooks, and establishing a standard that could never be met in the real world would be profoundly misguided. Indeed, that standard is particularly ill-suited to the wireless industry, which is characterized by high fixed network costs, differentiated products, and a host of other characteristics that economists, policymakers, and antitrust authorities, and courts have long recognized make perfect competition standards and models entirely inappropriate.<sup>21</sup> Nor could it provide any meaningful guidance or advance

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<sup>20</sup> G.S. Maddala & Ellen Miller, *Microeconomics, Theory And Applications* 283-84 (1989).

<sup>21</sup> *See, e.g., id.* (“No industry, in actual practice, satisfies all of the[] conditions [required for perfect competition]”); *First Report* ¶ 78 (rejecting use of perfectly competitive zero-profit test for wireless services because growth industries [such as the wireless industry] tend to have higher profits” which are needed “to fund investment in additional plant and equipment”); Report and Order and Order on Reconsideration, *Petition of Arizona Corporation Commission, To Extend State Authority Over Rate and Entry Regulation of All Commercial Mobile Radio Services And In the Matter of Implementation of Sections 3(n) and 332 of the Communications Act*, 10 FCC Rcd. 7824, ¶ 18 n.54 (1995) (“In general, perfect competition can exist only where

the Commission’s analysis to define “effective competition” as “a market that requires no intervention to improve its performance.” *Id.* at 4. That is a formulation that begs the central question of how to assess performance; it has no analytical content or rigor.

The *Notice* points out that Congress did provide a bright-line test for effective competition in one provision of the Act, Section 623, which sets the standard for when former monopoly cable companies could obtain relief from rate regulation of their video programming services in response to emerging competition. Those statutory tests ask one very simple question: is there a credible competitor? In particular, Congress directed the Commission to deem an individual local franchise area “effectively competitive” even if it had only *two* competitors, the incumbent cable company and the incumbent LEC. 47 U.S.C. § 543(l)(1)(D) (franchise area is effectively competitive even if the only two competitors are the incumbent cable firm and the LEC, regardless of the LEC’s market share, as long as the LEC’s offering is “comparable” to the incumbent’s). Effective competition also exists under the Section 623 definition if the incumbent cable company has an 85 percent market share and there are only two other unaffiliated competitors offering service to at least 50 percent of the households that together have at least a 15 percent market share. *Id.* § 543(l)(1)(B).

Of course, if the Commission were to adopt such a test, the wireless marketplace would pass easily, as it was never a monopoly service. Moreover, in the wireless context, a wealth of directly observable conduct and performance data proves, beyond doubt, that wireless competition is robust everywhere and throughout the nation is producing the concrete consumer benefits expected of effectively competitive markets. There is thus no need to base effective competition determinations for wireless services on predictive judgments from bright line market

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goods are homogeneous, and all buyers and sellers have full information and accept price as given (*i.e.*, they do not try to influence price).”).

structure tests alone.<sup>22</sup> Rather, replacing the careful review that the Commission now performs with a narrow bright-line test would do Congress, the industry, and the Commission itself a substantial disservice. It would replace the detailed and informative picture the Commission now provides with a stick-figure drawing that could not possibly do justice to the extremely dynamic marketplace that now exists in wireless services.

In short, the Commission should maintain its current practice of assessing all of the relevant indicators. It *should* recognize, however, that some indicators constitute more direct evidence of consumer benefits than others. The provider conduct, consumer behavior, and market performance categories – which encompass such indicators as prices, increased choices, expanded offerings, technological innovation, and service quality improvements – are inherently far more informative than either purely predictive measures like market structure (standing alone) or the “profits” metrics that the Commission proposes to analyze for the first time (and, which, as detailed below, have no theoretically valid basis whatsoever in this context). Stated differently, the Commission should give its most careful focus to the things that really matter to consumers – the fact that robust competition today is driving extraordinary levels of technological innovation, new offerings, lower prices, higher output, and increasing service quality. Doing so will further confirm that the Commission’s consistent hands-off policy toward

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<sup>22</sup> In this regard, Section 623 is really just a more specific application of the general recognition in numerous contexts that effective competition determinations can often be made on the basis of the alternatives available to consumers. *See, e.g., Tanaka v. University of S. Cal.*, 252 F.3d 1059, 1063 (9<sup>th</sup> Cir. 2001) (the “area of effective competition” is “where buyers can turn for alternative sources of supply” (internal quotations omitted)); *AT&T Non-Dominance Order*, 11 FCC Rcd. 3271, ¶ 129 (1995) (finding marketplace competitive where “it appears that adequate alternative sources of supply exist for resellers that do not wish to take service from AT&T”). Indeed, if there is anything to be inferred from Congress’ definition of effective competition in Section 623, it is that Congress likely had only the general understanding of the term “effective competition,” as referring merely to the existence of significant competitive alternatives, in mind when it included the term in Section 332(c).

regulating wireless services – maintained through Democratic and Republican administrations alike in furtherance of Congress’s far-sighted commands in its 1993 enactment of § 332(c)(1) – has unleashed extremely intense competition and an incredible array of benefits for consumers.

**II. ALL OF THE ESTABLISHED MARKET INDICATORS FOR ASSESSING EFFECTIVE COMPETITION DEMONSTRATE THAT THE WIRELESS MARKETPLACE IS EFFECTIVELY COMPETITIVE.**

The Commission’s wireless competition reports have traditionally focused on established metrics of competition, grouped into four broad categories: market structure, provider conduct, consumer behavior, and market performance.<sup>23</sup> These metrics have consistently confirmed that the wireless marketplace is at least “effectively competitive.” In its first wireless report to Congress in 1995 the Commission stated that “[t]he rise of competitive forces is now being achieved largely by the private sector” and that such competition “has been made possible . . . by the Commission’s deliberate dismantling of an old regulatory structure . . . [with] the creation of a new structure whose hallmark is flexibility, with regulation focused on protecting consumers by stimulating competitive forces.”<sup>24</sup> In its most recent report, the Commission concluded that “U.S. customers continue to reap significant benefits – including low prices, new technologies, improved service quality, and choice among providers – from competition in the CMRS marketplace.”<sup>25</sup> These metrics again confirm that there is intense, and certainly “effective,” competition in the wireless marketplace.

Market structure metrics – *e.g.*, number and type of competitors and concentration – overwhelmingly confirm that the wireless marketplace is open to competition. Most U.S. wireless customers can choose among at least five different providers. New entry by well

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<sup>23</sup> *See, e.g., Thirteenth Report.*

<sup>24</sup> *First Report* ¶ 84.

<sup>25</sup> *Thirteenth Report* ¶ 1.

financed companies such as Cox Cable and Clearwire continues, and other new entrants and smaller providers are flourishing. No U.S. carrier serves even a third of wireless customers. Compared to the 26 industrialized countries tracked by the OECD, the U.S. wireless marketplace is the *least* concentrated.

Provider conduct metrics – which focus on price and non-price rivalry among carriers – further confirms that providers are indeed intensely competing for customers on multiple fronts. Per minute prices in the U.S. continue to be well below those of other industrial nations.<sup>26</sup> Wireless providers lowered prices this year, and many of them expanded their bundled offerings and service plans to offer more voice calling, texting, email, Internet, and more. Providers also improved their pay-as-you-go plans and lowered those prices. Wireless providers spend more on advertising than firms in other U.S. industries. They are also investing billions of dollars to upgrade and expand their wireless networks. The big story this year – broadband wireless – is further driving rivalry among carriers, as they compete for customers by racing to upgrade their networks, deploy innovative services, work with manufacturers to develop cutting edge handsets for their broadband networks, and support third party development of tens of thousands of applications that customers can download from the Internet and use on their devices.

Customer conduct metrics – *e.g.*, customer ability and propensity to switch service providers – confirms that consumers are taking advantage of this competition. Wireless customer churn remains substantial, proving that carriers must compete to win and keep customers. Indeed, the cost of changing service has never been lower, and consumers have access to more information about alternative wireless services than ever before. Any provider

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<sup>26</sup> *CTIA Study*, at 3.

that fails to perform, innovate and become more efficient does not wait long to learn that its customers are ready and willing to switch to a provider that does.

Finally, market performance metrics – *e.g.*, price, output, quality, investment, innovation – all confirm that the wireless marketplace is functioning extraordinarily well. As noted (and discussed further below), prices continue to be lower than any other major industrialized country and they continue to fall, output and quality continue to rise, and carriers continue to invest billions of dollars in innovation, upgrades and expansion. In short, there has never been a time when wireless services were more competitive or providing more value and the future promises an even more competitive marketplace because carriers are poised to invest billions more dollars to upgrade their networks to 4G and to usher in a new generation of even more revolutionary devices.

**A. Market Structure Considerations Confirm That The Wireless Industry Is Highly Competitive.**

Market structure metrics, which the Commission has traditionally used as an analytical starting point, all indicate that the wireless marketplace is very competitive. Regulators and courts use market structure as a tool to assess whether a marketplace permits entry and competition, and focus on factors such as the number and type of existing competitors, marketplace concentration, and comparisons to foreign countries.

Market concentration figures standing alone, however, say little about likely market performance, and the Commission has thus correctly recognized that the “consumer outcomes are the ultimate test of effective competition.”<sup>27</sup> In that regard, the current FTC and DOJ economists, have strongly criticized attempts to “link[] increases in concentration to declines in market performance,” explaining that “[i]n recent decades . . . industrial organization scholars

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<sup>27</sup> *Thirteenth Report* ¶ 187.

and the courts have been more apt to stress that high concentration can be compatible with vigorous competition and efficient market performance.”<sup>28</sup> Indeed, both the Commission and the Government Accountability Office (“GAO”) have found, for example, that the existence of a single wireline competitor has resulted in incumbent cable companies reducing prices and substantially enhancing their own services.<sup>29</sup> Although over-reliance on market structure can lead to erroneous conclusions and misguided policy, here the issue is largely academic, because the wireless market structure metrics are fully consistent with the direct measures of competition (discussed in Part II, below): they both confirm that wireless marketplace is open to many firms competing robustly and providing benefits to consumers.

*The Structure Of Today’s Wireless Marketplace.* Today’s wireless marketplace includes four national wireless carriers, three large regional providers, and dozens of smaller providers. In addition, there are more than forty Mobile Virtual Network Operators (“MVNOs”) that lease airtime from facilities-based providers and then use it to compete against them (and each other). The vast majority of these wireless carriers offer national coverage, using a combination of their own facilities and roaming arrangements. And no single wireless carrier – not even the largest

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<sup>28</sup> Joseph Farrell & Carl Shapiro, *Antitrust Evaluation of Horizontal Mergers: An Economic Alternative to Market Definition*, at 4 (Working Paper, Nov. 25, 2008).

<sup>29</sup> See, e.g., Report on Cable Industry Prices, *Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992*, 21 FCC Rcd 15087, ¶ 2 (2006); Report & Order & Notice of Proposed Rulemaking, *Implementation of the Cable Television Consumer Protection and Competition Act of 1992*, 22 FCC Rcd. 17791, ¶ 24 (2007) (noting that the GAO Report concluded that “wireline video entry provides more price discipline to cable than DBS and is more likely to cause cable operators to enhance their own services and to improve customer service”); Report & Order & Further Notice of Proposed Rulemaking, *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Consumer Protection and Competition Act of 1992*, 22 FCC Rcd. 5101, ¶ 50 (2007) (“the presence of a second cable operator in a market results in rates approximately 15 percent lower than in areas without competition”); Second Report & Order, *Policy and Rules Concerning the Interstate Interexchange Marketplace*, 11 FCC Rcd. 20730, ¶ 61 (1996) (finding long distance market competitive even though it was concentrated).

national carrier – has anything even approaching a dominant market share. Compared to other countries in the world, the U.S. wireless industry is the *least* concentrated of the 26 major industrialized countries followed by the OECD.<sup>30</sup>

Customers in the U.S. thus have many choices. The latest Commission data show that more than 95 percent of the U.S. population lives in census blocks with at least three competing wireless carriers and more than half of the population lives in census blocks with at least five competing carriers.<sup>31</sup> Even the least populated “counties with population densities of 100 persons per square mile or less . . . have an average of 3.6 mobile competitors,” which is only marginally fewer than the average of 4.3 competitors in the nation as a whole.<sup>32</sup> Carriers in rural areas have aggressively invested in wireless spectrum and technology to expand their services and features.<sup>33</sup>

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<sup>30</sup> *CTIA Study* at 6 (the United States wireless marketplace is the least concentrated of the 26 OECD countries).

<sup>31</sup> *Thirteenth Report* ¶ 2.

<sup>32</sup> *Twelfth Report, Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993*, 23 FCC Rcd. 2241, ¶ 105 (2008) (“*Twelfth Report*”).

<sup>33</sup> The Commission “concluded” in the *Thirteenth Report* (¶ 109) that “CMRS providers are competing effectively in rural areas.” *See also, e.g., Twelfth Report*, ¶ 2 (“Several smaller, incumbent regional operators acquired AWS licenses that will enable them to expand their coverage and gain entry into new regional markets”). That report reflected much of the industry consolidation that has occurred, and since then there has been significant new entry and growth by wireless providers serving rural areas. New providers, such as Cox Cable and Clearwire, continue to enter. News Release, Cox Communications, *Cox to Launch Next Generation Bundle With Wireless In 2009*, (Oct. 27, 2008), available at [http://media.corporate-ir.net/media\\_files/irol/76/76341/release102708.pdf](http://media.corporate-ir.net/media_files/irol/76/76341/release102708.pdf); News Release, Clearwire, *Clearwire Reports Third Quarter 2008 Results* (Nov. 10, 2008), available at <http://newsroom.clearwire.com>. And, regional and smaller providers continue to be the fastest growing providers. Investor Overview, MetroPCS Communications, Inc. to Present at Bank of America Credit Conference (Nov. 18, 2008), available at <http://investor.metropcs.com>; Dan Frommer, *Cheap Wireless Service Weathering Downturn: Leap Subscriber Growth Spikes Up (LEAP)*, Silicon Alley Insider, Aug. 5, 2008, available at <http://www.alleyinsider.com/2008/8/cheap-wireless-service-weathering-downturn-leap-subscriber-growth-spikes-up-leap->

Customers in the U.S. are also increasingly relying on wireless broadband services for email, Internet and other functions that have historically been available only from wireline broadband services. The growing use of wireless broadband services is further enhanced by the availability of tens of thousands of Wi-Fi hotspots from AT&T and others. For these reasons, the impact of wireline services can no longer be ignored when assessing competitive constraints on wireless carriers.

With all of these competitors, the type of potential competitive harm that market structure analyses are designed to identify are virtually non-existent here. Specifically, one of the main purposes of a market structure analysis is as a starting point to determine the potential for competitive harm from tacitly coordinated action.<sup>34</sup> But the structure of the wireless industry confirms that such coordination would be virtually impossible here. Wireless providers offer a very large range of products and bundles (*e.g.*, voice, texting, Internet, email, music, video, GPS) with multiple pricing variables (*e.g.*, rollover minutes, free night and weekend calling, free in-network calling, and handset subsidies), which preclude any serious risk that carriers could or would coordinate the prices, terms and conditions for these services. Moreover, carriers would have no real ability to monitor competitors' adherence to any conspiracy given constantly changing terms and offerings, handset subsidies, new customer discounts, win-back offers, and so on. The complexity of these arrangements would make cheating very difficult to detect, which also substantially reduces the ability to maintain coordinated action.<sup>35</sup> Indeed, the

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<sup>34</sup> See, *e.g.*, *Thirteenth Report* ¶¶ 26, 63; DOJ/FTC Horizontal Merger Guidelines, § 2.1.

<sup>35</sup> In addition, future demand in the wireless marketplace is very uncertain, and as the DOJ's Horizontal Merger Guidelines recognize, this makes it even more difficult to coordinate and monitor cartelized action (because it would be impossible to tell whether fluctuations in demand were the result of overall market changes or cheating). See generally *Applications of AT&T Inc. and Centennial Communications Corp. For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, WC Docket No. 08-246, Public Interest

characteristics of the wireless industry – quickly changing market conditions and non-fungible services with myriad variables – are the exact opposite of the conditions in which the Supreme Court has found potential for coordination.<sup>36</sup>

In light of these facts, it is ironic that supposed supporters of competition call for various regulatory restrictions that would effectively convert wireless carriers into “dumb pipes” with homogenized service offerings. By eliminating the multi-faceted competition that characterizes the wireless marketplace today, in which wireless carriers offer consumers integrated value propositions combining various handsets, operating systems, features, functions and capabilities, those proposals would diminish, not increase, competition and consumer choice. At the same time, requiring all wireless carriers to offer the same undifferentiated product would increase, not reduce, the risk of tacit collusion.<sup>37</sup>

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Statement, Declaration of Robert D. Willig, Jonathan M. Orszag, & J. Loren Poulsen, ¶¶ 49-54 (Nov. 21, 2008).

<sup>36</sup> See *Brooke Group, Ltd. v. Brown & Williamson Tobacco Corp.*, 509 U.S. 209, 238 (1993) (“[t]acit coordination is facilitated by a *stable* market environment, *fungible* products, and a *small number of variables* upon which the firms seeking to coordinate their pricing may focus.”) (emphasis added); see also Mem. Opinion & Order, *SBC Communications Inc. and AT&T Corp. Applications for Approval of Transfer of Control*, 20 FCC Rcd. 18290, ¶ 137 (2005) (“we also are unpersuaded that SBC/AT&T and Verizon/MCI, in particular, will have the ability to coordinate to de-peer a sufficient number of their backbone rivals – either through targeted and serial de-peering or global de-peering – to effectively ‘tip’ the market to duopoly. We conclude that it would be difficult for the merged SBC/AT&T and Verizon/MCI to agree tacitly on the specifics of these de-peering strategies, such as which peers to target, and in which sequence, without reaching an express agreement in clear violation of antitrust laws.”).

<sup>37</sup> As the Commission has previously recognized, rate regulation itself would have that same effect. See, e.g., Second Report & Order, 11 FCC Rcd. 20730 at ¶ 61 (finding that without tariff filing requirements “tacit price coordination, to the extent it exists, will be more difficult. In contrast, allowing nondominant interexchange carriers to file tariffs on a voluntary basis would create the risk that carriers would file tariffs merely to send price signals and thus manipulate prices.”).

*Entry Barriers.* The Commission seeks comment on barriers to wireless entry.<sup>38</sup> Although, as detailed below, there is more to be done, the Commission has removed many entry barriers, and, consequently, there has been a steady march of wireless entry and expansion over the years. Rapidly evolving technology has created numerous opportunities for new wireless competitors to enter the marketplace. As the Commission has made additional spectrum available in recent years, Clearwire, cable companies, and other new providers have entered wireless services markets, and existing carriers continue to expand their footprints, service offerings, and reliability.<sup>39</sup>

Experience continues to show that even small entrants can be very successful. Virgin Mobile, for example, has gone from no customers to being a major carrier with five million customers in just a few short years, and MetroPCS and Leap Wireless – two regional providers – have been the fastest growing carriers in the nation.<sup>40</sup> MetroPCS, for example, reports that its

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<sup>38</sup> Notice at 7-8.

<sup>39</sup> News Release, Cox Communications, *Cox to Launch Next Generation Bundle With Wireless In 2009*, (Oct. 27, 2008), available at [http://media.corporate-ir.net/media\\_files/irol/76/76341/release102708.pdf](http://media.corporate-ir.net/media_files/irol/76/76341/release102708.pdf) (“As wireless communications enters the new generation, we are uniquely positioned to deliver the entertainment and communications services our customers want, whenever, however and wherever they want them”); News Release, Clearwire, *Clearwire Reports Third Quarter 2008 Results* (Nov. 10, 2008), available at <http://newsroom.clearwire.com> (“We were very gratified when last week the FCC announced unanimous approval of our pending transaction to combine Clearwire with Sprint’s WiMAX business. . . . [W]e believe Clearwire will be set to unleash a new way to Internet by offering a true mobile broadband experience for our customers”).

<sup>40</sup> See, e.g., Virgin Mobile, News Release, *Virgin Mobile USA Reports Strong Q3 2008 Results*, (Nov. 10, 2008), available at <http://virginmobileusa.com> (“[a]s of September 30, 2008, the Company had approximately 5.2 million customers, an increase of 6% over September 30, 2007”); Investor Overview, MetroPCS Communications, Inc. to Present at Bank of America Credit Conference (Nov. 18, 2008), available at <http://investor.metropcs.com> (“we have been among the fastest growing wireless broadband PCS providers in the United States as measured by growth in subscribers and revenues during that period”); Dan Frommer, *Cheap Wireless Service Weathering Downturn: Leap Subscriber Growth Spikes Up (LEAP)*, Silicon Alley Insider, Aug. 5, 2008, available at <http://www.alleyinsider.com/2008/8/cheap-wireless-service-weathering-downturn-leap-subscriber-growth-spikes-up-leap-> (“The U.S. economy is getting

customer base has grown more than 20 percent each quarter since 2007 and that it surged 37 percent in the past year, now giving MetroPCS a total of 6.1 million customers.<sup>41</sup>

*Effects of Consolidation.* The *Notice* (at 7) asks about the “effects of consolidation in the CMRS marketplace.” The simple answer is that little has changed since the *Thirteenth Report* showed that the U.S. wireless industry is the least concentrated among major industrial nations, with most U.S. consumers having access to five or more competitive providers. The data used in the *Thirteenth Report* already reflected much of the consolidation that has occurred in the wireless industry.<sup>42</sup> And, as noted, there subsequently has been significant new entry and expansion by existing regional wireless carriers. Consequently, the U.S. wireless marketplace continues to be the least concentrated among industrial nations.<sup>43</sup> Moreover, the limited consolidation that has occurred has benefited consumers, particularly those in rural areas; there is no evidence it has resulted in *any* consumer harm.

The consolidation that has occurred in the U.S. is just another reflection of the intense competition among U.S. wireless providers. U.S. providers vigorously compete to offer more services at lower prices in more places. One way for carriers to achieve these goals is through consolidation. Consolidation lowers costs by allowing providers to realize greater economies of scale and scope, and it allows carriers to more quickly and efficiently expand their networks into

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rocked, and the U.S. mobile business is slowing. So what’s pushing the growth at Leap Wireless, which sells cheap, all-you-can-eat wireless service? Easy: Cheap, all-you-can-eat wireless service.”).

<sup>41</sup> Dianne Morrison, *Regional Carrier MetroPCS To Stay Independent*, moconews.net, May 18, 2009, available at <http://www.moconews.net/entry/419-regional-carrier-metropcs-to-stay-independent>.

<sup>42</sup> See *Thirteenth Report* ¶¶ 51-62.

<sup>43</sup> *CTIA Study* at 6-7.

rural and underserved areas. Consolidation also can give carriers access to spectrum needed for today's exploding bandwidth requirements.

All consumers have benefited from this consolidation, through lower prices and better services. But perhaps the greatest beneficiaries of such consolidation are customers in rural and underserved areas. Consolidation – typically when a national or large regional carrier purchases a smaller carrier serving a rural or underserved area – has resulted in customers in those areas more quickly gaining access to the same wireless services and products that are available to customers in the most densely populated areas, such as access to the cutting edge next-generation networks, innovative voice and data plans, the latest handsets designed for these networks, and many other services and features. As the Commission has aptly summarized, these transactions “result in expanded and improved services and features for wireless customers, especially in rural areas,” “increased broadband deployment and next generation services,” “higher quality service,” and “increase[d] efficiency and . . . economies of scale and scope.”<sup>44</sup> Moreover, for each of these transactions, the Commission implemented safeguards designed to eliminate any potential harms that theoretically might have resulted, including ordering divestitures of facilities and spectrum to competitors, and other remedial actions.

*Mobile Data Subscriber Shares.* As the *Notice* points out, the Commission will obtain significant information about the deployment and use of wireless broadband data services for the

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<sup>44</sup> See, e.g., Mem. Opinion & Order & Declaratory Ruling, *Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, 23 FCC Rcd. 17444, ¶¶ 119-156 (2008).

first time this year. The *Notice* “seek[s] comment on the extent to which the new . . . data should be used to estimate mobile data subscriber shares and concentration levels.”<sup>45</sup>

The new Form 477 broadband data will document the remarkable progress U.S. wireless providers already have made in deploying and improving broadband wireless services. AT&T’s 3G mobile broadband network, for example, is now available in nearly 350 U.S. major metropolitan areas, with about 20 additional metro areas planned for deployment in 2009.<sup>46</sup> Moreover, although the industry is poised to switch to next generation LTE technology in 2010-2012, AT&T is continuing to make significant investment in its existing wireless broadband network, by devoting more spectrum to its 3G network and by upgrading its network to HSPA 7.2 technology starting this year.<sup>47</sup> Similarly, Verizon’s 3G network covered 80% or more of the US population even prior to its acquisition of Alltel,<sup>48</sup> and Verizon is now in the process of upgrading to LTE technology.<sup>49</sup> Sprint is already replacing its current 3G network with its next generation wireless network (a WiMAX network), and Sprint expects to expand this next-

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<sup>45</sup> *Notice* at 6-7.

<sup>46</sup> See, Press Release, AT&T, *AT&T to Deliver 3G Mobile Broadband Speed Boost* (May 27, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26835>.

<sup>47</sup> See *id.*

<sup>48</sup> Telegeography, July 14, 2008, available at [http://www.telegeography.com/cu/article.php?article\\_id=24030](http://www.telegeography.com/cu/article.php?article_id=24030).

<sup>49</sup> See also Press Release, Verizon, *Verizon Wireless Completes Purchase Of Alltel; Creates Nation’s Largest Wireless Carrier* (Jan. 1, 2009) (upgrading legacy Alltel network to 3G and expanding service options for legacy Alltel customers), available at <http://news.vzw.com/news/2009/01/pr2009-01-09.html>. This news further confirms that Verizon continues to invest billions to improve and expand its services in existing areas, available at <http://news.vzw.com>.

generation coverage significantly in 2009.<sup>50</sup> Other carriers, including U.S. Cellular, MetroPCS and Leap Wireless also have all expanded their broadband wireless footprint during the past year and continue to do so.<sup>51</sup>

These data also will allow the Commission to plot over time what will surely be a meteoric expansion and use of wireless broadband technologies in the U.S., as customers increasingly demand services based on wireless broadband technologies and as providers seek to satisfy that demand with larger and faster networks. The wireless broadband marketplace today is still emerging. New carriers (such as Cox and Clearwire) are entering, and, existing carriers continue to rapidly invest in upgrading and expanding their networks.<sup>52</sup>

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<sup>50</sup> News Release, Sprint, *Sprint's Now Network Powers Palm Pre Success* (July 11, 2009), available at [http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle\\_newsroom&ID=1298492](http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1298492).

<sup>51</sup> See, e.g., US Cellular 2008 Annual Report, at 4 (“U.S. Cellular took important steps in 2008 to ensure that its network supports developing customer needs for technology. The company expanded its 3G network to approximately 23 percent of its cell sites, and intends to bring 3G speeds to at least 60 percent of its cell sites by the end of 2009. The company also continued to add many new cell sites in 2008. . . .”), available at <http://phx.corporate-ir.net/phoenix.zhtml?c=106793&p=irol-reportsAnnual>; Leap Wireless, 1Q09 Earnings Conference Call, at 24 (May 7, 2009) (depicting Leaps 3G wireless network and the substantial expansion it intends to complete by the middle of 2009), available at <http://phx.corporate-ir.net/phoenix.zhtml?c=95536&p=quarterlyearnings>; MetroPCS Q1 2009 Form 10-Q, at 16, available at <http://investor.metropcs.com/phoenix.zhtml?c=177745&p=quarterlyEarnings> (“As of March 31, 2009, the Company had thirteen operating segments based on geographic region within the United States: Atlanta, Boston, Dallas/Ft. Worth, Detroit, Las Vegas, Los Angeles, Miami, New York, Orlando/Jacksonville, Philadelphia, Sacramento, San Francisco and Tampa/Sarasota. Each of these operating segments provide wireless broadband mobile voice and data services and products to customers in its service areas or is currently constructing a network in order to provide these services”); Light Reading’s Unstrung, MetroPCS Gets to Work on LTE Phones (May 1, 2009) (MetroPCS will be deploy LTE technology in 2010 and 2011).

<sup>52</sup> Leap Wireless, for example, only just completed its broadband wireless roll-out in the fourth quarter of 2008, and it is now in the process of expanding its coverage to new areas. See, Leap Wireless 2008 Year-End Earnings Slide Presentation, 26 (May 7, 2009), available at <http://phx.corporate-ir.net/phoenix.zhtml?c=95536&p=quarterlyearnings>.

The Form 477 data will also allow the Commission to plot the continued rapid adoption of wireless broadband technologies. There are already myriad high value uses for wireless broadband services including, among others, internet browsing, email, music and video downloads, GPS services, and similar functions that work best using these next generation networks. Consequently, demand for broadband continues to grow as new applications emerge and customers embrace them, leading to data traffic on AT&T's network growing more than 50 percent year over year on average."<sup>53</sup>

Although the new broadband data being collected by the Commission will be useful for setting a baseline for broadband wireless deployment and adoption and for plotting future progress, the Commission could not rationally rely on a snapshot of today's marketplace to draw any significant conclusions about the effectiveness of wireless broadband competition. Static market shares could not account for the extraordinary dynamism and growth in this marketplace. Such statistics could show only that the providers that took the largest risks and that were the first to upgrade their wireless networks to broadband capable speeds are now the leading providers of such services. But that, of course, fails to account for the significant growth in wireless broadband competition as new firms enter and existing firms are upgrading their networks. It would also fail to account for the continuous introduction of new broadband wireless services, such as the iPhone and Amazon Kindle, that could change the shape of the marketplace virtually overnight.

Moreover, wireless broadband could not be considered alone. Wireless broadband speeds are approaching those of many wireline broadband connections, and consumers

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<sup>53</sup> See Press Release, AT&T, *AT&T to Invest More Than \$17 Billion in 2009 to Drive Economic Growth* (Mar. 10, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26597>.

increasingly choose broadband service over wireline broadband connections. Nor is it clear whether broadband wireless services should be considered separate and apart from wireless services generally. AT&T customers, for example, often can use AT&T's broadband wireless network on a pay as you go basis, which means that a large portion of AT&T wireless customers that do not subscribe to an AT&T broadband service actually have access to those services. As the Commission recently explained, "there are risks associated with defining product markets too narrowly in the context of rapidly evolving markets and services such as those for mobile broadband services."<sup>54</sup>

*Additional Steps That the Commission Can Take To Reduce Entry Barriers.* The Notice (at 7) also asks whether there is action that the Commission could take to further reduce entry barriers and permit the even more rapid deployment of new and improved wireless services. Three issues merit particular attention.

First, the Commission should issue an order in its pending section 332(c)(B)(A) proceeding. That provision requires that state and local authorities act "within a reasonable period of time after a [tower siting] request is duly filed," that they set forth a valid basis for their decisions in writing, that they ensure that siting decisions do not discriminate among carriers, and that they allow judicial review within 30 days following their "failure to act."

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<sup>54</sup> Memorandum Opinion And Order And Declaratory Ruling, *Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC*, 23 FCC Rcd. 17444, ¶ 46 (2008) ("Verizon/Alltel Order"). Moreover, as AT&T explained in its June 8, 2009 Comments (at 16-17) in response to the Commission's Broadband Notice of Inquiry (GN Docket No. 09-51), it no longer makes sense to use "speed" as the only, or even, primary, means of defining whether a service qualifies as broadband. Speed is not the sole variant that distinguishes different broadband services or determines which service will best meet a consumer's needs. Depending on the context, factors such as cost, reliability, coverage, mobility, energy consumption, or security can be much more important than the throughput of a particular broadband network or service.

Unfortunately, Congress did not define “failure to act” or the “reasonable period” for action, and the Commission has not implemented those statutory commands with more specific rules. The Commission has a pending proceeding in which it is considering these issues, and it should promptly adopt authoritative constructions of the statutory phrases “reasonable period of time” and “failure to act,” which would eliminate the uncertainty that has led to wildly varied treatment of tower siting requests in different jurisdictions. AT&T supports the proposal of CTIA that these phrases be construed to require local authorities to take final action on a collocation application within 45 days and act on other applications for siting authority within 75 days from submission of the application. If a local authority does not act within those reasonable periods of time, the application should be deemed granted. In addition, the Commission should streamline its own tower authorization processes. The Commission must be an active partner with industry in efforts by providers to obtain approval for collocations and to get new towers on the ground with all necessary authorizations in place.

Second, the Commission ultimately must make more spectrum available for commercial use. While more quick and efficient tower siting would be helpful, significant improvements in service quality and innovation depend, in the end, on the amount of spectrum allocated to commercial uses by wireless carriers. Indeed, as carriers work to upgrade their networks to 4G and ultimately beyond, and as consumers respond to these upgrades with ever greater utilization of wireless services, the Commission will need to make additional spectrum available to accommodate these ever-increasing uses. Over the medium and longer term, increasing the spectrum available for carriers will be critical to ensuring that wireless carriers can continue to deliver the astounding array of innovative services and reduced prices that have benefited consumers over the past decades.

Third, the Commission needs to ensure greater regulatory certainty for wireless auction bidders, in the form of clear and secure spectrum rights. Carriers have spent *billions* of dollars on spectrum auctions. The industry needs reassurance that the Commission is committed to respecting the reasonable, investment-backed expectations of auction winners. The Commission’s actions have caused concerns in the past – as when it considered a change in the established rules for pre-existing AWS-1 auction winners, which would have exposed them to unanticipated interference long after the auction was complete. To create stability and to encourage continued investment, the Commission should create clear, “property-like” rights with respect to the spectrum it allocates by auction, and it should establish such rights *prior* to the relevant auction.

**B. Direct Evidence Of Competition In The Wireless Marketplace.**

As the Commission has previously emphasized, the structural characteristics of marketplaces “are desirable not as ends in themselves, but rather as a means of bringing tangible benefits to consumers such as lower prices, higher quality and greater choice of services,” and these “consumer outcomes are the ultimate test of effective competition.”<sup>55</sup> Thus, although the market structure analysis is a useful starting point and confirms that the wide open wireless marketplace is structured not only to promote but to compel rivalrous behavior, there is also overwhelming direct evidence that consumers are, in fact, benefiting from such rivalrous behavior. Here, the direct marketplace evidence of provider and consumer conduct and the core market statistics – decreasing price, increasing output, increased quality, and innovations – are dramatic and irrefutable proof of the competitiveness of wireless services.

**1. Provider Conduct Unambiguously Confirms That The Wireless Marketplace Is Effectively Competitive.**

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<sup>55</sup> *Thirteenth Report* ¶ 187.

The actions of wireless providers overwhelmingly demonstrate that the wireless marketplace is extraordinarily competitive. The Commission documented the price and non-price rivalry among wireless carriers in the *Thirteenth Report*,<sup>56</sup> and as detailed below and in CTIA's submissions that competition has only intensified in the past year.

Price competition is stronger than ever. Carriers continue to offer innovative pricing plans for voice and data services with more minutes and more bytes at the same or lower prices than were available in previous years. National carriers, regional and local carriers have lowered prices in the past year.<sup>57</sup> As CTIA has demonstrated, the per minute cost of calls for U.S. customers continues to be lower than those in other major industrial countries – in most cases, far lower. Further, carriers continue to offer better value text messaging plans that allow

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<sup>56</sup> *Id.* ¶ 111.

<sup>57</sup> See, e.g., Karle Bode, FierceWireless, *Verizon Lowers 3G Coverage Prices* (May 18, 2009) (“Verizon is bringing their 3G EVDO data plans more in line with the plans used for their new Wi-Fi/3G router. The cap on their \$40 tier will jump from 50 MB to 250 MB, while overages will decrease from 25 cents to 10 cents per megabyte. The cap for their \$60 tier remains at 5 GB per month, though overages are being reduced from 25 cents to 5 cents per megabyte.”), available at <http://www.dslreports.com/shownews/Verizon-Lowers-3G-Coverage-Prices-102495>. Larry Dignan, ZDNet, *AT&T matches Verizon (T-Mobile follows): Welcome to the wireless price wars* (Feb. 2008), available at <http://blogs.zdnet.com/BTL/?p=8046>; Chris Ziegler, Engadget iMmobile (April 15, 2009) (“T-Mobile’s always been known for aggressively pricing its plans against the other nationals, and that trend continues today with the introduction of a new \$89.99 myFaves family plan with 1800 minutes, the addition of 500 anytime minutes to its \$99.99 and \$129.99 family plans, a \$10 reduction in price on a couple other plans, and – perhaps the most relevant new feature for many customers – unlimited mobile-to-mobile on every individual plan \$49.99 and up.”), available at <http://www.engadgetmobile.com/2009/04/15/t-mobile-retools-offerings-adds-new-family-plan-and-more-unlimi/>; Dianne Morrison, *Regional Carrier MetroPCS To Stay Independent*, *moconews.net* (May 18, 2009) (“The regional carrier was one of the first prepaid wireless firms to offer a flat rate \$50 unlimited plan, that includes both voice and data, something that has resonated with consumers more careful with their cash. In the past year, its subscriber base has surged 37 percent to give it a total of 6.1 million customers, and has grown more than 20 percent each quarter since 2007”), available at <http://www.moconews.net/entry/419-regional-carrier-metropcs-to-stay-independent>; Gearlog, *MetroPCS: Wireless For The Recession* (Dec. 3, 2008), available at [http://www.gearlog.com/2008/12/metropcs\\_wireless\\_for\\_the\\_rece.php](http://www.gearlog.com/2008/12/metropcs_wireless_for_the_rece.php).

customers to buy large blocks or even unlimited text messages for a single price.<sup>58</sup> Carriers also continue to expand their bundled offerings. For example, Sprint introduced its “Simply Everything” plan, which offers a single price for unlimited national voice, text, web surfing, email and more.<sup>59</sup> Carriers also have continued to develop innovative pay-as-you-go calling plans, which have become increasingly popular during the past year.<sup>60</sup> As the Commission explained in its last report, this “continued rollout of differentiated pricing plans” for wireless voice services clearly “indicates a competitive marketplace.”<sup>61</sup> Nothing has changed in that regard.

Non-price rivalry has continued to intensify in the past year as well. According to a recent report, wireless companies have spent more on advertising than any other company in any other industry.<sup>62</sup> Carriers also have made significant investments to enhance service quality and customer service, producing the highest consumer satisfaction ratings ever.<sup>63</sup>

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<sup>58</sup> See, e.g., Karl Bode, Broadband DSLReports.com, *AT&T To Lower Unlimited Data & SMS Pricing* (Jan. 22, 2009) (“To match Verizon Wireless, AT&T will be reducing the price of their unlimited text and data plan from \$35 to \$30”), available at <http://www.broadbandreports.com/shownews/ATT-To-Lower-Unlimited-Data-SMS-Pricing-100415>.

<sup>59</sup> Paul Miller, Engadget, *Sprint debuts “Simply Everything” plan for \$99 a month* (Feb. 28, 2008) (“instead of just the unlimited voice offered by AT&T and Verizon, or the voice + SMS that T-Mobile has on offer, Sprint is undercutting the competition with a \$99 plan that includes voice, data, text, Sprint TV, GPS and more”), available at <http://www.engadget.com/2008/02/28/sprint-debuts-simply-everything-plan-for-99-a-month/>.

<sup>60</sup> Press Release, AT&T, *AT&T to Introduce GoPhone Three-Dollar per Day Unlimited Calling Option May 11* (May 8, 2009) <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26802>; Prepaid Reviews, *Cricket unveils unlimited pay as you go* (Oct. 2, 2008), available at <http://www.prepaidreviews.com/blog/cricket/cricket-unveils-unlimited-pay-as-you-go-35489/>.

<sup>61</sup> *Id.*

<sup>62</sup> Fierce Wireless, *Wireless Carriers Rank High In Ad Spending* (Aug. 14, 2008) (“Wireless companies are big spenders when it comes to advertising. Advertising Age recently ranked the leading national advertisers and AT&T, Verizon and Sprint were ranked No. 1, 2 and 3, respectively. AT&T spent \$2.2 billion on advertising in 2007, while Verizon Communications

But the big story this year is wireless broadband competition. Broadband networks allow providers to offer customers an extraordinary suite of services, applications, features and functionalities. Carriers today offer wireless broadband Internet, email, video services, music services, turn-by-turn direction services, visual voicemail, and countless other data services. Customers can choose among myriad data plans, depending on which plan provides them the most value for their needs,<sup>64</sup> ranging from email-only plans to full blown Internet access to service by the byte, megabyte, or gigabyte.

Robust carrier investment in a down economy is additional direct evidence of effective competition. As Former Vice President Al Gore aptly stated: “because of competition, we are seeing a continued pulse of investment to expand the capacity of [broadband] networks.”<sup>65</sup> AT&T alone will invest several billion on wireless infrastructure upgrades.<sup>66</sup> Carriers are actively preparing to deploy the next generation of 4G broadband networks. For AT&T, Verizon

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spent \$2.1 billion and Sprint spent \$1.16 billion. T-Mobile USA was ranked No. 12 and it spent a mere \$606 million”), available at [http://www.fiercewireless.com/story/wireless-carriers-rank-high-ad-spending/2008-08-14?utm\\_medium=rss&utm\\_source=rss&cmp-id=OTC-RSS-FW0](http://www.fiercewireless.com/story/wireless-carriers-rank-high-ad-spending/2008-08-14?utm_medium=rss&utm_source=rss&cmp-id=OTC-RSS-FW0).

<sup>63</sup> See, e.g., Press Release, AT&T, *AT&T Wins Billing & OSS World Excellence Award for Customer Care* (April 15, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdun-news&newsarticleid=26724> (“AT&T BusinessDirect® customer Web portal has been recognized with the Billing & OSS World 2009 Excellence Awards for Best Customer Care Solution. The annual awards recognize the leaders — vendors, service providers and integrators — in the development and deployment of billing and operations support systems (OSS) technologies and solutions.”).

<sup>64</sup> *Thirteenth Report* ¶ 119 (noting the “diversity of pricing options” available to wireless data customers).

<sup>65</sup> The transcript of this speech is available at <http://www.ctia.org/media/press/body.cfm/prid/1816>.

<sup>66</sup> See Press Release, AT&T, *AT&T to Invest More Than \$17 Billion in 2009 to Drive Economic Growth* (Mar. 10, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26597>.

and many regional and smaller carriers, that means the deployment of LTE technology, and these next generation networks are expected to be deployed nationally over the next few years.

However, demand for wireless broadband is so great and competition so fierce that competitors cannot wait for the roll out of these next generation networks to offer customers even better services. Consequently, carriers are also investing billions of dollars to upgrade existing network technologies to provide more reliable and faster service. For example, AT&T is continuing to invest in its existing wireless broadband network, by devoting more spectrum to its 3G network and by upgrading its network to HSPA 7.2 technology starting this year, which will be available to customers later this year.<sup>67</sup> This upgraded network platform could allow for theoretical peak speeds of 7.2 Mbps.<sup>68</sup>

In tandem with these increased broadband network capabilities, providers are also competing fiercely to offer the best choices of handsets and other wireless devices that can take advantage of the advanced network capabilities. Just a few years ago, handsets typically had black and white (or green and white) screens, clunky interfaces, hard to use features, low quality (or no) cameras, little (or no) interconnectivity with other devices, and limited capability to use those few third-party applications that were then available. Today, one can choose among dozens of handsets with appealing form factors, high-resolution color screens, elegant interfaces (often touch screen interfaces), simple to use features, high quality cameras (and in some cases video cameras), Bluetooth and Wi-Fi connectivity (which allows for broadband Internet at tens of thousands of “hot spots” throughout the country), and the ability to run tens of thousands of applications written by third parties. Simply put, wireless providers are competing to offer the

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<sup>67</sup> *See id.*

<sup>68</sup> Press Release, AT&T, *AT&T to Deliver 3G Mobile Broadband Speed Boost* (May 27, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26835>.

best suite of handsets and other devices for use on their networks, including an extraordinary variety of devices that have different operating systems, different capabilities, and different specialized and targeted uses (such as the Amazon Kindle, designed for downloading and reading books using wireless broadband).

Highly anticipated cutting-edge handsets are released seemingly by the day. The Palm “Pre” which was released this month, claims to offer “an innovative new WebOS that’s fully integrated with the internet” “[a]nd the new operating system is made up entirely of Web languages like HTML, CSS, and Java Script so developers and partners like Facebook and Amazon can quickly create new applications and content for the device.”<sup>69</sup> The next generation iPhone will be available this week, and HTC, Samsung, LG and others continue to roll out handset after handset with the latest cutting-edge features. Moreover, Google has announced that there will be between 18 and 20 new handsets featuring Google’s Android operating system by the end of this year,<sup>70</sup> and, as its senior director for mobile platforms explained, “the domestic [U.S.] market is so competitive that carriers and handset makers want to create highly distinctive versions of the Android phone to give themselves an edge.”<sup>71</sup>

Much of the quantum shift in the pace of handset innovation – and the associated dramatic consumer benefits – can be directly traced to voluntary exclusive distribution arrangements between individual carriers and handset manufacturers for certain new handset offerings. Exclusive handset distribution arrangements encourage collaboration that optimizes

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<sup>69</sup> *Best of 2009 CES*, Laptop Magazine, Jan. 10, 2009, available at <http://www.laptopmag.com/review/accessories/bestofces.aspx?pid=12>.

<sup>70</sup> Matt Richtel, *Google: Expect 18 Android Phones by Year’s End*, N.Y. Times, May 27, 2009, available at <http://bits.blogs.nytimes.com/2009/05/27/google-expect-18-android-phones-by-years-end>.

<sup>71</sup> *Id.*

handset performance and accelerates the delivery of next-generation features. They increase a carrier's incentives to make purchase commitments and to invest in promotions, network improvements and special training of sales staff. They lower manufacturer entry barriers and serve as a key tool to maintain brand value. And, as an important form of competition, they encourage other carriers and manufacturers to do better, by improving their own handset portfolios or the prices, features and other characteristics of their existing offerings.

There is no more dramatic example of an exclusive arrangement creating enormous benefits for all consumers than the iPhone. The popularity of the iPhone and its innovative features and applications has provoked an unprecedented competitive frenzy, palpably accelerating not only handset innovation but the pace of wireless broadband investment and applications development. The exclusive arrangement between AT&T and Apple is in no small part responsible for these spectacular public interest benefits – both for the close collaboration and enormous investment that deal made possible and for the competitive envy and activity it engendered when it proved successful.<sup>72</sup>

Wireless industry participants are likewise making enormous investments to support their own and third party development of applications that can be used with wireless handsets and that provide additional value to customers, especially those that use data services. For example, Apple, to ensure that third party developers populate its App Store with desirable applications, provides software development kits and support that allows independent programmers to develop

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<sup>72</sup> With the benefit of hindsight it is easy to view the iPhone as a great boon for AT&T and Apple; in fact, both companies risked a great deal. AT&T and Apple both invested heavily in bringing the iPhone to the market and risked very substantial sums on the device and its rollout, even though at the time there was no guarantee that the product would be a success. Of course, we now know that the iPhone was a success, and, today, there are myriad iPhone copy-cats and other handsets with significant technological advances as carriers and handset makers jockey for position.

third-party applications for the iPhone.<sup>73</sup> There are already more than 50,000 applications for the iPhone alone, resulting in more than one billion downloads in the first year of the App Store's existence. Although the App Store is perhaps the best known, it is far from the only source of third party applications for handsets. Every large carrier, many handset makers, many makers of operating systems, and numerous others have "applications stores" where customers can download applications and use them with their data services.<sup>74</sup>

Competition is also driving carriers to make their networks more "open" to devices and applications. AT&T's policies are an excellent example. AT&T has for years permitted customers to use their own compatible GSM wireless devices with AT&T's network, without having to purchase a device from AT&T.<sup>75</sup> Under its "Bring Your Own Device" program, customers can simply purchase a Subscriber Identity Module ("SIM" card) from AT&T, obtain a rate plan, and configure the device for voicemail, messaging and Internet browsing.<sup>76</sup> In addition, AT&T sells a wide variety of consumer wireless devices and accessories from the world's leading manufacturers, including Apple, Blackberry (RIM), HTC, LG, Motorola, Nokia, Option, Palm, Pantech, Samsung, Sierra Wireless, and Sony Ericsson.

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<sup>73</sup> *Thirteenth Report* ¶ 166.

<sup>74</sup> *See, e.g.*, Nokia Press Release, Ovi Store opens for business (May 26, 2009), available at <http://www.nokia.com/press/press-releases/showpressrelease?newsid=1317441>; Palm Press Release, Palm Unveils More webOS Details: Palm Media Sync, Twitter Integration, App Catalog (May 28, 2009), available at <http://investor.palm.com/releasedetail.cfm?ReleaseID=386488>; RIM Press Release, RIM Launches BlackBerry App World Users Able to Easily Discover and Download a Wide Range of Applications Directly From Their BlackBerry Smartphone (April 1, 2009), available at <http://press.rim.com/release.jsp?id=2223>.

<sup>75</sup> *See* <http://choice.att.com/flash/customersdevices.aspx> ("You've got the choice: either conveniently get a phone through AT&T for guaranteed worry-free functionality, or bring any GSM Phone and we'll connect it to our network").

<sup>76</sup> *See id.*

At the same time, AT&T's customers have virtually unlimited access to a mind-boggling array of applications that have been developed for their wireless devices. There are an extraordinary variety of devices that can be used with AT&T's network, and these devices utilize a wide variety of operating systems and environments, including Blackberry, Mac OS X Leopard (iPhone), Microsoft Windows Mobile, Palm OS, and Symbian, all of which support myriad applications that are readily available for download on the Internet. Applications developers do not need AT&T's permission to make their applications available on the Internet, and AT&T's customers do not need AT&T's permission to download those applications onto their devices.<sup>77</sup>

One of the numerous Internet websites from which AT&T customers can obtain applications is AT&T's own pioneering online applications store, called the MEdia Mall,<sup>78</sup> which is an applications store that AT&T has operated since 2004. To facilitate the creation of new applications, AT&T has a "Developer" tool on its website that makes AT&T's Universal Design guidelines available to developers to help them design applications that can be sold on AT&T's MEdia Mall (or elsewhere).<sup>79</sup> AT&T currently has more than 20,000 developers registered in its devCentral developer relations program (which was introduced in 2002 and was the first program of its kind by a major carrier), and AT&T collaborates with developers to

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<sup>77</sup> Customers can download and use any application that is compatible with the operating system used in the device they have chosen. Under AT&T's wireless terms of service, except for "uses that cause extreme network capacity issues and interference with the network," customers are not prohibited from using the applications that are compatible with their chosen device. *See* <http://www.wireless.att.com/cell-phone-service/legal/plan-terms.jsp>.

<sup>78</sup> *See* <http://choice.att.com/flash/customersapplications.aspx> & <http://mediamall.wireless.att.com/sf/storefront>.

<sup>79</sup> *See* <http://choice.att.com/developers/GettingStarted.aspx>; *see also* <http://choice.att.com/developers/CreateIt.aspx> ("Whether you are building a mobile web site or a downloadable application or even an application for the device's native operating system, we provide you with the tools and resources to help. In addition to the usual tools like SDKs, emulators, and custom APIs, AT&T offers dev support in the form of expert tutorials, web boards, webcasts and podcasts").

create applications and content for all of the world's major mobile operating systems. AT&T provides developers unparalleled resources and access to the information needed to develop virtually any type of application for virtually any platform. AT&T makes available software development kits (SDKs) from several "device and operating system manufacturers," "testing tools" for mobile applications, "simulators" for testing applications, "programming guides" with "in-depth technical discussion of different wireless technologies to help [developers] build and improve [their] wireless applications," "style guides" that "describe best practices and requirements for different AT&T distribution channels," white papers with "developer insights, recommendations, and technical information about key wireless development topics," and numerous other resources.<sup>80</sup> As a result, the MEdia Mall today offers more than 90,000 applications and other device content from more than 115 content providers.<sup>81</sup>

AT&T has also launched "AT&T Apps Beta," a special program that allows developers to test applications with customers and receive customer feedback during the development process.<sup>82</sup> This is the first program of its kind to be offered by any U.S. carrier. Through AT&T Apps Beta, customers can download trial versions of applications at no cost, and developers can test their ideas with AT&T customers and get direct feedback such as apps ratings, feature suggestions and identification of bugs. AT&T also operates an interactive community forum, which aggregates user-generated content, and offers tag clouds to indicate the most active

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<sup>80</sup> AT&T Developer Resources, available at <http://developer.att.com/developer/index.jsp?page=toolsTechOverview&id=800064&WT.svl=800064>.

<sup>81</sup> Press Release, AT&T, *AT&T to Deliver 3G Mobile Broadband Speed Boost* (May 27, 2009), available at <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26835>.

<sup>82</sup> See <http://appsbeta.wireless.att.com/login?id=choiceconsumer>.

discussions around various applications. AT&T permits developers to use AT&T Apps Beta to get targeted user input for applications they may have already launched broadly.<sup>83</sup>

But AT&T's approach is just one of many other competitive options available to customers. For example, another option available to customers in the wireless marketplace is the Google/Android model, which provides an operating system that purports to be open to any applications developer with no pre-certification process. This offers consumers a different, competing experience – one in which they bear greater risks related to quality and security.

There is also the 700 MHz C Block model, where consumers may use *any and all devices of their choosing* on the licensee's C Block network, regardless of their manufacturer. The C block licensee may *not disable features* on devices provided to customers *nor lock devices* so that they work only on the licensee's network; must allow devices to access *any and all*

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<sup>83</sup> Press Release, AT&T, AT&T Launches 'Apps Beta' Program to Advance Innovations in Applications, Issues Open Call to Developers (Apr. 2, 2009), *available at* <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26679> (“Our goal is to deepen the dialogue with developers and give customers a chance to tell us what works and what doesn't,” said David Christopher, chief marketing officer for AT&T Mobility and Consumer Markets. ‘We hope that by facilitating this level of collaboration between the developer community and early adopters, we'll see even more innovation as developers gain valuable customer insights that will ultimately benefit their long-term application development and marketing strategies’”). AT&T also operates other platforms from which consumers can obtain various applications and services. For example, AT&T operates a wireless Internet portal called MediaNet, which provides content from more than 50 different providers (including ESPN, CNN, music services, mail and messaging services, weather and travel services, financial services, movie times and dining services, and many similar services in Spanish), and which also works with more than a dozen aggregators who deliver off-portal content (such as ringtones, graphics, video) from more 500 different providers. <http://www.wireless.att.com/source/connect/medianet.aspx>. AT&T's wireless customers have many email platforms available, including Blackberry, Microsoft Direct Push, Mobile Email, and Xpress Mail, and AT&T also has the largest catalogue of mobile music in the industry and has more partnerships with digital music services than any other carrier, including Napster, eMusic, iTunes, XM Radio, MobiRadio, MobiVJ, VIP Access, Mspot's Remix, and Pandora.

*capabilities* of the licensee’s C Block network; and must ensure that devices the licensee provides to customers are *open to any and all applications*.<sup>84</sup>

With such a wide variety of models for consumers to choose from, there is no reason for the Government to homogenize the wireless marketplace by dictating that every single provider must adopt one model to the exclusion of all others. Forcing all wireless broadband offerings into a one-size fits-all model would only reduce competition and consumer choice.

The only such “any device/any application” requirement that the Commission has ever imposed in any context is the specific license condition on one block of 700 MHz spectrum – the C Block. The Commission recognized that this unique license condition goes far beyond the *Internet Policy Statement* principles, imposed it only on the C-Block so that it could “observe the real-world effects of such a requirement,” and flatly denied requests to extend the requirement even to other spectrum auctioned at the same time because of concern for “unanticipated drawbacks” from such an untested approach.<sup>85</sup>

The Commission’s decision to tread cautiously in this area – limiting open access requirements to the C Block – was a wise one. For one thing, there is no market failure warranting broader regulatory intervention. As noted, the wireless marketplace exhibits all the indicia of a vigorously competitive marketplace – rising output, falling prices, improving service quality, and aggressive capital investment – and there are dozens of providers, hundreds of

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<sup>84</sup> See 47 C.F.R. § 27.16(b), (e). See also *id.* § 27.16(b)(1)-(2) (establishing limited exception to open devices and applications requirements where “use would not be compliant with published technical standards reasonably necessary for the management or protection of the licensee’s network,” or “[a]s required to comply with statute or applicable government regulation.”).

<sup>85</sup> Second Report & Order, *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, 22 FCC Rcd. 15289, ¶¶ 196, 205 (2007) (“700 MHz Second Report and Order”).

devices, numerous competing operating systems, tens of thousands of applications and a host of different value propositions are all providing an incredible array of choices to consumers.<sup>86</sup>

All of these developments with regard to open networks and devices, as well as initiatives to optimize consumers' experience with respect to the myriad of options confronting them, are driven by and a reflection of intense competition in the wireless marketplace. Enabling customers to use the devices and access the services and features they want is not an option; it is an imperative for success in the marketplace. Thus, arguments that there is some form of market failure warranting openness requirements defy reality.

But apart from the lack of any need for Government intervention, the imposition on wireless networks of "openness" principles devised for *wireline* networks would impose significant social costs. There are critical differences between wireless and wireline networks – differences that wireless net neutrality proponents simply ignore. One is in the area of network management. Wireless providers cannot simply expand capacity at will to address congestion. To the contrary, wireless networks must be engineered and dynamically managed to address unique spectrum-based bandwidth constraints and the challenge of serving a diverse range of devices that support different functions. This process is all the more crucial and challenging

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<sup>86</sup> For example, as noted, AT&T's customers are free to choose any of a wide array of handsets with varying operating systems, features, functionalities, and prices, including, for example, handsets that support VoIP over AT&T's 3G network. AT&T supports and markets numerous Windows Mobile handsets (produced by Samsung, LG, HTC, Pantech, and Motorola), and any AT&T customer using these handsets can download and use Skype software to make Skype calls over AT&T's 3G network—which treats the Skype packets like other data packets, neither restricting nor prioritizing their delivery. See AT&T Wireless, PDAs and Smartphones – Data Only, <http://www.wireless.att.com/cell-phone-service/cell-phones/pda-phones-smartphones.jsp> (listing all available smartphones); Skype 2.5 for Windows Mobile, <http://www.skype.com/download/skype/windowsmobile> (offering full-featured Skype software usable on Windows Mobile). Consumers also may bring their own handsets, including those that are pre-loaded with Skype, and use those handsets on AT&T's 3G network.

given that voice and data services share the same bandwidth, and wireless networks must accommodate the shifting usage patterns of a mobile customer base. The failure of any wireless carrier to adequately manage its network – especially congestion caused by just a small percentage of especially heavy users – could degrade the quality of basic service (voice and data) experienced by the majority of consumers. To the extent net neutrality requirements would constrain carriers from properly managing their wireless networks, those requirements would thus harm most consumers.

Another difference between wireline and wireless networks is in the way products are delivered to customers. Specialized devices have long been a hallmark of the wireless customer experience. Some devices support Wi-Fi, but some do not; some support full motion video capture or playback, some do not; some support GPS location-based social networking applications and others do not; some, like the Amazon Kindle, are designed for only limited Internet functionality and do not even permit voice phone calls.<sup>87</sup>

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<sup>87</sup> See also Kim Poh Liaw, *Mednet to Offer Wireless Heart Monitoring with AT&T* (March 30, 2009) (“Mednet and AT&T has announced their partnership to provide cardiac monitoring service for doctors and patients remotely monitor heart arrhythmia through personal mobile devices”); <http://www.att.com/gen/press-room?pid=2575> (“AT&T and Customer Choices Fact Sheet” listing more than 100 manufacturers of AT&T-supported specialty devices, including taxi dispatch systems, wireless construction management systems, point of sale terminals, remote fiber inspection devices, vehicle security devices, dual mode wireless and landline phones, and devices for special needs consumers); Amol Sharma and Roger Cheng, Wall Street Journal, *Sprint Looks to Power Gadgets Beyond Cell Phones* (March 24, 2009) (Sprint “is now talking with companies such as GPS device maker Garmin Ltd., Eastman Kodak Co. and SanDisk Corp., which makes storage devices, about delivering wireless Internet service for their products”); Nilay Patel, Engadget, *T-Mobile Announces Tiny New “Embedded SIM” For Connected Devices* (April 23, 2009) (“T-Mobile’s . . . new SIMs are the size of a pinhead and made of silicon instead of plastic, which allows them to be coded at the factory and hard-mounted directly to a device. . . . Devices with the new SIMs are expected to be out and sending data over T-Mo’s network in as little as six months – the first is an energy meter from Echelon [a medical device] that should hit soon”);

This diversity of device-application combinations allows consumers to find the package that best suits their needs and their price point – and a great deal of the competition and innovation that drives the wireless broadband market results from providers competing to design device-service packages targeted at specific user groups. A classic example of this is the Amazon Kindle, which is offered in support of *one specific* wireless application: downloading and reading books and other print materials from Amazon’s online collection. With memory, a processor, and a 3G connection, the Kindle actually *could* be used to perform any Internet access function, but Amazon has offered the device with deliberately limited service (and terms of use that require users to agree to this limitation)<sup>88</sup> in order to serve a particular market need at a particular cost. It provides an alternative to the iPhone, for example, which similarly supports e-book reader applications but also includes broader Internet access—and accordingly requires users to pay monthly connectivity fees. A range of other specialty wireless devices exist that, like the Kindle, are optimized to support a specific application and address a particular consumer need.<sup>89</sup>

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<sup>88</sup> See Amazon Kindle: License Agreement and Terms of Use, § 2, [http://www.amazon.com/gp/help/customer/display.html/ref=kin2w\\_ddp?nodeId=200144530&#wireless](http://www.amazon.com/gp/help/customer/display.html/ref=kin2w_ddp?nodeId=200144530&#wireless) (“You agree you will use the wireless connectivity provided by Amazon only in connection with Services Amazon provides for the Device. You may not use the wireless connectivity for any other purpose”; “You may be charged a fee for wireless connectivity for your use of other wireless services on your Device, such as Web browsing and downloading of personal files, should you elect to use those services,” and Amazon reserves the right to change those fees at any time).

<sup>89</sup> See, e.g., AT&T, Press Release, *Mednet to Offer Wireless Heart Monitoring with AT&T* (Mar 27, 2009), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26659>; Amol Sharma and Roger Cheng, *Sprint Looks to Power Gadgets Beyond Cell Phones*, Wall Street Journal (Mar. 24, 2009), <http://online.wsj.com/article/SB123785070580819121.html> (reporting that Sprint “is now talking with companies such as GPS device maker Garmin Ltd., Eastman Kodak Co. and SanDisk Corp., which makes storage devices, about delivering wireless Internet service for their products”); Nilay Patel, *T-Mobile Announces Tiny New ‘Embedded SIM’ For Connected Devices*, Engadget Blog (Apr. 23, 2009), available at <http://www.engadget.com/2009/04/23/t-mobile-announces-tiny-new-embedded-sim-for-connected-devices/> (“T-Mobile’s . . . new SIMs are the size of a pinhead and made of silicon

Requiring every wireless device to support every application uniformly would eliminate the rich diversity and choice that characterizes the wireless marketplace today. For example, such a rule would absurdly force the Kindle off the shelves (or force Amazon to add monthly service fees) despite its popularity and unique value proposition.<sup>90</sup> More generally, mandating an open platform model would force many customers to forego the quality assurances they value, effectively degrading their wireless experience. Today, wireless providers aim to offer their customers seamless integration between their device, their operating system, the application they select, and their wireless connection. This provides end users with a reliable and predictable customer experience, as well as high-level security and reliability. That model of providing service contrasts with the wireline model, where users typically assemble their own total-service platforms – purchasing a device from one provider, virus and malware security software from another, the broadband connection from yet another – and where users bear full responsibility for troubleshooting the interactions between these and other components.

To be sure, as noted above, wireless customers who prefer a more “wired” experience can chose devices and operating systems that offer that experience. For example, the Google/Android platform provides users with a more “PC-like” experience, in which users are

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instead of plastic, which allows them to be coded at the factory and hard-mounted directly to a device. . . . Devices with the new SIMs are expected to be out and sending data over T-Mo’s network in as little as six months – the first is an energy meter from Echelon [a medical device] that should hit soon”); AT&T, Fact Sheet: AT&T and Consumer Choices (2008), <http://www.att.com/Common/merger/files/pdf/Wireless-choices-fs.pdf> (listing more than 100 manufacturers of AT&T-supported specialty devices, including taxi dispatch systems, wireless construction-management systems, point-of-sale terminals, remote fiber-inspection devices, vehicle security devices, dual-mode wireless and landline phones, and devices for special-needs consumers).

<sup>90</sup> See Johna Till Johnson, *What’s an ISP? (That’s Not a Trick Question)*, Network World (Nov. 24, 2008), <http://www.networkworld.com/columnists/2008/112408johnson.html> (“So if you support net neutrality, you’ll need to tell Amazon to close up shop, at least for the Kindle. (And I’ll probably have to come whack you with my now-useless book reader.)”).

free to run any application, at their own risk. But neither customers nor providers should be *forced* to adopt this do-it-yourself model, which may leave many customers facing risks and burdens they would rather avoid. It was recently suggested, for example, that Google’s “Open Source” Android operating system was vulnerable to applications that might allow hackers to take control of a user’s phone and, for example, snoop on the user’s browser history and web transactions.<sup>91</sup> Users may prefer the iPhone model, in which Apple has reviewed and approved the applications available on the App Store as being secure. And the issue is not just safety. In contrast to the models adopted by Google/Android and required for the C Block licensee, the iPhone model guarantees customers a certain level of quality and a certain customer experience. The degree to which customers value this was illustrated by the outcry that ensued when the offensive “Babysaker” application “slipped through the cracks” and appeared in the App Store for one day.<sup>92</sup> However much some users may choose the “Android” or “C Block” models, the availability of the more managed and customized iPhone option clearly *enhances* the consumer experience for many, and there is no public interest to be served by eliminating that option.<sup>93</sup>

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<sup>91</sup> See Samantha Rose Hunt, *Android: Browser So Vulnerable Users Urged Not To Use It*, TG Daily (Feb. 13, 2009), <http://www.tgdaily.com/content/view/41445/108> (“[A] security researcher presented a new vulnerability in Google’s mobile OS Android, which lets hackers take control of the phone’s web browser and other processes from a remote location”).

<sup>92</sup> See Jessica Mintz, *Apple Pulls Plug on ‘Baby Shaker’ iPhone Program After Outcry Online*, ABC News (Apr. 22, 2009), <http://i.abcnews.com/Technology/wireStory?id=7406406>. See also Gibson’s Blog, *Baby Shaker Slipup* (April 25, 2009), available at <http://www.gibsontang.com> (“The Android Market allows developers to have instant upload without any review process. So does that mean that offensive apps such as Baby Shaker or those in a similar vein will make it into the market? The answer is yes.”).

<sup>93</sup> Further, the Commission lacks authority to dictate to operating-system developers which functionalities, features, and content they must support, which APIs they must publish, and which applications they must approve. And any attempt by the Commission to regulate in that fashion would most certainly run afoul of the First Amendment.

In short, each device and operating system represents myriad trade-offs between network management, design specifications, and the types of customers that are targeted. An inflexible “openness” requirement would eliminate all of this innovation and disserve consumers. It matters little if this approach is prescriptive or enforced after the fact: Commission decisions on the “reasonableness” of particular aspects of these offerings would represent purely arbitrary second-guessing of network management and business judgment, leaving providers, manufacturers, and application developers uncertain about what, if any, offering might pass muster. It is hard to see what consumer interest could be served by deterring the development of the next Kindle or iPhone.

As noted, open-platform requirements *have* been imposed on the Upper 700 MHz C Block, but the Commission declined to impose such requirements on other spectrum, noting “we cannot rule out the possibility that *such a requirement may have unanticipated drawbacks as well.*”<sup>94</sup> To reverse course now, suddenly, would be utterly arbitrary, unfair to licensees that invested billions in 700 MHz and other spectrum on the understanding that they would be *unencumbered* by open-platform requirements, and would be in any event a hazardous experiment for all the reasons set forth above. And there is demonstrably no justification for the Commission to impose this experiment on a market that already is aggressively responding to consumers’ needs for wireless service, access to the Internet and to a range of applications and content, and customized devices and services. In this context, there would be little to be gained that providers do not already offer – and there would be much to lose.

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<sup>94</sup> *700 MHz Second Report and Order*, ¶ 205 (emphasis added); *see also id.* at ¶ 196 (“We conclude, however, that it would not serve the public interest to mandate, at this time, requirements for open platforms for devices and applications [even] for all unauktioned commercial 700 MHz spectrum”); 47 C.F.R. § 27.16.

## 2. Customer Behavior Also Unambiguously Shows That The Wireless Marketplace Is Effectively Competitive.

Customer conduct provides additional real world evidence that wireless markets are highly competitive. As the Commission has explained, “if enough consumers have the ability and propensity to switch service providers in response to an increase in price or other harmful conduct, then the provider will have an incentive to compete on price and non-price factors.”<sup>95</sup>

Here, customer actions speak for themselves. For the national carriers, churn rates have ranged from 1.2% to 4% per *month*, which means that between 15% and 40% of customers switch carriers or cancel service each year.<sup>96</sup> Clearly, customers are aware of their alternatives and they can and do respond to competitive offers. This high customer turnover is of paramount significance to carriers because it impinges on their profitability,<sup>97</sup> thereby increasing their incentives to offer competitive prices and services.

When assessing customer conduct, the Commission has also examined the extent to which customers have access to information about the availability and quality of competitive alternatives, and the extent to which customers are willing and able – without significant transaction costs – to switch to other carriers.<sup>98</sup> In today’s marketplace, consumers unquestionably have more information about competitive alternatives than they ever had previously, and transaction costs for switching are very low (often at or near zero).

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<sup>95</sup> *Thirteenth Report* ¶ 177.

<sup>96</sup> *Id.* ¶ 181. Similarly, a recent survey confirms that “9 percent of AT&T customers said they would switch carriers in the next six months, compared with 11 percent of Verizon customers.” Phil Goldstein, *Report: AT&T most likely to pick up switching subscribers*, Fierce Wireless, May 28, 2009, available at <http://www.fiercewireless.com/story/report-t-most-likely-pick-switching-subscribers/2009-05-28>.

<sup>97</sup> *Thirteenth Report* ¶ 181 (“Lowering churn improves profitability”).

<sup>98</sup> *Id.* ¶¶ 178-186.

The amount of information available to consumers about wireless carriers is unprecedented. Carriers themselves invest more each year in informing existing and potential customers about the features, performance pricing, and quality of their networks and services, and about how these characteristics compare with those of other networks.<sup>99</sup> Carriers provide this information through direct contact with existing and potential customers at retail stores or by telephone, through Internet web sites, and through national and local television, radio, newspaper, and magazine advertising campaigns. In this regard, AT&T and many other carriers are signatories to the CTIA Consumer Code for Wireless Service, which, among many other protections, guarantees customers the information they need to make informed choices. Third parties likewise have made businesses out of collecting and providing information about alternative providers to customers.<sup>100</sup> Indeed, entering the term “compare wireless carriers” into Google’s search engine produces hundreds of results providing expert reviews, customer reviews, and information about voice and data coverage, Internet speeds, pricing, early termination policies, future expansion plans, future handsets, and more.

It is also clear that switching costs are very low. The Commission’s number portability requirements allow consumers to keep their wireless telephone numbers,<sup>101</sup> and providers generally subsidize handsets purchases, making handsets available at very low cost and in some

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<sup>99</sup> Wireless providers spend more on advertising than companies in any other industry. Sue Marek, *Wireless Carriers Rank High In Ad Spending*, Fierce Wireless, Aug. 14, 2008, available at [http://www.fiercewireless.com/story/wireless-carriers-rank-high-ad-spending/2008-08-14?utm\\_medium=rss&utm\\_source=rss&cmp-id=OTC-RSS-FW0](http://www.fiercewireless.com/story/wireless-carriers-rank-high-ad-spending/2008-08-14?utm_medium=rss&utm_source=rss&cmp-id=OTC-RSS-FW0). See also *Thirteenth Report* ¶ 179 (finding that the wireless industry has responded to the demand for information “by launching various initiatives designed to educate consumers and help them make informed choices when purchasing wireless services”).

<sup>100</sup> *Accord Thirteenth Report* ¶ 178 (finding that the sources of third-party information available to consumers include publications, trade associations, marketing and consulting firms, and numerous web sites).

<sup>101</sup> *Id.* ¶¶ 182-184.

cases for free. To be sure, those subsidies necessitate the imposition of early termination fees, but for most national carriers those fees are less than \$200, and are now reduced on a pro rata basis for each month the customer stays with the carrier.<sup>102</sup> And, of course, these, pro rated fees do not apply to customers who do not purchase a subsidized handset from their carrier or who have already satisfied their contractual commitment. Nor do they apply to customers who purchase pay-as-you go plans.

**3. Market Performance Measures Show That the Wireless Marketplace Is Effectively Competitive, And Arbitrary Estimates Of Profitability Or ARPU Would Be Meaningless.**

As the Commission has emphasized, “consumer outcomes are the ultimate test of effective competition.”<sup>103</sup> Accordingly, the final economic indicators the Commission has previously examined are the underlying dynamics of the marketplace, as shown by “pricing levels and trends, subscriber growth and penetration, MOUs, innovation and diffusion of services, and quality of service.”<sup>104</sup> Over the past thirteen years, each and every one of these market performance metrics has provided powerful direct evidence of effective wireless competition: (1) *prices* have been falling for years and are among the lowest in the world;<sup>105</sup> (2)

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<sup>102</sup> *Accord id.* ¶¶ 185-186 (noting the increasing prevalence of pro-rated early termination fees).

<sup>103</sup> *Id.* ¶ 187.

<sup>104</sup> *Id.*

<sup>105</sup> *Id.* ¶ 189 (“Of the three indicators of mobile telephone pricing examined here, all of the indicators show that the cost of mobile telephone service fell in 2007”); *id.* ¶ 192 (revenue per minute “has fallen from \$0.47 in December of 1994 to \$0.06 in December of 2007, which represents a decline of 87 percent”); *id.* ¶ 194 (“the price per text message dropped again in 2007 to \$0.025, about one cent [or nearly one third] lower than the price per text message in 2006”); *id.* ¶ 111 (“In the mobile telephone sector, we observe independent pricing behavior, in the form of continued experimentation with varying pricing levels and structures, for varying service packages, with various handsets and policies on handset pricing”); *id.* ¶ 112 (“[t]he major development since the release of the *Twelfth Report* is the introduction of unlimited national flat-rate calling plans across the four nationwide operators”); *id.* ¶ 218 (“mobile calls continue to be significantly less expensive on a per minute basis in the United States than in Western Europe

*output* is increasing substantially in every way (*e.g.*, subscribers, minutes of use, monthly text volumes, broadband usage, multimedia messaging, number of services and features)<sup>106</sup> (3) *quality* is increasing,<sup>107</sup> and (4) the industry is *investing* billions in upgrades, expansions and innovations.<sup>108</sup> As CTIA demonstrates in detail, all of those trends are continuing (and some cases accelerating) – for example, there are now 270 million wireless subscribers in the United States, in 2008 they used more than 2.2 *trillion* minutes (a huge increase from 2007),<sup>109</sup> and U.S. wireless prices are much lower than in any other major industrialized country in the world.<sup>110</sup>

In addition to these commonly employed economic indicators measures, the Commission asks whether it should analyze carrier “profits” and how it should use “Average Revenue Per

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and Japan”); *id.* ¶ 219 (average revenue per minute in U.S. is “less than one-third of the European average” and one fourth of revenue per minute in Japan).

<sup>106</sup> *Id.* ¶ 197 (“the total mobile telephone subscriber base has increased 23 percent in the last two years”); *id.* ¶ 201 (“[t]he percentage of U.S. mobile telephone subscribers that uses their mobile phone for data services continued to rise in the past year”); *id.* ¶ 206 (“the number of U.S. mobile subscribers with 3G enabled devices grew to 64.2 million in mid-2008, up by 80 percent from 35.65 million in mid-2007”); *id.* ¶ 208 (“[w]ireless subscribers continue to increase the amount of time they communicate using their wireless phones”); *id.* ¶ 210 (“[f]or 2007 as a whole, total reported text/SMS traffic volume rose to more than 362 billion messages, more than double the total of more than 158 billion messages reported in 2006”); *id.* (“the volume of photo messaging and other multimedia messaging services also has continued to grow”); *id.* ¶ 164 (“Providers exhibit competitive rivalry with respect to mobile data services by introducing new mobile data offerings, responding to such innovations with rival offerings and differentiating their mobile data offerings from those of rivals”).

<sup>107</sup> *Id.* ¶ 214 (“wireless call quality problems declined for three consecutive reporting periods, reaching the lowest levels in the five-year history of the study”); *id.* ¶ 159 (discussing upgrades by carriers to “improve the coverage, capacity, and capabilities of their networks”).

<sup>108</sup> *Id.* ¶ 2 (wireless providers “have continued to deploy mobile broadband networks”); *id.* (listing multiple “[n]ew and innovative mobile services and devices launched during the past year”); *id.* ¶ 155 (describing capital expenditures by wireless carriers to “expand and improve the geographic coverage of networks, increase the capacity of existing networks so they can serve more customers, and improve the capabilities of networks (by allowing higher data transmission speeds, for example)” totaling approximately \$20 billion annually).

<sup>109</sup> *CTIA Study* at 4, 9.

<sup>110</sup> *Id.* at 3, 9; *see also Thirteenth Report*, ¶¶ 218-219.

Unit (“ARPU”) as a metric in its analysis.”<sup>111</sup> As explained below, the former is singularly unreliable for assessing competition and should not be used, and the latter can be informative only through analysis that accounts for the remarkable increases in consumption that have such substantial impacts on wireless ARPU.

“*Profits.*” The *Notice* asks whether the Commission’s effective competition analysis would be advanced by examining carrier profits. As one prominent economics professor has explained: “The most important . . . misconception[] is to believe the following argument: Economic analysis shows that economic profits . . . are zero under competition. Hence . . . profitable firms must have market power. This is a fundamental misunderstanding of basic economic principles.”<sup>112</sup>

In fact, the Commission recognized this fundamental point in its very first annual wireless report (*First Report* ¶ 78). There, it acknowledged that the existence of profits would not indicate a failure of effective competition. As the Commission explained, “growth industries tend to have higher profits,” and “growth industries need cash from high profits to fund investment in additional plant and equipment.” *Id.* The Commission recognized that it had no way even to measure economic profits, noted that accounting profits varied widely and were, in any event consistent with growth and reinvestment, and it has never given any serious consideration to profit metrics in any subsequent report. Of course, wireless remains a growth industry, as the competitive data dramatically confirm, and thus “high” profits even if they could be documented through any economically meaningful metric would neither be unexpected or of any competitive concern. Today, even more so than in 1995, wireless firms are faced with

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<sup>111</sup> *Notice* at 11-12.

<sup>112</sup> Franklin M. Fisher, *Economic Analysis And “Bright-Line” Tests*, J. of Competition L. & Econ., at 139 (2008).

enormous capital demands as they prepare to invest billions of dollars in 3G and 4G infrastructure developments.

In all events, none of the eight metrics proposed in the *Notice* would provide any meaningful measure of “profits.”<sup>113</sup> As the *Notice* correctly points out, a firm can be said to earn “abnormal profits” in any economically meaningful sense only if its profits exceed relevant *economic* costs over the full life of its assets.<sup>114</sup> The only one of the eight metrics proposed by the Commission that is even theoretically based on economic costs is the Lerner Index, the difference between price and marginal cost as a fraction of price, or  $(p-mc)/p$ .

Economists and the Commission have long known that the Lerner Index is not informative where, as here, the marketplace is characterized by high fixed and sunk costs with scale economies. In such industries, firms *must* set prices well above marginal cost to recover their large fixed and sunk investments and to avoid bankruptcy.<sup>115</sup> Consequently, the Lerner

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<sup>113</sup> “The Bureau proposes using accounting data from the Securities and Exchange Commission [(“SEC”)] filings of publicly-traded CMRS providers to examine profitability measures in the CMRS industry” and asks which of eight alternative proposed methods of measuring profitability using such accounting data “is the most appropriate for analyzing profitability of wireless telecommunications firms and providing insight into whether there is effective competition.” *Notice* at 12.

<sup>114</sup> See *Notice* at 12 & n.30. See also, e.g., Roger LeRoy Miller & Raymond P.H. Fisher, *Microeconomics, Price Theory In Practice*, at 386 (1996) (“it is economic profits, not accounting profits, that matter”); Franklin M. Fisher and John J. McGowan, *Firm Interdependence in Oligopolistic Markets*, 73 *Am. Econ. Rev.* 82, 82 (1983) (“the *economic* rate of return is the only correct measure of profit rate for purposes of economic analysis”) (emphasis added); Maddala & Miller, *Microeconomics, Theory And Applications*, at 292 (1989) (“A zero economic profit for all firms does not imply that *accounting profit* will be 0 or even equal for all firms”); see also Order & Notice of Proposed Rulemaking, *Special Access Rates for Price Cap Local Exchange Carriers*, 20 FCC Rcd. 1994, ¶ 61 (2005) (“The aim of price cap regulation is rates that approximate those that a competitive firm would charge, and a competitive firm makes decisions based on economic, not accounting rates of return”).

<sup>115</sup> See also Alan J. Daskin & Lawrence Wu, *Observations On The Multiple Dimensions Of Market Power*, 19 *Antitrust ABA* 53, 55 (2005) (“In some cases, the technology of production or the nature of costs precludes sustainable pricing at marginal cost” because “although the firm *could* set the price equal to marginal cost, it would lose money by doing so. . . . ‘The industries

Index will, by definition, *always* be high in such industries, even when the industry is highly competitive.<sup>116</sup> Economists therefore have sharply criticized the use of any “price-equals-marginal-cost standard” as a basis for regulating industries characterized by large scale economies as “tantamount to a requirement that every firm with scale economies, no matter how competitive the market, commit hara-kiri in order for its prices to be deemed ‘competitive’.”<sup>117</sup>

The Commission itself has cautioned against relying on the Lerner Index in network industries: “[S]tandard indicators of market power rooted in the measurement of unit price-cost margins, such as the Lerner Index, are particularly difficult to interpret if the cost structure of the industry is characterized by large fixed costs and economies of scale.”<sup>118</sup> For example, “the cost structure of the communications satellite industry is marked by the pervasive fixed and sunk costs and economies of density and scale implied by the large investments in both space and

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that are the hallmark of the “new economy” are characterized by a special cost structure. From software to semiconductors, digital entertainment to biotechnology, and innovative fields more generally, the standard cost pattern entails such outlays that are large and must be incurred over and over again, but the marginal cost—the cost of serving an additional customer – is virtually negligible.”).

<sup>116</sup> See, e.g., Louis Kaplow & Carl Shapiro, *Handbook of Law and Economics, Antitrust* (2007) (showing mathematically that the Lerner Index necessarily will be high for competitive industries with high fixed costs relative to marginal costs).

<sup>117</sup> See, e.g., William J. Baumol & Daniel G. Swanson, *The New Economy and Ubiquitous Competitive Price Discrimination: Identifying Defensible Criteria of Market Power*, 70 *Antitrust L.J.* 661, 682 (2003); see also *id.* at 668 (“Since marginal cost is the added (variable) cost incurred by the supply of one additional unit of output, then by definition marginal cost does not include fixed or sunk costs, because neither of these costs is variable. Hence, a price equal to marginal cost covers only variable costs and makes absolutely no contribution to recovery of either fixed or sunk costs. Such a price is clearly a recipe for insolvency. Unless voluntary suicide is considered a necessary requirement of absence of market power, the failure of firms with scale economies to charge the prices of perfectly competitive markets cannot be deemed to constitute proof of such power.”). See also Daskin & Wu, *Observations On The Multiple Dimensions Of Market Power*, 19 *Antitrust ABA* 53, 55 (2005).

<sup>118</sup> Second Report, *Second Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services*, 23 *FCC Rcd.* 15170, ¶ 80 (2008).

ground segments. As a result, it is expected that marginal cost in both the short and long run will fall below average cost for significant ranges of output. It is reasonable to expect, therefore, that substantial markups over the marginal cost of production will be observed in the industry.”<sup>119</sup>

Moreover, the Lerner Index could not be accurately computed for the wireless industry even if it were relevant. To calculate it, it is necessary to know each firm’s economic marginal cost and price, neither of which can be practically computed. There is no single “price” for wireless service that could be plugged into the Lerner Index formula. Rather, the wireless industry is characterized by myriad prices for many different products and services. There are many different prices for voice plans, from pay-as-you go plans (per minute prices) to block minute plans (*e.g.*, 450 minutes for \$40), to unlimited voice plans. There are multiple data plans for various groups of devices, including multiple Blackberry data plans, iPhone data plans, other smartphone data plans, and non-smartphone data plans. There are also prices for video, music, GPS, applications, and numerous other wireless services and applications. Moreover, prices of each of these products and services – or bundles of these products and services – change frequently in response to new technology, consumer preferences, competition, and other factors.

Nor is it feasible to compute the “marginal cost” for these services. Wireless networks provide many services, and these services are provided using common facilities and operations and any attempt to allocate cost to any particular service would be inherently arbitrary. Moreover, the marginal cost of rendering service varies for different geographic locations. Marginal costs in the wireless industry also change rapidly over time, with changes in technology and other factors. *Cf.* Michael S. McFalls, FTC, *The Role and Assessment of Classical Market Power In Joint Venture Analysis: Ch. III, How Courts And Agencies Evaluate*

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<sup>119</sup> *Id.* ¶ 81. *See also id.* ¶ 90 & n.89.

*Market Power* (Oct. 1997), available at <http://www.ftc.gov/opp/jointvent/classic3.shtm> (“[t]he most significant practical obstacle to broader application of the Lerner Index is determining the firm’s marginal cost of production at any given point in time. Without a measurement or reasonable estimate of marginal cost, the ratio is incalculable. Moreover, exogenous economic factors, such as shifts in consumer demand or the cost of inputs, could result in dramatic and misleading changes”). In short, any attempt accurately to estimate the *economic* costs of wireless service, and to allocate those costs appropriately to different services, would be futile.

The remaining seven proposals rely on *accounting* profits, not economic profits, and it is well settled that accounting profits are not valid proxies for economic profits.<sup>120</sup> The Commission and its staff have thus expressly rejected arguments that high accounting profits earned by CMRS carriers indicate market power.<sup>121</sup> Moreover, at least some of the accounting

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<sup>120</sup> Franklin M. Fisher and John J. McGowan, *Firm Interdependence in Oligopolistic Markets*, 73 *Am. Econ. Rev.* 82, 82 (1983) (“accounting rates of return, even if properly and consistently measured, provide no information about economic rates of return.”); *see also* Franklin M. Fisher, *Economic Analysis And “Bright-Line” Tests*, *J. of Competition L. & Econ.*, 129, 139 (2008) (A “fatal misconception is that accounting rates of return can be used to measure economic rates of return, so that a persistent high accounting rate of return indicates a high economic rate (and hence non-competitive profits). . . . [But] accounting rates of return bear almost no necessary relation to true economic rates of return. This has been known for more than 20 years”); William F. Long & David Ravenscraft, Comment, *Misuses of Accounting Rates of Return*, 74 *Am. Econ. Rev.* 494 (1984); Stephen Martin, Comment, *Misuses of Accounting Rates of Return*, 74 *Am. Econ. Rev.* 501 (1984).

<sup>121</sup> Report & Order, *Petition of the People of the State of California and the Public Utilities Commission of the State of California To Retain Regulatory Authority over Intrastate Cellular Service Rates*, 10 *FCC Rcd.* 7486, ¶ 137 (1995) (although “most [CMRS] carriers experienced a point when their accounting rate of return might be viewed as high yet, as a financial investment, their operations yielded no return because most or all of that return was reinvested to support expansion [and] [e]ven in the largest markets, in certain years increases in net plant were substantially above after-tax operating profits”); *see also, e.g.*, Kieth S. Brown, FCC, *A Survival Analysis of Cable Networks*, 2004 *FCC LEXIS* 7110, \*5 (Dec. 2004) (discussing the “the virtual impossibility and high likelihood of error when researchers try to infer economic profits from observed accounting profits, so that using profit and revenue data may not be desirable”); Notice of Inquiry, *Competition, Rate Deregulation and the Commission’s Policies Relating to the Provision of Cable Television Service*, 5 *FCC Rcd.* 362, ¶ 20 (1989) (“Accounting profits . . . may

profit measures proposed in the *Notice* would be exceedingly difficult to compute.<sup>122</sup> Indeed, history shows that whenever the Commission attempts to determine a firm’s “profits,” the resulting proceeding is extremely contentious, difficult, and ultimately arbitrary. The Commission should not even start down that path, because the profit metrics have nothing whatsoever to do with whether there is “effective competition” in this marketplace.

*ARPU*. As detailed above, it is indisputable that consumers continue to pay far less for far more wireless functionality each year. Average per minute voice prices continue to fall dramatically and many customers now obtain service under unlimited voice plans for a fixed monthly fee. The average price customers pay for text messages has likewise decreased substantially, and, here too, many consumers now purchase under unlimited plans. And data plan prices are falling even as the speed and functionalities provided to customers expand exponentially.

As the Commission has previously recognized, however, “ARPU” – the average revenue received by a carrier *per customer* – can mask these and other substantial price declines, because it is directly impacted by the *quantity* of service customers purchase. As consumers purchase new services and consume more of existing services – a natural response to the price declines in

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not provide an accurate measure of the presence or absence of monopoly profits. Differences in accounting practices among firms and the variability of profits over the business cycle limit the usefulness of these data. Accounting profits of a cable system vary over time, for example, because a system incurs heavy initial costs that may not be recovered until well into the franchise term, at which time the system may upgrade, further affecting the system’s profits.”).

<sup>122</sup> For example, the *Notice* (at 12) proposes to “compar[e] the return on equity with the cost of equity or the weighted average cost of capital.” These values have never been computed for the wireless industry. When regulators have sought to compute these values in other contexts, it quickly became apparent that computing such values requires significant assumptions, virtually all of which are the subject of hot debate among economists and financial experts. Consequently, regulators often found themselves mired in months- or even years-long proceedings consisting of thousands of pages of expert analysis, data submissions, briefing, and, often, live hearings, before they were forced ultimately to adopt only second-best compromise solutions that everyone agreed were flawed.

an intensely competitive marketplace – their average monthly payments may go up even as prices are rapidly falling. For example, increases in ARPU could merely indicate increased usage of voice or data services, expansion by consumers of the wireless services they purchase, or increased application, ringtone, video or music purchases. Accordingly, it would be flatly inappropriate to infer from ARPU increases that competition is ineffective or that prices are rising.

Wireless customers today purchase many different services from wireless carriers, not just voice, and wireless carriers are constantly adding to their suite of wireless services. And it is well established that consumers are rapidly expanding both their use of existing wireless services and their purchases of additional services.<sup>123</sup> As it happens, even with this incredible expansion in consumption of wireless services, the ARPU metric of customers' total monthly bills has remained essentially flat since 2003, actually *falling* more than 12 percent in real, inflation-adjusted terms. These ARPU statistics show that customers are receiving more (and better) services for the same (less, after adjusting for inflation) money.<sup>124</sup> Thus, when properly analyzed to reflect increases in consumption, wireless ARPU figures provide still further confirmation that the wireless marketplace is effectively competitive.

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<sup>123</sup> *Thirteenth Report ¶¶* 193-195 (noting 50 percent increase in voice minutes of use and substantial increases in data usage between 2003 and 2007).

<sup>124</sup> Previous data collected by the Commission show that from 1993 through 2007, ARPU fell from \$61.49 to \$49.79, notwithstanding that customers in 2007 purchased far more minutes than in 1993 (769 minutes vs. 140 minutes), and used those minutes on much better and more ubiquitous networks than in 1993, and that they also obtained text messaging, Internet, email, and myriad other services that did not even exist in 1993.

## CONCLUSION

For the foregoing reasons, the Commission should reaffirm that wireless markets are intensely competitive and take the limited action to further reduce barriers to competition discussed herein.

Respectfully Submitted,

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