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

In the Matter of	)	
	)	
Wireless Telecommunications Bureau	)	
Seeks Comment On the State of Mobile	)	
Wireless Competition	)	WT Docket No. 10-133
	)	

COMMENTS OF CTIA-THE WIRELESS ASSOCIATION®

Michael Altschul
Senior Vice President and General Counsel

Christopher Guttman-McCabe
Vice President, Regulatory Affairs

Robert F. Roche, Ph.D.
Vice President, Research

Brian M. Josef
Director, Regulatory Affairs

CTIA-THE WIRELESS ASSOCIATION®
1400 Sixteenth Street, NW
Suite 600
Washington, D.C. 20036
(202) 785-0081

Dated: July 30, 2010

EXECUTIVE SUMMARY

The wireless marketplace has been, and remains, vibrantly competitive. The wireless ecosystem functions as a virtuous cycle, with new spectrum fueling the construction of new advanced networks, new networks stimulating the development of innovative products and devices, new devices featuring new capabilities made possible by more sophisticated operating systems motivating the creation of more applications and uses, and new uses creating increased consumer adoption and capacity demand. This cycle, driven by competitive forces, has provided incredible dividends for the American public, who enjoy some of the most extensive, least expensive, and most advanced mobile services in the world. The mobile ecosystem, and the consumer benefits it supplies, have flourished in the past, and continue to flourish today, because the Commission has recognized that competitive forces can discipline actors more effectively, and more efficiently, than inflexible regulation ever could.

A rational evaluation of the wireless marketplace demonstrates conclusively that effective competition exists. Major market indicators confirm that robust competition and immense consumer value and choice characterize the wireless ecosystem, including:

- capital expenditures and network investments
- number of competitors in each sector and relative market shares
- average minutes of use
- advertising expenditures
- subscribership levels
- number of devices manufactured for the U.S. market
- operating system choices
- level of application development
- infrastructure deployments
- consumer choice in calling plans, data plans, and other service offerings
- network coverage
- pricing trends
- enhancements in service policies, customer care, and transparency.

CTIA's key indicators for 2009, in fact, show competition intensifying in each segment of the wireless virtuous cycle:

- Wireless providers continue to invest considerably in, build out, and upgrade their networks to better compete on network quality. By the end of 2009, U.S. wireless carriers' cumulative capital expenditures totaled more than $285 billion, an increase of more than $20 billion from year-end 2008 despite the current recession.

- The number of 3G wireless subscribers continues to grow: there were an estimated 103 million unique 3G wireless subscribers and more than 122 million total 3G wireless subscriptions at the end of 2009.

- Driven by competitive forces, U.S. carriers have made substantial commitments to the deployment of 4G technologies, including both WiMAX and LTE. The commitment to advanced technology is also demonstrated by the fact that, while the U.S. accounts for only 6 percent of the total world's wireless subscribers, the U.S. has more than 21 percent of the world's 3G subscribers, more than are found in the five largest European countries combined.

- At least 33 companies manufacture more than 630 unique devices for the U.S. market. Significantly, almost all of the hottest and most innovative devices are launched in the United States first, including the Apple iPhone, iPhone 3G, iPhone 3GS and iPhone 4; Apple iPad; Google G1; Motorola Droid and Droid X; MyTouch and Nexus One; Blackberry Storm, Bold, Pearl, Tour and Curve 8900; Samsung Instinct; Palm Pre and Pixi; Amazon Kindle; Barnes & Noble Nook, and the Incredible and EVO 4G from HTC.

- Competition among sophisticated operating system capabilities drives the push for new and innovative services and applications. The number of companies producing independent operating systems for mobile wireless devices has blossomed to at least 11, and, of note, none of these leading systems is owned by a mobile wireless carrier.

- Competition in the wireless ecosystem fuels the development of applications and promotes network openness. As of the end of 2009, U.S. consumers had access to slightly over 130,000 different apps. As of today, that number (conservatively) is well above 300,000, with the number increasing daily.

- The virtuous cycle of the wireless ecosystem has driven consumption of and demand for wireless services. As of December 31, 2009, America's more than 285.6 million active wireless subscribers generated more than 2.2 trillion minutes of use ("MOU"), 1.563 trillion text messages, and 35 billion MMS messages in 2009, all of which represent increases over 2008.

The virtuous cycle of mobile wireless competition has reaped considerable benefits for American consumers. Not only do U.S. consumers enjoy a wide array of choice in service providers, wireless providers continue to develop and revise calling plans to meet consumers' needs. Competition has also resulted in carriers, without any regulatory mandate, adopting and enhancing consumer friendly policies and practices.

As a result of this remarkable competition, the U.S. wireless marketplace leads the world in efficiency, competition, and value for consumers. The U.S. wireless market is – without question – the most competitive market in the world, with the lowest concentration among the 26 major OECD countries. The U.S. average monthly MOUs continue to rank first of the OECD countries. Not only does the U.S. lead in wireless investment, it also leads the world in mobile broadband deployment and adoption. Thus, by any measure, the U.S. is the world leader in wireless communications.

As the FCC embarks on the process of developing its *15th Annual Report* on competition in the wireless market, it has solicited not only data, but also comment on whether the *14th Report*, which changed directions in many respects, should serve as a basis for future reports. As discussed below, the *14th Report* is flawed in that it did not—as required by statute—reach a conclusion that the wireless marketplace is subject to effective competition. In reality, the Commission routinely makes determinations of effective competition in other complex situations, and the data provided in the report provides a clear and convincing case for a finding of effective competition. Based on the statutory mandate and the evidence shown below, CTIA believes the *15th Report* must return to making a finding of effective competition.

CTIA also believes the *14th Report* contains other significant, and material, factual and methodological errors that must not be perpetuated in future reports. For example, the *14th Report:*

- Incorrectly suggests that wireless industry investment is declining, when in fact the data used by the report does not capture all relevant investment, including new greenfield builds and spectrum acquisition;
- Skews statistics regarding industry concentration, reporting, among other things, a significant increase in market concentration without explaining that the majority of that increase occurred in years well prior to the study period of the report; and
- Unjustifiably and irrationally casts doubt on the accuracy of carrier coverage data.

The *14th Report*, and other related material recently used by the Commission, do not appear to report data in an objective manner and fail to provide access to sufficient underlying materials to verify what the agency has concluded. These flaws must not be repeated in the *15th Report*.

CTIA believes that the intense competition in the wireless ecosystem is evident through a wide variety of objective metrics. CTIA urges the FCC, as it considers its *15th Report* on wireless competition, to follow the facts. As shown herein, the wireless industry has been, and remains, one of the most competitive sectors in the U.S. economy, and clearly should be determined to be subject to effective competition.

TABLE OF CONTENTS

Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Wireless Telecommunications Bureau	)	WT Docket No. 10-133
Seeks Comment On the State of Mobile	)	
Wireless Competition	)	
	)	

COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®

CTIA – The Wireless Association® ("CTIA") hereby submits the following comments in response to the June 30, 2010 *Public Notice* by the Federal Communications Commission ("Commission" or "FCC") requesting input and data on mobile wireless competition for the Fifteenth Annual Report ("*15th Report*") on the state of competition in mobile wireless, including CMRS.[1] In these comments, CTIA highlights data collected via its carrier surveys and third parties that prove the flourishing competition in the wireless market and the virtuous cycle of innovation and mobile broadband growth spurred by that competition. As a result of intense competition in the wireless ecosystem consisting of wireless carriers, infrastructure suppliers, wireless device manufacturers, operating system providers, and application developers, the data demonstrates that the United States leads the world in the provision of mobile services, and the Commission should reinstate its long held but recently abandoned finding that there is effective competition in the U.S. wireless market.

[1] Wireless Telecommunications Bureau Seeks Comment on the State of Mobile Wireless Competition, *Public Notice*, WT Docket No. 10-133 (June 30, 2010) ("*Public Notice*").

While the *Public Notice* posits that the Fourteenth Competition Report ("*14th Report*")[2] should serve as the basis for the *15th Report*, there were substantial problems with the Commission's *14th Report*—documented herein—that must not be perpetuated. These problems must be addressed, including significant factual and methodological misstatements.

I. INTRODUCTION AND SUMMARY

In its *Public Notice*, the Commission solicits "input and data on mobile wireless competition for the Federal Communications Commission's (Commission) Fifteenth Annual Report on the State of Competition in Mobile Wireless, including Commercial Mobile Radio Services."[3] As detailed in the instant comments, the Commission's analysis of the intensely competitive U.S. wireless industry for the *15th Report* reveals that every major market indicator confirms the robust competition and immense consumer value and choice stemming from the mobile wireless ecosystem, including:

- capital expenditures and network investments
- number of competitors in each sector and relative market shares
- average minutes of use
- advertising expenditures
- subscribership levels
- number of devices manufactured for the U.S. market
- operating system choices
- level of application development
- infrastructure deployments
- consumer choice in calling plans, data plans, and other service offerings
- network coverage

---

[2] Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Radio Services, WT Docket No. 09-66, *Fourteenth Report*, FCC 10-81 at 11 (rel. May 20, 2010) ("*14th Report*").

[3] *Public Notice* at 1. The FCC is required to provide such reports on an annual basis to Congress. *See* 47 U.S.C. § 332(c)(1)(C).

- pricing trends
- enhancements in service policies, customer care, and transparency

As CTIA demonstrates in these Comments, the market indicators for 2009 demonstrate even more robust competition than last year. Thus, the *15th Report* should reinstate the finding of effective competition.

The *Public Notice* not only requests "information and insights on competition across the mobile wireless ecosystem using [the framework on the *14th Report*]," but also asks "parties to comment on whether the framework used in the Fourteenth Report was adequate for analyzing mobile wireless competition, or whether changes should be made for the Fifteenth Report."[4] In such regards, CTIA commends the Commission's effort to be "data driven" and "transparent," but the core appeal of these concepts is the idea that regulatory policies will be more equitable and achieve better results if those policies can be tied to objective facts. To achieve the promise of "data driven" and transparent decision making, the data itself must be capable of being examined and verified. Unfortunately, the information that has been released is insufficient to verify the data actually used in the *14th Report*. Yet, it is quite apparent that there are factual or methodological errors in that report.[5] Further, the *14th Report* uses data selectively with the result that the perception of the data is no longer accurate or unbiased.

Finally, although the Commission indicated in the *14th Report* that it was taking an expanded approach to evaluating wireless competition, that expansion should not have

---

[4] *Public Notice* at 2.

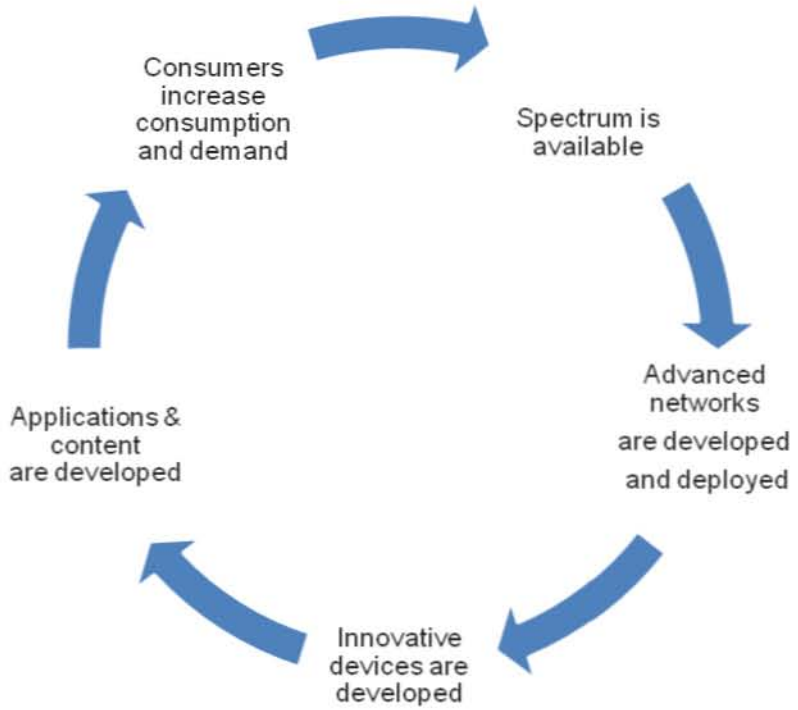
[5] The FCC provided a hyperlink on its website to a zipped file containing Excel spreadsheets corresponding to various tables in the *14th Report. See* http://reboot.fcc.gov/blog?entryId=490094. These files, however, did not contain the raw data that was analyzed to create the tables, but rather simply the tables themselves.

precluded a finding that the core CMRS market is effectively competitive. By all relevant indices, the core CMRS market was no less competitive than it was in the *13th Report*, and in fact may have been more competitive, based on the pricing pressures that were illustrated during the year under consideration. The Commission, therefore, should have been able to conclude that the core CMRS market was effectively competitive.

II. CTIA'S KEY INDICATORS FOR 2009 DATA SHOW INCREASING COMPETITION IN MOBILE SERVICES.

A. Each Segment of the Wireless Ecosystem's Virtuous Cycle is Characterized by Intense Competition.

As CTIA has advocated in the past, the wireless ecosystem is defined by a "virtuous cycle" in which competition drives the deployment and development of advanced networks, innovative devices, and applications and content. This cycle leads to increased consumption of and demand for wireless services. This virtuous cycle of innovation and competition promotes considerable consumer benefit, and is characterized by competition in each link of the wireless "value chain."



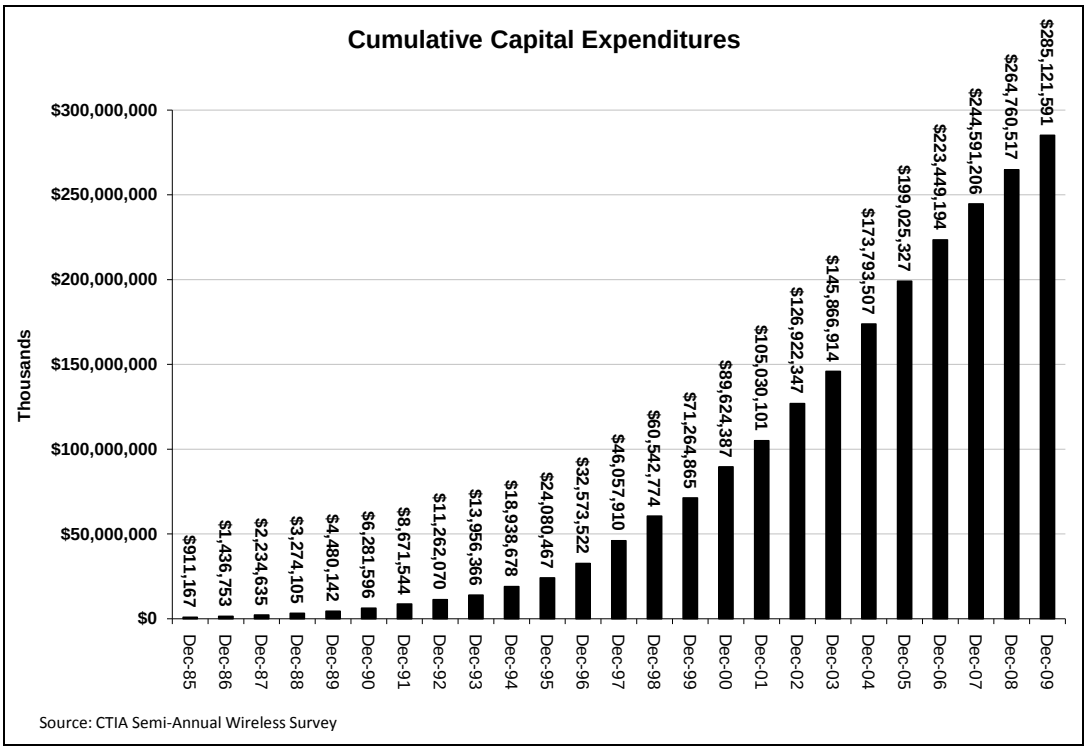
Wireless network providers more than ever compete on the quality of their networks, and invest billions in building out and upgrading their networks to attract and retain customers. These advanced networks enable the development of devices with innovative new capabilities, driving competition both among handset manufacturers to develop innovative devices and among carriers to offer the best selection of devices to the public. With the development of advanced devices, there has been tremendous innovation and investment in the applications space, with wireless carriers working in tandem with developers to compete on the quality of applications offered. All of this has driven unprecedented demand for and consumption of wireless services, further promoting competition.

SERVICE PROVIDERS

1. Wireless Providers Continue to Invest Considerably in, Build Out, and Upgrade Their Networks, and Compete on Network Quality.

   a. Capital Expenditure.

At the core of wireless competition and innovation are the ongoing investments made by providers in advanced networks. As CTIA has previously observed, investment at the network core fuels the development and evolution of user devices and applications. Further, wireless carriers compete intensely on the coverage and quality of their networks. By the end of 2009, U.S. wireless carriers' cumulative capital expenditures totaled more than $285 billion, an increase of more than $20 billion from year-end 2008. Indeed, wireless carriers have continued to commit billions of dollars to capital expenditures, despite the current recession.

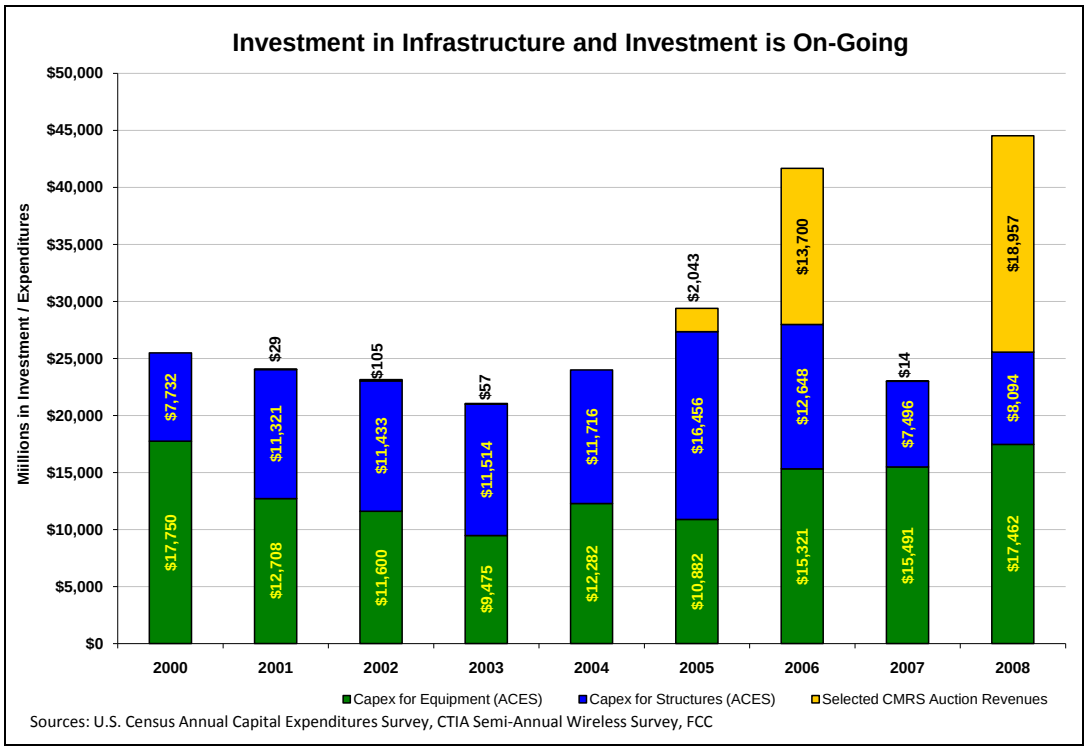


The U.S. Census also tracks wireless investment through its Annual Capital Expenditures Survey ("ACES"). The Census data provides investment information broken out between equipment and structures, as well as between new and used structures and equipment. As part of its "Capital Expenditures for Structures and Equipment for Companies With Employees by Industry for 2008," released March 18, 2010, ACES reported that wireless carriers spent more than $25 billion in 2008.[6] Of that more than $25 billion, more than $17 billion was spent on equipment and more than $8 billion was spent on structures.[7] These investments do not include the nearly $19 billion paid by

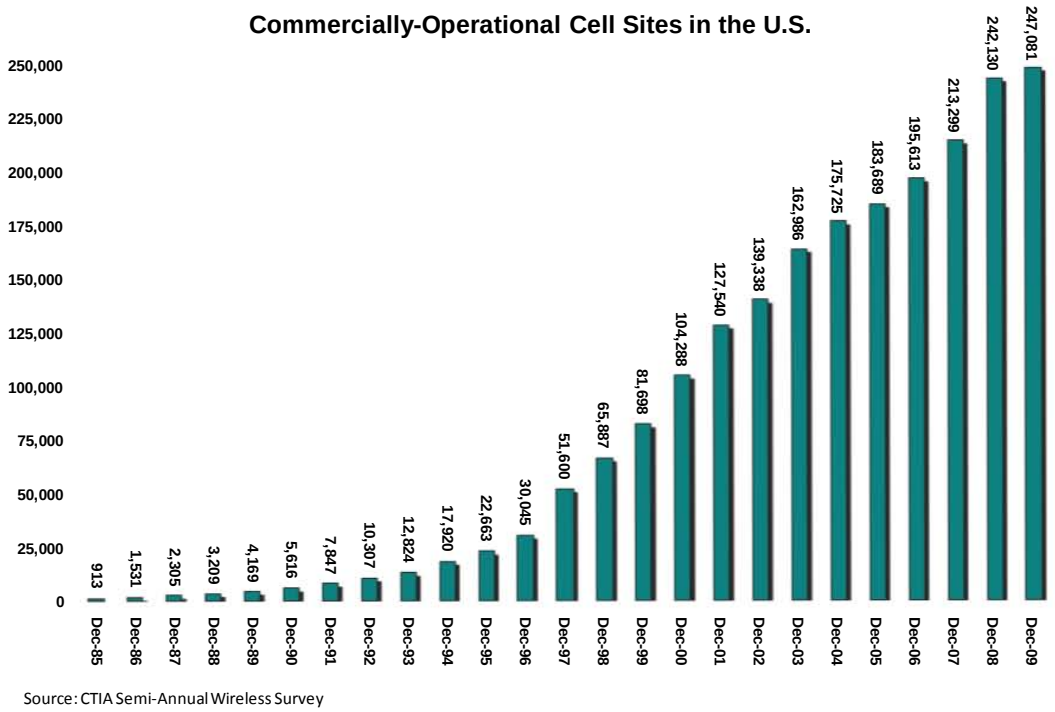
[6] Annual Capital Expenditures Survey, Capital Expenditures for Structures and Equipment for Companies With Employees by Industry for 2008 (Mar. 18, 2010), *available at* http://www.census.gov/econ/aces/xls/2008/table4a.xls.

[7] *Id*.

wireless carriers to the Federal Treasury for spectrum in 2008. This number from the Census Bureau is not yet available for 2009.



This investment in equipment and structures has increased the ubiquity of wireless services, with new cell sites continually being deployed. At the end of 2009, there were 247,081 operational cell sites in the U.S., up from 242,130 in 2008.



With more cell sites deployed every year, facilities-based competition continues to flourish, and more Americans are able to make mobile broadband part of their daily lives.

b. Network Deployment

Wireless providers have invested billions of dollars in equipment, structures, and spectrum to accommodate the explosive demand for mobile broadband. As part of this effort, wireless providers are actively engaged in upgrading existing networks and building out newly-acquired spectrum.[8] These broadband-capable wireless networks

[8] *See, e.g.*, Press Release, AT&T, AT&T Upgrades 3G Technology at Cell Sites Across Nation (Jan. 5, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30358&mapcode=corporate|financial ("Faster 3G speeds will come as AT&T combines the new technology with enhanced cell site backhaul connections over the course of 2010 and 2011. . . . The backhaul upgrades are also a key step in the evolution toward next-generation LTE mobile broadband technology. AT&T is designing its new backhaul deployments to accommodate both faster 3G and future LTE deployments. AT&T currently plans to begin trials of LTE technology this year, and to begin LTE deployment in 2011, matching industry time lines for widespread availability of compelling devices and supporting network equipment.");

"have liberated broadband from the desktop and made it possible to imagine a world where the Internet is available to anyone, anywhere, anytime."[9] It is not surprising, then, that "[m]obile data usage is not just growing, it's exploding."[10]

c. Wireless 3G Build Out and Upgrades

In part because of continued build-out of wireless broadband networks, demand for wireless broadband will continue to grow. Carriers continue to meet these demands by building out and upgrading third-generation networks. AT&T has announced plans to roll out High Speed Packet Access ("HSPA") technology to twenty-five of the thirty largest markets by the end of 2010, and expand to ninety percent of its network by 2011.[11] T-Mobile is continuing to expand HSPA+, a 3.5G technology that can deliver peak download speeds of 21 Mbps.[12] T-Mobile expects that its HSPA+ network will

---

Press Release, T-Mobile, T-Mobile to Rollout the Nation's Fastest 3G Wireless Network With HSPA+ to More than 100 Metropolitan Areas in 2010 (Mar. 23, 2010), *available at* http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20100324&title=%20T-Mobile%20to%20Rollout%20the%20Nation's%20Fastest%203G%20Wireless%20Network%20with%20HSPA+%20to%20More%20than%20100%20Metropolitan%20Areas%20in%202010 ("By the end of 2010, T-Mobile expects to have HSPA+ deployed across the breadth of its 3G footprint, covering more than 100 metropolitan areas and 185 million people.").

9 Julius Genachowski, Chairman, Federal Communications Commission, Mobile Broadband: A 21st Century Plan for U.S. Competitiveness, Innovation and Job Creation (Feb. 24, 2010), *available at* http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-296490A1.pdf ("Genachowski New America Foundation Remarks").

10 *Id.*

11 Press Release, AT&T, AT&T to Make Faster 3G Technology Available in Six Major Cities This Year (Sept. 9, 2009), *available at* http://www.att.com/gen/press-room?newsarticleid=27068&cdvn=news&pid=4800; Press Release, AT&T, AT&T Upgrades 3G Technology at Cell Sites Across Nation (Jan. 5, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30358.

12 Press Release, T-Mobile, T-Mobile HSPA+ Network Now Delivers Broadest Reach of 4G Speeds in U.S. (July 21, 2010), *available at* http://press.t-mobile.com/articles/t-mobile-HSPA-4G; Michelle Maisto, *T-Mobile Debuts WebConnect*

cover 185 million people by the end of 2010.[13] Verizon Wireless' voice and 3G data network serves nearly 93 million customers.[14]

Carriers across the country are deploying mobile data services and broadband technologies outside of major metropolitan areas, including in rural markets, to provide their customers access to new technologies and faster speeds. For example, Alaska Communications Systems recently announced plans to "expand and deepen its 3G coverage by more than 50 percent in 2010" as part of an "aggressive multi-million dollar network investment to stay ahead of the growing demand for mobile data services."[15] Bluegrass Cellular continues to roll out 3G services throughout Kentucky.[16] Cellular South continues make considerable investments in its 3G deployment in Alabama and

---

Jet Modem, Discount Plans, EWEEK.COM, Nov. 11, 2009, *available at* http://www.eweek.com/c/a/Desktops-and-Notebooks/TMobile-Debuts-WebConnect-Jet-Modem-Discount-Plans-439524/.

[13] Press Release, T-Mobile, T-Mobile to Rollout the Nation's Fastest 3G Wireless Network With HSPA+ to More than 100 Metropolitan Areas in 2010 (Mar. 23, 2010), *available at* http://www.t-mobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20100324&title=%20T-Mobile%20to%20Rollout%20the%20Nation's%20Fastest%203G%20Wireless%20Network%20with%20HSPA+%20to%20More%20than%20100%20Metropolitan%20Areas%20in%202010.

[14] *See, e.g.*, Press Release, Verizon Wireless, Colorado Customers Receive More 3G Coverage With New Verizon Wireless Cell Sites (July 22, 2010), *available at* http://news.vzw.com/news/2010/07/pr2010-07-22b.html.

[15] Press Release, Alaska Communications Systems, Alaska Communications Systems Brings 3G Mobile Broadband Network to Kodiak (May 21, 2010), *available at* http://acsalaska.com/assets/releases/5_21_2010_Kodiak%203G%20Expansionx.pdf.

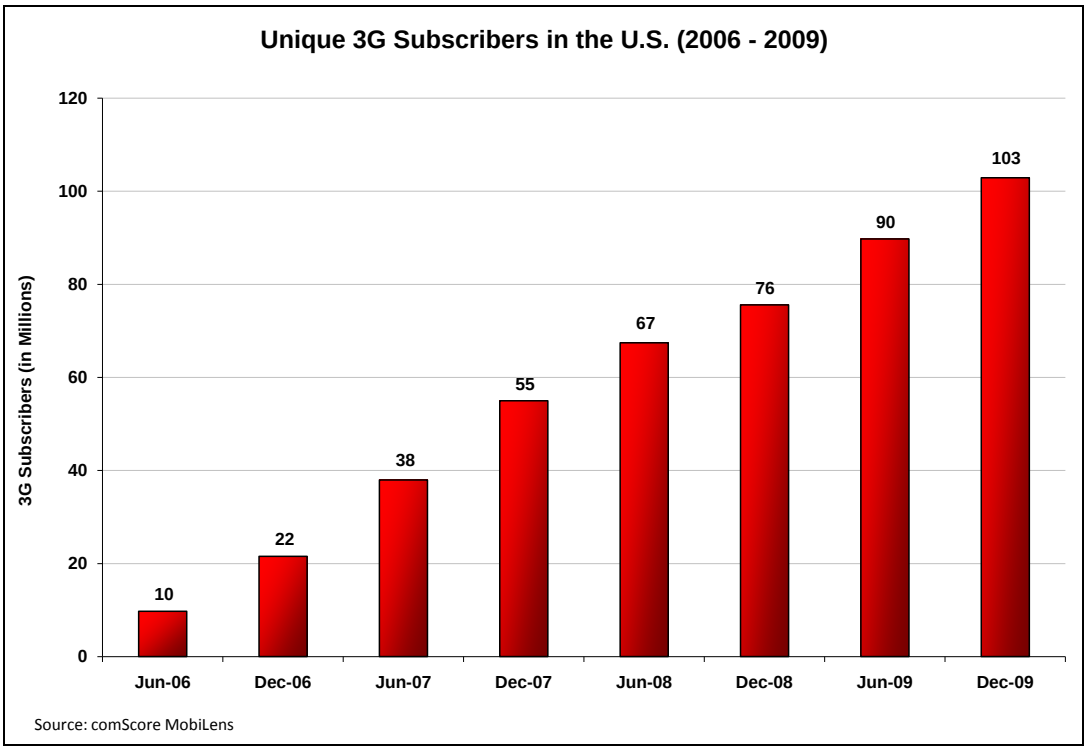
[16] *See, e.g.*, Press Release, Bluegrass Cellular, Bluegrass Cellular Adds 3G Coverage in Barren County (May 21, 2010), *available at* http://bluegrasscellular.com/about/news/bluegrass_cellular_adds_3g_coverage_in_barren_county2.

Mississippi.[17] Numerous other wireless providers have committed substantial resources to broadband network deployment nationwide.[18] As a result, the number of 3G wireless subscribers continues to grow: there were an estimated 103 million unique 3G wireless subscribers and more than 122 million total 3G wireless subscriptions at the end of 2009.[19]

[17] Press Release, Cellular South, Cellular South Expands Advanced 3G Mobile Broadband Network In Mobile And Baldwin Counties (Mar. 15, 2010), *available at* https://www.cellularsouth.com/news/2010/20100315.html ("This year Cellular South has continued with its promise and launched more than 158 new 3G sites - enhancing its network and improving its overall wireless coverage.").

[18] *See, e.g.*, Press Release, nTelos, nTelos Completes $46 Million Upgrade to 3G Network (July 8, 2009), *available at* http://ir.ntelos.com/Cache/1500026274.PDF?D=&O=PDF&IID=4110676&Y=&T=&FID=1500026274 ("The multi-million dollar investment to improve the company's network will allow for faster download speeds of large, graphic-rich files, ringtones, music and games and quicker functioning Smartphones and BlackBerrys. Accessing services such as social networking and interactive gaming will also be enhanced."); Union Telephone, Wireless - New Cell Site, http://www.unionwireless.com/Cellular.aspx?page=Cellular&subpage=New-Cell-Site&SiteID=130 (last visited July 29, 2010) (indicating that Union Telephone, a wireless provider in Wyoming, northwestern Colorado and parts of Utah, added eighteen new wireless tower sites in Wyoming and Colorado in 2010).

[19] comScore estimates unique wireless subscribership for the 50 states and the District of Columbia, taking into account multiple simultaneous subscriptions. The Informa Telecoms and Media Group estimates total active wireless subscribership for the U.S., and its territories. Both estimate 3G subscribership or subscriptions.



d. Wireless 4G Build Out

Further, a number of wireless companies have introduced or announced plans to deploy 4G networks:

- **AT&T Mobility** has announced plans to upgrade its 3G cell sites to HSPA 7.2 technology and provide enhanced fiber-optic backhaul connectivity, intended to support AT&T's future 4G network based on Long Term Evolution ("LTE") technology. AT&T expects to deploy LTE devices in 2011.[20]

- **Clearwire** has expanded its 4G WiMAX network throughout the country and now covers 44 markets across the U.S., with planned deployments in Tampa, Orlando, and Dayton, Florida; Nashville, Tennessee; Modesto and Stockton, California; Wilmington, Delaware; and Grand Rapids, Michigan in the summer of 2010.[21] By the end of 2010, Clearwire plans to launch its 4G

[20] Press Release, AT&T, AT&T Selects LTE Equipment Suppliers (Feb. 10, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30493&mapcode=financial|Wireless.

[21] Press Release, Clearwire, Clearwire Brings CLEAR 4G to Merced and Visalia, California (July 1, 2010), *available at*

service in New York City, Los Angeles, San Francisco, Boston, Denver, Minneapolis, Miami, Cincinnati, Cleveland, and Pittsburgh.[22]

- **Cox Communications** has completed testing of voice calling and high definition video streaming over wireless networks using LTE technology. Cox plans to use AWS-1 and 700 MHz spectrum obtained in recent auctions and is testing LTE in Phoenix and San Diego.[23]

- **MetroPCS** plans to launch an LTE-based 4G network in the second half of 2010, starting with cities including Las Vegas, Nevada. MetroPCS has partnered with Samsung to introduce an LTE phone.[24]

- **Sprint** has launched the HTC EVO 4G, "America's first 3G/4G phone." Sprint currently offers 4G service in 33 markets.[25]

- **Verizon Wireless** has announced plans to launch LTE starting with 25 to 30 markets in 2010, covering approximately 100 million people, and extending to cover Verizon Wireless' current 3G footprint in 2013.[26]

e. Advertising

Network quality and coverage is of such importance to wireless carriers that they compete vigorously on network quality and spend considerably on advertising that touts network quality.[27]

---

http://newsroom.clearwire.com/phoenix.zhtml?c=214419&p=irol-newsArticle&ID=1443337&highlight= (last visited July 3, 2010).

22 *Id.*

23 Press Release, Cox Communications, Cox Successfully Demonstrates the Delivery of Voice Calling, High Definition Video Via 4G Wireless Technology (Jan. 25, 2010), *available at* http://cox.mediaroom.com/index.php?s=43&item=469.

24 Peter Svensson, *MetroPCS to Launch 4G Phone Before Verizon*, Associated Press (Mar. 24, 2010), *available at* http://www.usatoday.com/tech/wireless/2010-03-24-metropcs-4g_N.htm.

25 Press Release, Sprint, HTC EVO™ 4G Breaks Sales Records for Sprint on Launch Day; America's First 4G Phone is a Hit With Customers (June 7, 2010), *available at* http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1436066&highlight=.

26 Verizon Wireless LTE Network, LTE Innovation Center, https://www.lte.vzw.com/AboutLTE/VerizonWirelessLTENetwork/tabid/6003/Default.aspx (last visited July 28, 2010).

Top Ten Advertisers: Q1 2009 vs. Q1 2008[1]

Rank	Company	Jan-Mar 2009 (Millions)	Jan-Mar 2008 (Millions)	% Change
1	Procter & Gamble Co	$674.1	$820.0	-17.8%
2	Verizon Communications Inc	$577.1	$559.8	3.1%
3	AT&T Inc	$459.4	$465.1	-1.2%
4	General Motors Corp	$424.2	$524.6	-19.1%
5	Johnson & Johnson	$397.2	$308.2	28.9%
6	News Corp	$341.2	$404.6	-15.7%
7	Sprint Nextel Corp	$317.7	$243.7	30.3%
8	Walt Disney Co	$303.7	$337.0	-9.9%
9	Time Warner Inc	$263.4	$348.5	-24.4%
10	General Electric Co	$261.4	$251.0	4.1%
	Total	$4,019.5	$4,262.6	-5.7%

Source: TNS Media Intelligence
1 Figures do not include FSI, House Ads or PSA activity.

In fact, as of the first quarter of 2009, Verizon Wireless, AT&T, and Sprint Nextel were the second, third, and seventh largest advertising purchasers, respectively, among all advertisers, further illustrating the highly competitive nature of the wireless market and the focus on infrastructure build-out and network quality.

[27] For example, Verizon's "There's A Map for That" campaign focuses on the extent of its 3G coverage as an advantage over other carriers. *See* Comments of Verizon and Verizon Wireless, GN Docket No. 09-191, at 23 (Jan. 14, 2010). Similarly, AT&T launched a national advertising campaign touting the superiority of its 3G speed, service features, applications, and devices. *See, e.g.*, COMMUNICATIONS DAILY, Nov. 20, 2009.

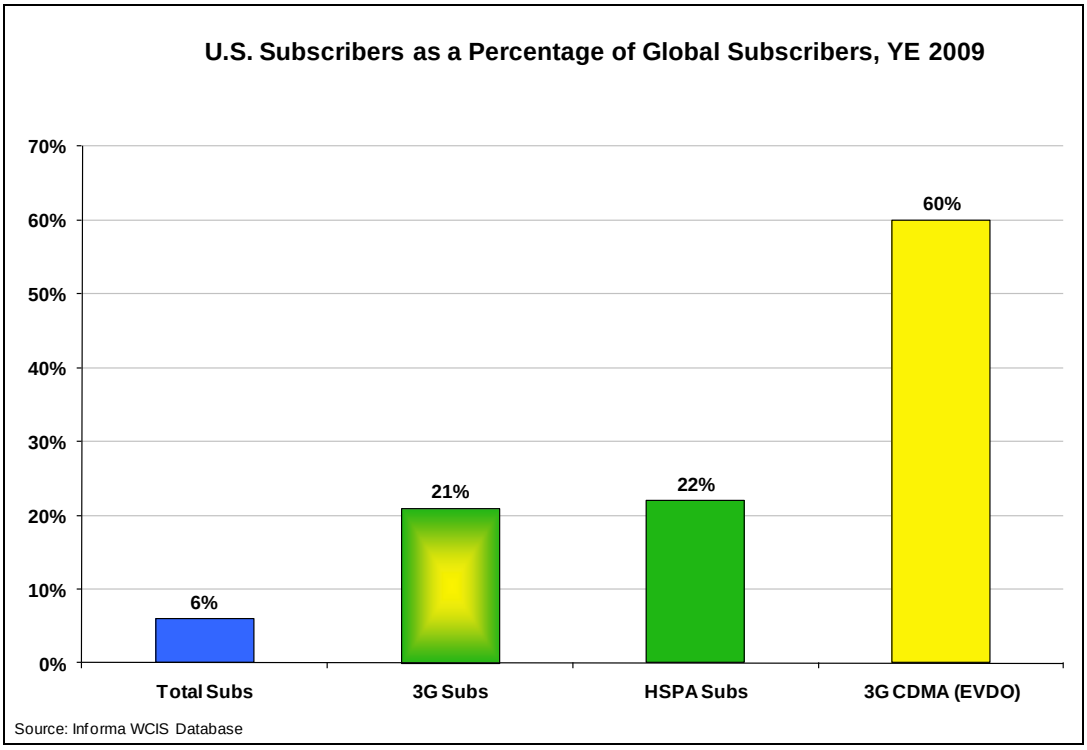
2. Advances in Network Infrastructure Make Upgrades and Advanced Deployments a Reality

The shift of network use from voice to multimedia communications confirms the substantial investment and deployment that have occurred in the network over the past 30 years. From first generation analog networks focused on voice calls to the broadband and video capabilities of today's systems – the developments are staggering. Now, we are entering an entirely new phase with LTE and WiMAX deployments that will further advance the virtuous cycle of innovation and investment in the wireless sector.

Service providers are constantly working with their infrastructure suppliers to expand and upgrade their networks as highlighted above. A number of infrastructure suppliers – including Alcatel-Lucent, Avaya, Ericsson, Huawei, Motorola, and Nokia Siemens Networks – are competing fiercely to build out carriers' 3G networks and provide HSPA technology to carriers using the Global System for Mobile communications ("GSM") standard and EV-DO technology to carriers using the Code Division Multiple Access ("CDMA") standard. Infrastructure suppliers are also competing for 4G network contracts. Two competing platforms – LTE and WiMAX – have emerged, and suppliers are already working with carriers to deploy these 4G technologies.

The U.S. is a world leader in the deployment of mobile broadband infrastructure, and these advanced networks are facilitating an increasingly robust mobile broadband experience for consumers. While the U.S. has less than 6 percent of the world's total

wireless subscribers, it has a much larger percentage of users on advanced 3G and 4G networks. For GSM, the U.S. had more than 22 percent of the world's 216 million 3G GSM High Speed Packet Access ("HSPA") subscribers at year-end 2009. AT&T alone has more HSPA subscribers than any other carrier in the world. The story is the same when looking at EV-DO technology, used by Verizon Wireless, Sprint Nextel, Leap Wireless, and other carriers. While we have 33 percent of the world's CDMA subscribers, we have 60 percent of the 3G EV-DO subscribers.



As with other areas of the mobile wireless ecosystem, the infrastructure supplier segment continues to evolve. The 2009 Sprint Nextel-Ericsson network services agreement reflects the innovative relationships developing between companies at different levels of the competitive wireless ecosystem. Pursuant to the agreement, Ericsson assumed responsibility for day-to-day operations for Sprint Nextel's CDMA, iDEN, and wireline networks. Sprint Nextel, meanwhile, retains ownership and control

of the network assets, continues to make network strategy and investment decisions, and continues to control the customer experience and provide technical support.[28] Thus, this agreement is another example of the dynamic evolution that is taking place in the wireless industry.

The infrastructure segment also continues to develop and advance technologies that enhance coverage and capacity of the network. For example, the industry continues to utilize distributed antenna systems ("DAS") and other smart antenna technologies to improve network coverage and provide increased capacity at large spectator events to handle increased voice and data traffic.[29] For example, Verizon Wireless is making considerable use of DAS in building out its 700 MHz spectrum.[30] MetroPCS also made considerable use of DAS in its deployments in Boston, New York, and Philadelphia, and

---

[28] Press Release, Ericsson, Sprint Gains Network Advantage: Innovative Network Services Deal with Ericsson Delivers Competitive Edge (July 9, 2009), *available at* http://www.ericsson.com/ericsson/press/releases/20090709-1328069.shtml.

[29] Press Release, AT&T, AT&T Preps South Florida Wireless Network for Pro Bowl and Super Bowl (Jan. 19, 2010) *available at* http://www.prnewswire.com/news-releases/att-preps-south-florida-wireless-network-for-pro-bowl-and-super-bowl-82045142.html; Press Release, Sprint, Sprint's Ready for Some Football: Outlines Network Prep for Super Bowl XLIII (Jan. 16, 2009) *available at http://newsreleases.sprint.com/phoenix.zhtml?c=127149&p=irol-newsArticle_newsroom&ID=1245515*;

[30] Kevin Fitchard, *LTE deployments driving new distributed antenna deployments*, Connected Planet (Mar. 15, 2010) ("Connected Planet DAS Article"), *available at* http://connectedplanetonline.com/3g4g/news/LTE-driving-distributed-antennas-0315/ (last accessed July 29, 2010) (noting that DAS supplier ADC anticipated "a 20% growth in indoor DAS equipment in 2010, largely fueled by Verizon's LTE efforts.") . *See also* Phil Goldstein, *Distributed antenna systems: From niche to necessity*, FierceWireless (Mar. 4, 2010) ("FierceWireless DAS Article"), *available at* http://www.fiercewireless.com/story/distributed-antenna-systems-niche-necessity/2010-03-04 (last accessed July 29, 2010) ("Verizon Wireless spokesman Tom Pica said that carrier uses DAS today to serve large customers where they need a better signal – such as arenas and airports. He said that when Verizon launches its LTE network, it will continue to use DAS in that way.").

will be able to use these same sites for its AWS and 700 MHz LTE networks.[31] Leap Wireless also has made use of DAS in building out its CDMA network.[32] Sprint recently reported that it has deployed approximately 1,500 outdoor DAS nodes as of March 2010.[33] AT&T has installed network equipment on a DAS to achieve integrated wireless coverage in challenging structures like skyscrapers and stadiums.[34]

In addition, the development of femtocells to improve network coverage and capacity is a great example of the virtuous cycle of innovation and investment in the infrastructure segment. Femtocells are essentially personal cell sites installed in a home. These devices resemble a computer modem, receive nearby cell phone signals, and transmit the signals over a broadband connection. A number of carriers including AT&T, Verizon Wireless, and Sprint have made femtocells available to consumers.

These developments highlight the competition and innovation in the infrastructure supply segment of the wireless ecosystem.

---

31 *See* Connected Planet DAS Article.

32 *Id.*

33 FierceWireless DAS Article.

34 Press Release, AT&T, AT&T Improves Wireless Coverage in Renowned Trump International Hotel & Tower Chicago (Jan. 15, 2010) *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30443; Press Release, AT&T, AT&T Enhances Wireless Coverage at Cowboys Stadium (Sept. 17, 2009) *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=27143.

DEVICES

3. The U.S. Wireless Market Is Characterized by Continued Device Innovation and Choice.

The wireless ecosystem in the United States is characterized by the extraordinarily large number of handsets available, the diversity of wireless devices, the innovation that occurs in the device market, and the fact that the most anticipated devices are launched in the U.S. first. New companies continue to enter the market, with Dell and HP being two of the newest. With at least 33 companies manufacturing more than 630 unique devices for the U.S. market – more devices than in any other country in the world – there can be no doubt about the vibrant competitiveness of the U.S. wireless device market:

HANDSET MANUFACTURERS PRODUCING DEVICES FOR THE U.S. MARKET

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

Because of the large number of companies producing devices for the United States, the wireless device market in the U.S. is robustly competitive. These devices range from simple, voice-only phones to complex smartphones used to access a variety of wireless broadband content. Devices sold in the U.S. increasingly include Wi-Fi and

Bluetooth capability, giving consumers new ways to connect and use their wireless handsets. Some devices are capable of functioning as a Wi-Fi hotspot.

Each year, wireless devices sold in the United States become more and more advanced. For example, at the end of 2005, there were approximately 172 million SMS-capable devices and 92 million Web-capable devices on carriers' networks in the U.S. At the end of 2009, these numbers had grown to more than 238 million for each of these capabilities. The number of wireless-enabled laptops and wireless modems on U.S. carriers' networks grew from 7 million at the end of 2008 to nearly 12 million at the end of 2009. And in just the past two years, wireless smartphones have seen explosive growth, from 40.5 million as of June 2009 to nearly 50 million by year-end 2009.

Devices on Wireless Service Providers' Networks in the U.S.	
SMS-capable devices: YE2009: 238,421,412 YE2008: 227,160,202 YE2007: 212,695,381 YE2006: 199,360,570 YE2005: 172,606,907 Five year growth rate: 38%	Devices capable of web-browsing: YE2009: 238,395,969 YE2008: 202,715,184 YE2007: 202,472,577 YE2006: 106,421,983 YE2005: 92,812,617 Five year growth rate: 157%
Wireless-enabled laptops and wireless modems: YE2009: 11,870,931 YE2008: 7,149,186 YOY growth rate: 66%	Smartphones and wireless-enabled PDAs: YE2009: 49,752,701 MY2009: 40,549,840 Six-Month growth rate: 23%

Source: CTIA Semi-Annual Wireless Survey

Indeed, smartphones represent one of the greatest areas of growth for the wireless ecosystem, and continue to rise in popularity: 31 percent of all handset sales were smartphones in the fourth quarter of 2009, and at year-end 2009 almost 50 million smartphones and wireless-enabled PDAs were reported active on carriers' networks.[35] As a result of this increased demand and the increased competition to serve this demand, manufacturers are expanding the functionality of smartphones while lowering their prices. U.S. consumers have considerable choice among smartphones, with several manufacturers offering smartphone models. Apple has become the largest U.S. cell phone maker, selling 8.8 million iPhones in the first quarter of 2010.[36] Apple recently introduced the iPhone 4, selling 1.7 million handsets in three days.[37] There are now more than a dozen Android phones available from manufacturers such as Samsung, Motorola, and HTC. Google released its own Android phone, the Nexus One, available through an online store where consumers can purchase the phone with service from one of Google's operator partners or unlocked for use on any GSM network.[38] Also entering the market

---

[35] *See* Press Release, NPD Group, Smartphones Drive More Handset Sales Overall, But Lower Prices Stall Total Handset Revenue Growth (Mar. 17, 2010), *available at* http://www.npd.com/press/releases/press_100317.html; *see also* CTIA's Wireless Industry Indices: Semi-Annual Data Survey Results: A Comprehensive Report from CTIA Analyzing the U.S. Wireless Industry, Year-End 2009 Results, at 10-11 (May 20, 2010) ("CTIA's Wireless Industry Indices Report").

[36] David Chartier, *Apple Becomes Top U.S. Phone Maker During 2010 First Quarter*, NETWORK WORLD (Apr. 30, 2010), *available at* http://www.networkworld.com/news/2010/043010-apple-becomes-top-us-phone.html.

[37] Press Release, Apple Inc., iPhone 4 Sales Top 1.7 Million (June 28, 2010), *available at* http://www.apple.com/pr/library/2010/06/28iphone.html (noting that the iPhone 4's launch was "the most successful product launch in Apple's history").

[38] Press Release, Google, Google Offers New Model For Consumers to Buy Mobile Phone (Jan. 5, 2010), *available at* http://www.google.com/intl/en/press/pressrel/20100105_phone.html.

are Dell[39] and HP, whose recent purchase of Palm, Inc., positions it to develop smartphones, tablets and other wireless devices.[40] Significantly, almost all of the hottest and most innovative devices are launched first in the United States, including the Apple iPhone, iPhone 3G, iPhone 3GS and iPhone 4; Apple iPad; Google G1; Motorola Droid and Droid X; MyTouch and Nexus One; Blackberry Storm, Bold, Pearl, Tour and Curve 8900; Samsung Instinct; Palm Pre and Pixi; Amazon Kindle; Barnes & Noble Nook, and the Incredible and EVO 4G from HTC. Large and small wireless carriers now offer a variety of smartphones to their customers. The following is a snapshot of the number of smartphones sold by a sampling of U.S. carriers as of May 2009:

	AT&T Mobility	Verizon Wireless	Sprint	T-Mobile USA	U.S. Cellular	Bluegrass Cellular	Carolina West	Cellular One	Cincinnati Bell	nTelos
Number of Smartphones Available	16	17	12	12	7	5	4	9	9	8

U.S. consumers have multiple venues from which they can purchase wireless handsets: directly from their wireless provider, from online stores, from online auction sites, at retailers such as Best Buy, and at independent retail outlets. A copy of the most

---

[39] Justin Scheck, *Dell Reorganizes, Creating New Mobile Device Division*, WALL STREET JOURNAL, Dec. 5, 2009, *available at* http://online.wsj.com/article/SB10001424052748704342404574576201600691622.html?mod=dist_smartbrief; Press Release, Dell Inc., Dell Announces U.S. Smart Phone Deal with AT&T (Jan. 6, 2010), *available at* http://content.dell.com/us/en/corp/d/press-releases/2010-01-06-dell-att-smart-phone-deal.aspx. *See also* Ross Miller, *Dell's Lightning, Thunder, Flash, Smoke and More: Rounding Up a Storm of Mobile Leaks*, ENGADGET (April 22, 2010), *available at* http://www.engadget.com/2010/04/22/dells-lightning-thunder-flash-smoke-and-more-a-roundup/.

[40] Jon Stokers, Phones, tablets, netbooks: taking stock of the HP/Palm deal, ARSTECHNICA, Apr. 29, 2010, *available at* http://arstechnica.com/gadgets/news/2010/04/phones-tablets-netbooks-taking-stock-of-the-hppalm-deal.ars.

recent Best Buy mobile handset catalog has been attached. Not only are handsets readily available through a number of outlets, but consumers also are able to choose from mobile phones with plans, prepaid phones, and unlocked phones. More carriers are also offering unlocked handsets or offering the ability to unlock phones currently set up to run on their network.[41] The increasing availability of unlocked handsets further promotes competition in the device market.

Non-phone wireless devices also continue to grow in popularity. For example, Apple recently released its 3G-enabled iPad device, which includes access to the Internet and Apple's application store through either a Wi-Fi or 3G wireless connection.[42] Apple recently announced that it sold its 3 millionth iPad just 80 days after its U.S. launch.[43] E-readers that connect to carriers' 3G networks also have evolved, with new features added and decreases in device prices. For example, Amazon's new latest-generation Kindle DX "features a new graphite enclosure and an all new, high contrast electronic ink display with 50 percent better contrast for the clearest text and sharpest images."[44] These new products further underscore the competition-driven innovation that characterizes the wireless device market.

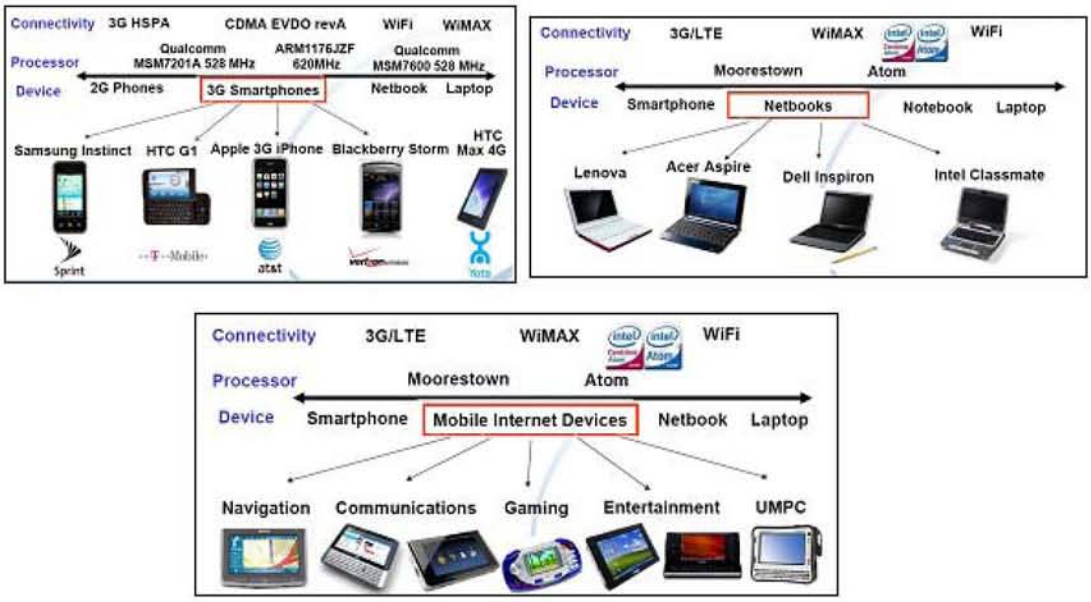
---

41 Comments of CTIA—the Wireless Association®, WT Docket No. 09-66 at 33-34 (filed June 15, 2009).

42 Press Release, Apple Inc., Apple Launches iPad: Magical & Revolutionary Device at an Unbelievable Price (Jan. 27, 2010), *available at* http://www.apple.com/pr/library/2010/01/27ipad.html.

43 Press Release, Apple Inc., Apple Sells Three Million iPads in 80 Days (June 22, 2010), *available at* http://www.apple.com/pr/library/2010/06/22ipad.html.

44 Press Release, Amazon, Amazon Introduces New Kindle DX With 50 Percent Better Display Contrast and New Lower Price of $379 (July 1, 2010), *available at* http://phx.corporate-ir.net/phoenix.zhtml?c=176060&p=irol-newsArticle&ID=1443342&highlight=.



Sources: CTIA Research, Yankee Group 2008

OPERATING SYSTEMS

4. Competition Among Sophisticated Operating System Capabilities Drives the Push for New and Innovative Services and Applications

As consumers and enterprise users have become more reliant on mobile connectivity, they also have sought a mobile experience capable of handling applications more traditionally found on home or office computers. Indeed, the applications and uses of mobile devices are near limitless – from email, text messaging, and word processing, to web browsing, digital photography, and video programming. These capabilities rely, however, on sophisticated software platforms necessary to run these demanding devices and applications.

Mobile operating systems are important because they manage both the hardware features of the device, such as the antennas, camera, touch screen, thumbwheel and keyboards, as well as software applications like email, text-messaging, web browsing, GPS functionality and other applications. Mobile operating systems are responsible for how these functions and features interact. Since current generation smartphones feature increasingly sophisticated functions, software and hardware providers must also develop increasingly sophisticated operating systems.

The market for mobile operating systems continues to grow increasingly competitive. In sharp contrast to the highly commoditized personal computer market, the numerous operating systems available today offer unique user interfaces, feature specifications, and customer experiences.[45] These differences provide additional choice

[45] *See* Press Release, Canalys, Majority of Smart Phones Now Have Touch Screens (Feb. 8, 2010), *available at* http://www.canalys.com/pr/2010/r2010021.html.

and value to consumers, carriers, application developers, and other participants in the mobile wireless ecosystem.

The number of companies producing independent operating systems for mobile wireless devices has blossomed to at least 11. The Research in Motion BlackBerry OS, QUALCOMM Binary Runtime Environment for Wireless ("BREW"), Open Handset Alliance (with Google) Android, Nokia Symbian OS, Apple iPhone OS, Samsung bada, Sun Microsystems Java, Linux LiMo, Palm PalmOS and WebOS, Microsoft Windows Mobile, and other mobile operating systems are all competing to be the system of choice. Of note, none of these leading systems is owned by a mobile wireless carrier.

Independent Operating Systems
Research in Motion Blackberry OS
QUALCOMM Binary Runtime Environment for Wireless ("BREW")
Open Handset Alliance (with Google) Android
Nokia Symbian OS
Apple iPhone OS
Samsung bada
Sun Microsystems Java
Linux LiMo
Palm Palm OS
Palm WebOS
Microsoft Windows Mobile

The fluid market shares for mobile operating systems highlight the fierce competitive pressures of the mobile wireless ecosystem:

U.S. Smartphone Market Share - YE 2009		U.S. Smartphone Market Share - Mar 2009	
RIM Blackberry OS	41.6%	RIM Blackberry OS	37.6%
Apple iPhone OS	25.3%	Apple iPhone OS	20.9%
Windows Mobile	17.9%	Windows Mobile	27.4%
Android	5.2%	Android	2.0%
Palm	6.1%	Palm	9.0%
Symbian OS	3.8%	Symbian OS	3.1%

Source: comScore MobiLens (www.comscore.com)

It is striking that the two newest operating systems – iPhone OS and Android – now hold more than 30 percent market share in the U.S. The original iPhone OS only debuted in June 2007. And the initial Android system was not released until October 2008. With systems providers regularly offering software updates, new system improvements, and increased "application" functionality, this sector of the mobile ecosystem will continue to thrive.

APPLICATIONS

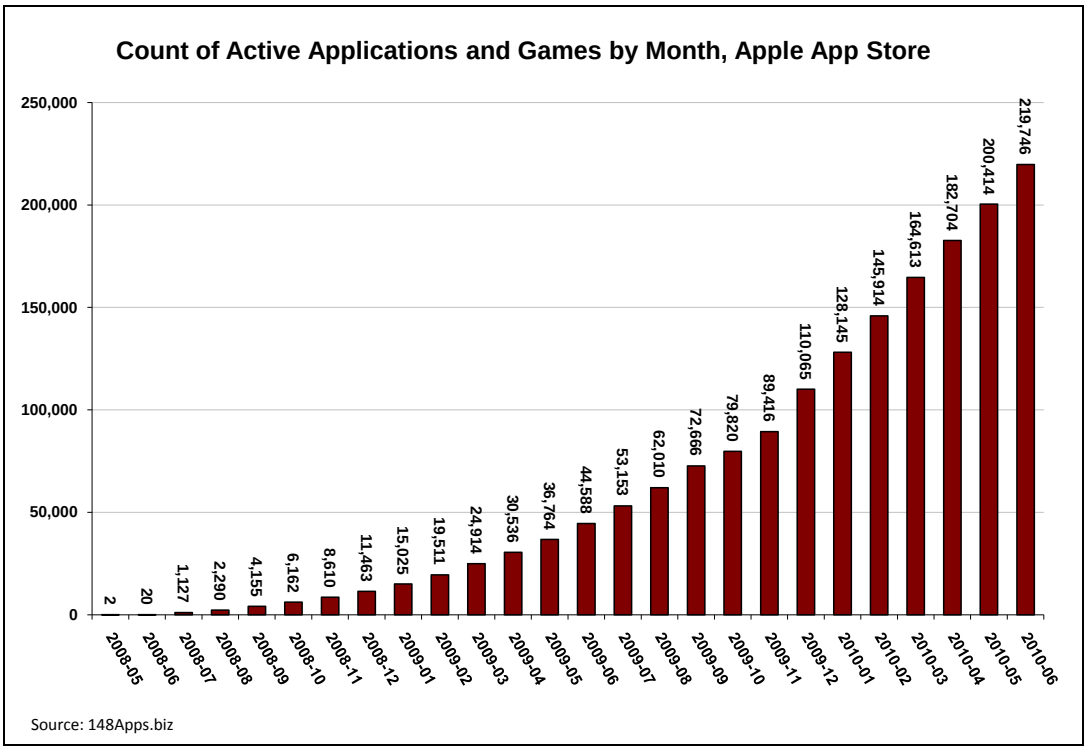
5. Competition in the Wireless Ecosystem Fuels the Development of Applications and Promotes Network Openness.

CTIA's recent filings have charted the tremendous growth in applications for mobile phones, which represents part of a broader trend toward openness on the part of participants in the wireless ecosystem. As wireless networks have evolved to support robust broadband experiences, as devices have evolved to feature increased functionality in Internet access, and as smartphones continue to proliferate, an explosion of applications designed to run on these networks and devices is occurring.

As of the end of 2009, U.S. consumers had access to slightly over 130,000 different apps.[46] As of today, well over 300,000 apps serve a variety of informational, public safety, and entertainment purposes. More than 5 billion applications have been

[46] *See 14th Report* at ¶ 320; *see also* The Mobile Internet Report, Morgan Stanley Research at 157 (Dec. 2009), *available at* http://www.morganstanley.com/institutional/techresearch/pdfs/mobile_internet_report.pdf (last accessed July 29, 2010).

downloaded from Apple's iTunes App Store.[47] The following chart indicates the number of active applications and games offered by the Apple App store by month from 2008 through April 2010 and shows the steady increase in application development:[48]



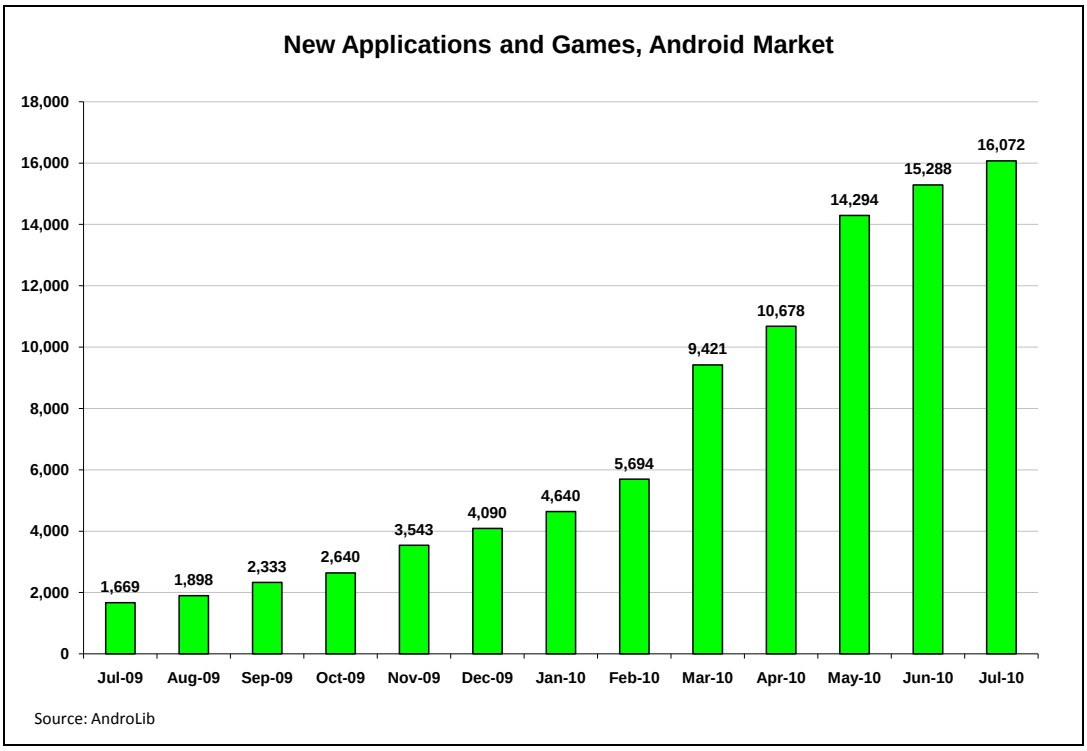
There are now 65,000 applications available in the Android Market, up from 50,000 in April 2010.[49] The following chart shows the number of new applications and games introduced in the Android Market each month:[50]

---

47 Ryan Kim, Live Blogging the Apple WWDC Keynote, SFGATE, June 7, 2010, *available at* http://www.sfgate.com/cgi-bin/blogs/techchron/detail?blogid=19&entry_id=65182.

48 *See* Apple iTunes App Store Metrics, Statistics and Numbers for iPhone Apps, 148Apps.biz, http://148apps.biz/app-store-metrics/?mpage=appcount (last accessed July 28, 2010).

49 Andy Rubin, *160,000 Android Phones Sold Per Day*, MOBILEKNOTS (June 24, 2010), *available at* http://www.techknots.com/mobiles/andy-rubin-160000-android-phones-sold-per-day/; Chris Ziegler, *Android Market Clears the 50,000 App Mark, Says AndroLib*, ENGADGET (Apr. 23, 2010), *available at*



Consumers have access to several other application stores, each of which offers an ever-increasing selection of applications:

http://www.engadget.com/2010/04/23/android-market-clears-the-50-000-app-mark-says-androlib/.

50 *See* AndroLib, Android Market Statistics from AndroLib, Android Applications and Games, http://www.androlib.com/appstats.aspx (last visited July 28, 2010).

Application Stores Operating in the U.S. Market

Application Store	Date Launched	Number of Apps Available Today
iTunes App Store	July 2008	225,000 apps
Android Market	October 2008	65,000 apps
Palm Software Store	January 2009	5,000 apps and games
BlackBerry App World	April 2009	7,422 apps
Nokia Ovi Store	May 2009	6,843 apps
Palm App Catalog	June 2009	1,452 apps
Windows Mobile Marketplace	Oct 2009	1,014 apps

In the short time between the CMRS Competition Reports, the wireless industry's applications market has had a meteoric rise that shows no signs of abating. In 2010, consumers are projected to spend $6.2 billion in mobile application stores worldwide to download over eight billion applications.[51] It is projected that worldwide downloads from mobile application stores will exceed 21 billion by 2013.[52] Application-generated traffic accounts for approximately 30 percent of total smartphone data volume in the network.[53]

This growth in applications has occurred hand-in-hand with carrier initiatives to provide resources, including opening their networks, to applications developers. For example, AT&T's devCentral program provides "great opportunities for developers

---

[51] Press Release, Gartner, Gartner Says Consumers Will Spend $6.2 Billion in Mobile Application Stores in 2010 (Jan. 18, 2010), *available at* http://www.gartner.com/it/page.jsp?id=1282413.

[52] *Id.*

[53] Press Release, Bytemobile, Bytemobile Expands Market-Leading Optimization Portfolio (Mar. 23, 2010), *available at* http://www.bytemobile.com/news-events/2010/archive_230310.html.

building applications in the consumer space."[54] AT&T also recently held an "Open Call – Apps For All!" contest for applications developers that awarded $10,000 and co-marketing opportunities with AT&T to winners in various categories.[55] Sprint Nextel has stated that it "is embracing an open ecosystem that encourages application developers to use Sprint Nextel's tools and programs to develop many applications for a wide range of Sprint devices."[56] T-Mobile has developed a Partner Network Program to assist mobile developers.[57] Verizon Wireless launched its Open Development program, which "encourages third-party developers to produce new devices and applications that can run on Verizon's networks" and is part of the Joint Innovation Lab, a joint venture that "will promote the development of new mobile technologies, applications, and services, with an initial focus on developing and deploying a mobile widgets platform to encourage innovative new mobile internet services."[58] Put simply, consumers' thirst for mobile applications will continue to promote network openness and applications development.

---

[54] AT&T, Consumer Software Developers, http://www.wireless.att.com/about/alliances/consumer-developer.jsp.

[55] AT&T Developer Program, AT&T Open Call-Apps for All! Contest, http://developer.att.com/developer/index.jsp?page=event&id=6.3_v1_9700324 (last visited July 28, 2010).

[56] Comments of Sprint Nextel Corporation, GN Docket No. 09-157, at 28 (Sept. 30, 2009).

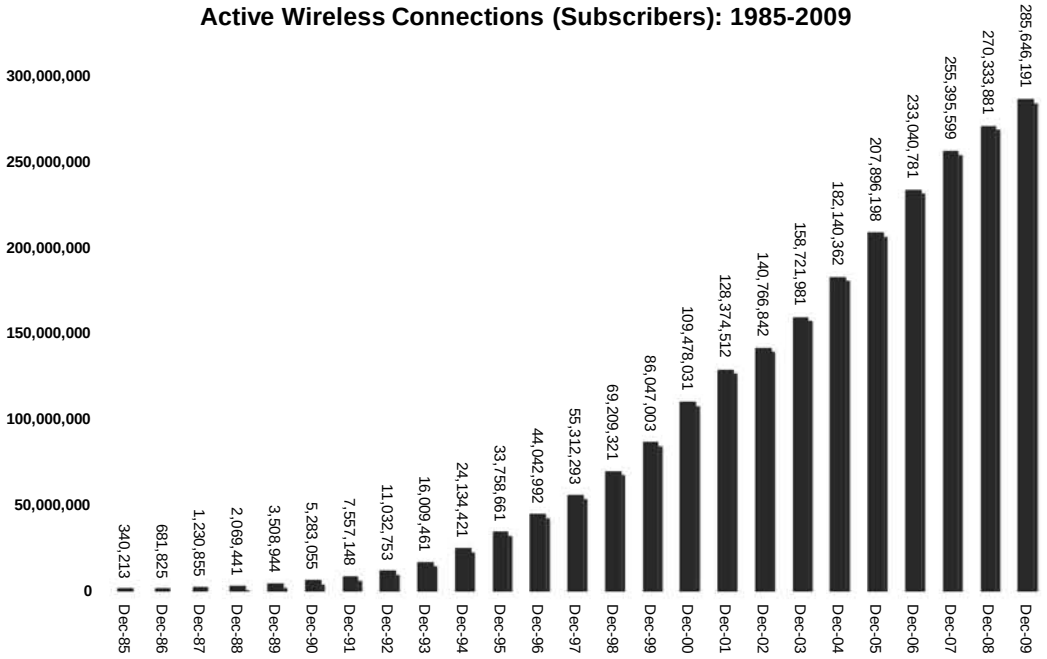
[57] T-Mobile Partner Network, http://developer.t-mobile.com/site/global/home/p_home.jsp (last visited July 27, 2010).

[58] Comments of Verizon and Verizon Wireless, GN Docket No. 09-191, at 28 (Jan. 14, 2010). Under the Open Development program, "customers have the option to use any wireless device that meets the company's published technical standards and any application the customer chooses on such devices. To facilitate development, Verizon has published technical standards, held a developer's conference, and established a certification process for third-party devices." *Id.* (citations omitted).

WIRELESS CONSUMPTION

6. The Virtuous Cycle of the Wireless Ecosystem Has Driven Consumption of and Demand For Wireless Services.

As Americans across all demographics and incomes subscribe to and rely on wireless service, wireless subscribership continues to grow. As of December 31, 2009, there were more than 285.6 million active wireless subscribers in the U.S., an increase of approximately 15 million from 2008.

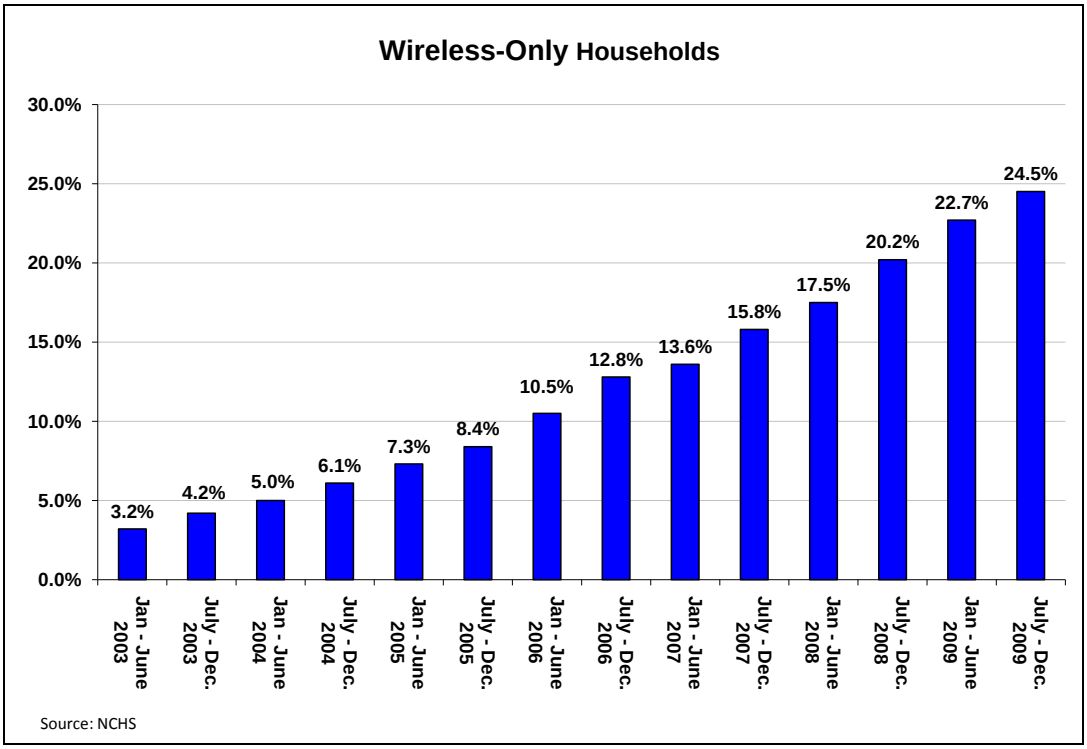


Source: CTIA Semi-Annual Wireless Survey

Significantly, at the end of 2009, 24.5 percent of U.S. households had only a wireless phone, with an additional 14.9 percent receiving almost all of their calls wirelessly even though they had landline service.[59] When combined, these metrics

[59] *See, e.g.*, Wireless Substitution: Early Release Estimates from the National Health Interview Survey, July – December 2009, Centers for Disease Control and Prevention (rel. May 12, 2010).

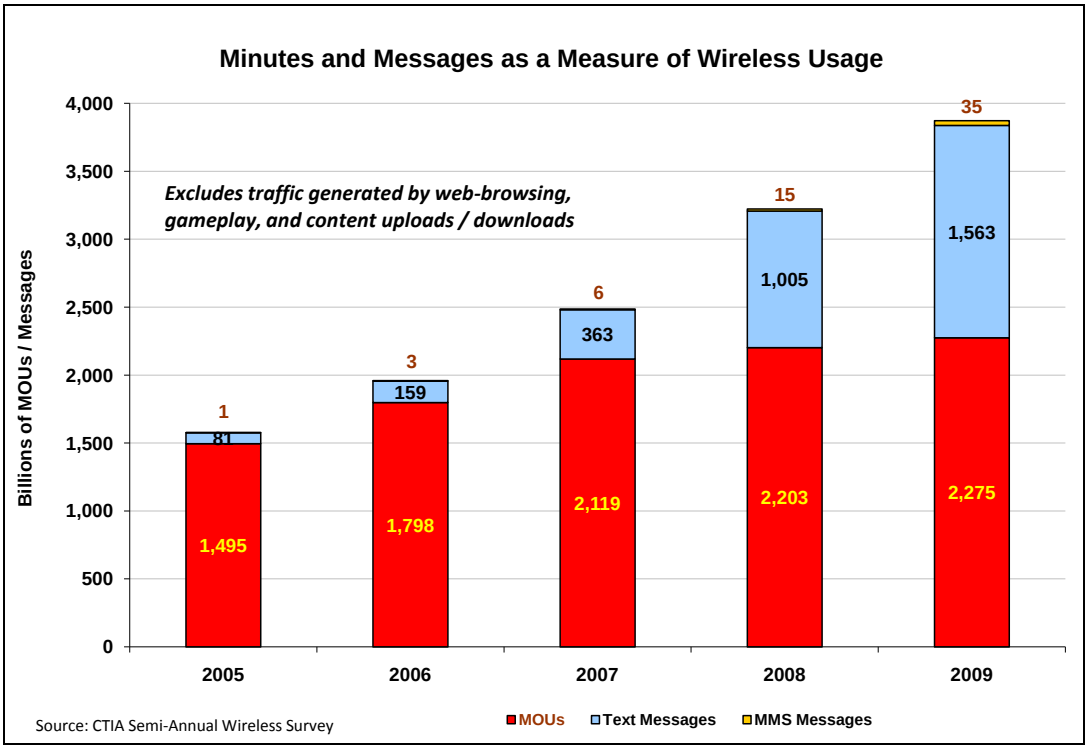
indicate that nearly 40 percent of Americans rely on wireless for the majority of their communications needs.



Total wireless output also has continued to climb. America's wireless users generated more than 2.2 trillion minutes of use ("MOU"), 1.563 trillion text messages, and 35 billion MMS messages in 2009, all of which represent increases over 2008. Put simply, "we have seen use of mobile Internet evolve from an occasional activity to being a daily part of people's lives."[60]

60 Press Release, comScore, Mobile Internet Becoming a Daily Activity for Many (Mar. 16, 2009), *available at* http://www.comscore.com/Press_Events/Press_Releases/2009/3/Daily_Mobile_Internet_Usage_Grows.

Wireless Usage Has Soared



Wireless is a growing means of high-speed access in the United States: while other forms of broadband access also have grown in recent years, none have grown at the same rate as wireless access. Indeed, there was a 600 percent growth in traffic to mobile websites over a twelve month period, according to Bango, a firm that tracks statistics for surfing of web sites optimized for mobile users.[61] Additionally, mobile wireless broadband is proving to be more rapidly adopted and used in communities that have

61 *See* David Murphy, *Bango Reveals Surge in Traffic to Mobile Sites*, Mobile Marketing Magazine (Feb. 16, 2010) *available at* http://www.mobilemarketingmagazine.co.uk/content/bango-reveals-surge-traffic-mobile-sites.

traditionally trailed in broadband adoption, such as minority consumers.[62] As CTIA has observed previously, wireless broadband is not a third pipe into the home, but rather is broadband to the person, wherever they are, whenever they want access to information. Ongoing competition in the wireless ecosystem will continue to drive mobile broadband demand and adoption.

B. The Virtuous Cycle of Mobile Wireless Competition Has Reaped Considerable Consumer Benefit.

It is clear that there is substantial competition taking place at all levels of the wireless ecosystem. The result has been considerable consumer benefit, with U.S. consumers having their choice of several facilities-based carriers in the vast majority of markets. Each wireless provider offers several innovative calling plans to meet their customers' needs, and this competition drives down the price of service and promotes innovation. Competition also drives the provision of consumer-friendly practices such as the recent trend toward pro-ration of early termination fees ("ETF"). Finally, U.S. wireless consumers are more educated than ever and have access to numerous outlets for information about wireless coverage, calling plans, devices, account management tools and services.

1. U.S. Consumers Enjoy a Wide Array of Choice of Service Providers.

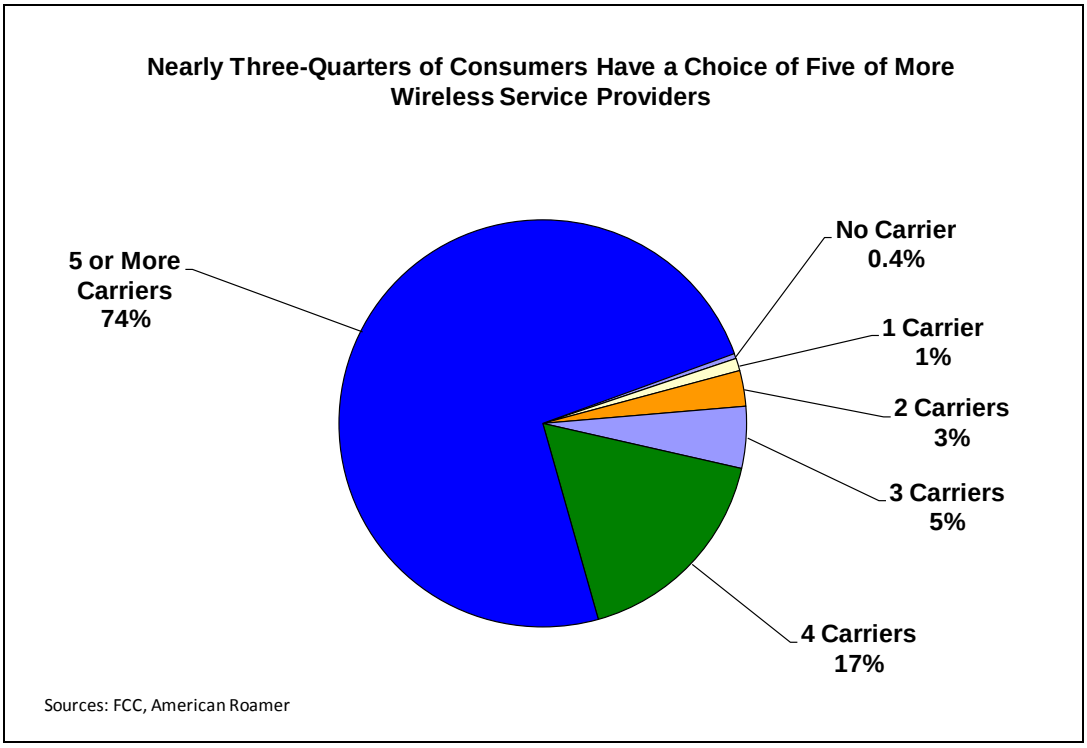
A wide variety of facilities- and non-facilities-based wireless carriers compete to win and retain the business of U.S. consumers. These carriers differentiate themselves through service offerings, usage plans, network coverage and reliability, and service

---

62 *See* Gautham Nagesh, *Pew: Minorities are More Likely to Use Mobile Web*, Hillicon Valley (July 7, 2010) *available at* http://thehill.com/blogs/hillicon-valley/technology/107547-pew-minorities-more-likely-to-use-mobile-web.

quality and customer care, among other features. Seventy-four percent of Americans have a choice of five or more facilities-based wireless providers, up from 64 percent a year ago.[63] In addition, 91 percent of Americans have access to four or more facilities-based providers, and 96 percent of Americans have access to three or more. The following chart illustrates the array of facilities-based wireless providers available to U.S. customers:

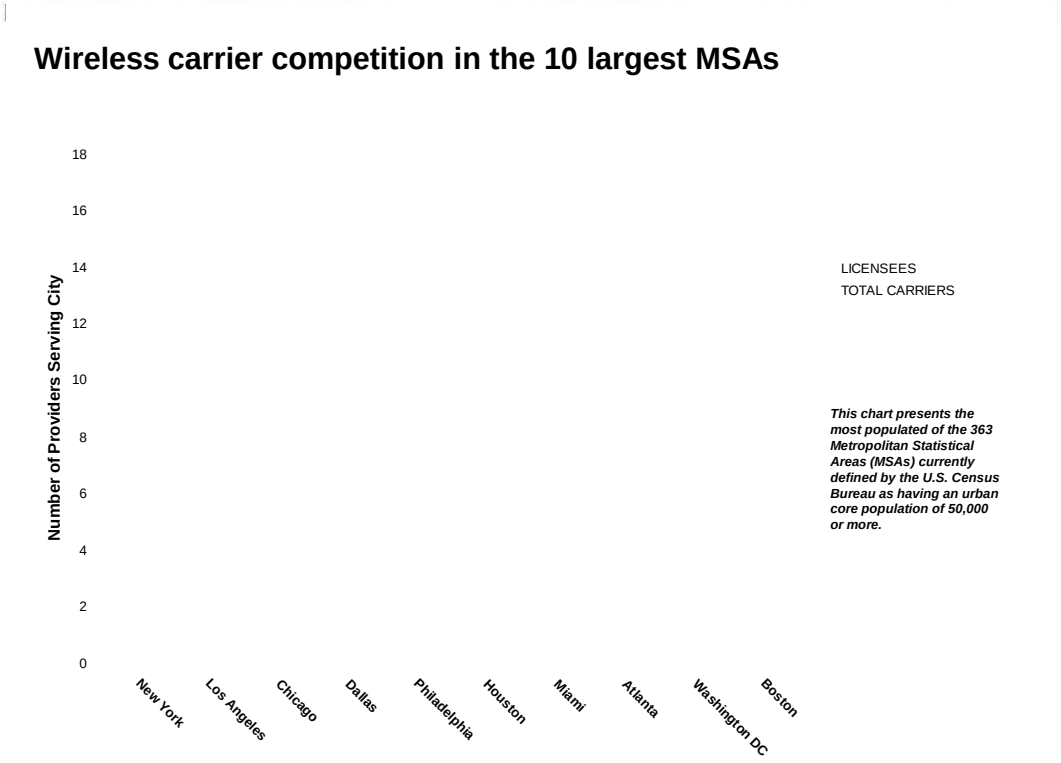
Wireless Has Delivered More Choices for More People



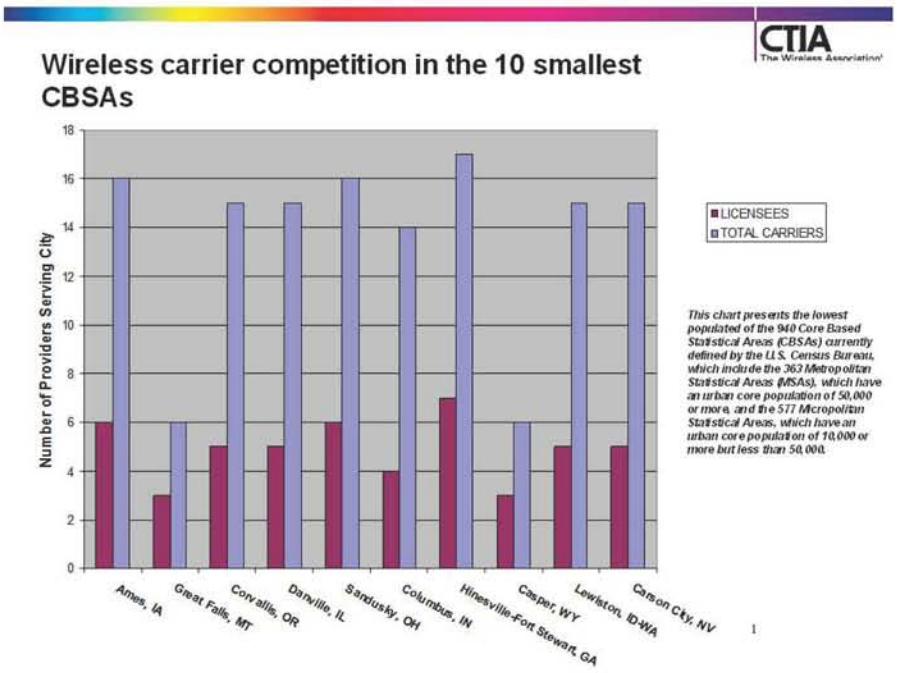
This vigorous competition is not confined to the largest urban areas, but rather can be seen broadly across the country. Both the ten largest Metropolitan Statistical Areas ("MSAs") in the country and the 10 least populous Core Based Statistical Areas

63 Comments of CTIA—The Wireless Association®, WT Docket No. 09-66, at 3 (June 15, 2009).

("CBSAs") in the nation experience intense competition. The following chart depicts the continued competition in the largest MSAs:



In each of these large metropolitan areas, there are no fewer than five facilities-based wireless carriers and no less than fifteen providers when MVNOs, resellers, and other non-facilities-based carriers are included. Moreover, the smallest markets also experience considerable competition:



Each of the bottom ten markets has no fewer than three facilities-based competitors, with seven of the ten having at least five facilities-based competitors. When non-facilities-based competitors are considered, consumers in eight of the bottom ten CBSAs by population have 14 or more competitive choices.

Thus, it is clear that by any measure U.S. consumers have considerable choice when selecting their wireless provider, and as a consequence these providers compete vigorously on every level of service to meet consumers' wireless needs. As stated further below, the U.S. wireless market leads the world in efficiency, competition, and value.

CALLING PLANS

2. Wireless Providers Continue to Develop and Revise Calling Plans to Meet Consumers' Needs.

Competition has motivated carriers to develop a variety of calling plans to satisfy diverse consumer needs, including pre-paid and post-paid, buckets of minutes and text

messages, friends and family plans, free long distance plans, national and local plans and unlimited calling and data services options. These diverse calling plans demonstrate two essential truths of the wireless market. First, through these plans, the wireless industry accommodates consumers' needs across all income and usage levels. Second, the development of such plans demonstrates the constant competition among wireless providers.

Examples of Mobile Wireless Plan Offerings	
Prepaid	Unlimited In-Network
Pay-as-you-Go	Unlimited Friends (My Circle, myFaves)
Postpaid	Basic Data Plan (Bundle / per MB)
Free Nights & Weekends	Basic Data Plan (Unlimited)
Rollover Minutes	Smartphone Data Plan (Bundle / per MB)
Unlimited Push-to-Talk	Smartphone Data Plan (Unlimited)
Unlimited Voice	Family Plan: Unlimited Voice
Unlimited Text	Family Plan: Unlimited Voice + Text
Unlimited Voice + Text	Family Plan: Unlimited Voice + Text & Data (Bundle / per MB)
Unlimited Voice + Text + Push-to-Talk	Family Plan: Unlimited Voice + Text + Data

Source: CTIA Research

Unlimited, flat-rate calling plans are available through numerous carriers. This pricing innovation has been deemed by one writer to be the "worthy successor" to the Digital One Rate plan introduced in the 1990s and credited by the Commission for "alter[ing] the market to the benefit of consumers."[64] During the first month of 2010, AT&T, Verizon Wireless, and U.S. Cellular reduced the price of their unlimited nationwide voice plans.[65] T-Mobile offers unlimited plans for voice, text, and/or Web

[64] 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, *Eleventh Report*, 21 FCC Rcd 10947, at ¶ 90 (2006).

[65] Press Release, AT&T, AT&T Announces New Unlimited Plans (Jan. 15, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30401&mapcode=; Press Release, Verizon,

access, both with and without annual contracts.[66] Sprint Nextel's Simply Everything Plan includes unlimited voice, text, data, and direct connect for $100.[67] Boost Mobile has introduced a $50/month unlimited nationwide talk, text and web plan, including 411 calls, instant messaging, and emailing.[68] Regional providers such as Leap's Cricket Communications and MetroPCS also offer various unlimited plans.[69]

Wireless providers also have responded to consumer demand for more flexibility within – and without – contracts. Several Tier II and Tier III providers have adopted a business model providing the flexibility of contract-free wireless service with unlimited talk, text and data plans. Cricket, MetroPCS, Pocket and Revol Wireless all offer such

---

Verizon Wireless Offers Simple, Affordable Convenience With New Unlimited Voice Plans (Jan. 15, 2010), *available at* http://www.prnewswire.com/news-releases/verizon-wireless-offers-simple-affordable-convenience-with-new-unlimited-voice-plans-81687552.html; Press Release, U.S. Cellular, U.S. Cellular Offers New Unlimited National Calling Plans (Jan. 18, 2010), *available at* http://www.uscellular.com/uscellular/common/common.jsp?path=/about/press-room/2010/us-cellular-offers-new-unlimited-national-calling-plans.html.

66 T-Mobile USA, Cell Phone Plans, http://www.t-mobile.com/shop/plans/Cell-Phone-Plans.aspx?catgroup=Individual&WT.z_shop_plansLP=individual (last visited July 28, 2010).

67 Sprint, Cell Phone Rate Plans, Wireless Phone Services, http://shop.sprint.com/NASApp/onlinestore/en/Action/DisplayPlans?filterString=Individual_Plans_Filter&id12=UHP_PlansTab_Link_IndividualPlans (last visited July 28, 2010) (may require entry of zip code).

68 Boost Mobile, Monthly Unlimited Cell Phone Plans, http://plans.boostmobile.com/monthlyunlimited.aspx (last visited July 28, 2010).

69 *See Leap's Cricket Service Now Offers Free, Unlimited Messaging in All Plans*, BUSINESS WIRE, Apr. 3, 2007, *available at* http://www.businesswire.com/portal/site/google/index.jsp?ndmViewId=news_view&newsId=20070403005453&newsLang=en; *see also* Cricket Wireless, Cell Phone Plans, http://www.mycricket.com/cricketplans/ (last visited June 28, 2010); MetroPCS, Unlimited Cell Phone Plans, http://www.metropcs.com/plans/default.aspx (last visited July 28, 2010) (may require zip code).

plans starting between $40 and $50.[70] AT&T, Verizon Wireless, and T-Mobile have also adopted pre-paid offerings. In fact, early this year, Verizon Wireless added new Mobile Broadband plans offering either a set number of minutes or unlimited usage to the company's pre-paid portfolio.[71]

Other innovative plans and pricing structures are being introduced that give consumers unprecedented choice and value in wireless. Customers are increasingly able to choose which features they want to include in their wireless plans. Cricket offers plans at $30, $40, $50, and $60 with varying features such as picture messaging, navigation, or international text messaging.[72] And as wireless data use explodes, the wireless industry is beginning to see new innovations in data plans. In early June, AT&T introduced a new series of broadband data plans that would, if customers choose to switch, reduce the monthly bill for 98 percent of the company's smartphone customers.[73]

---

[70] Cricket Wireless, Cell Phone Plans, http://www.mycricket.com/cricketplans/ (last visited June 28, 2010); Press Release, MetroPCS Communications, Inc., MetroPCS Introduces Wireless for All Nationwide Service Plans with No Hidden Taxes or Regulatory Fees (Jan. 12, 2010), *available at* http://investor.metropcs.com/phoenix.zhtml?c=177745&p=irol-newsArticle&ID=1373920&highlight; Pocket Communications, No Contract Cell Phone Rate Plans, http://www.pocket.com/index.php/plans (last visited July 28, 2010); Revol Wireless, Plans, https://www.revol.com/estore/plans.php (last visited July 28, 2010) (requires entry of zip code).

[71] Press Release, Verizon Wireless, Verizon Wireless Offers Simple, Affordable Convenience with New Unlimited Voice Plans (Jan. 15, 2010) *available at* http://news.vzw.com/news/2010/01/pr2010-01-14c.html.

[72] Cricket Wireless, Cell Phone Plans, http://www.mycricket.com/ http://www.mycricket.com/cell-phone-plans/ (last visited July 29, 2010).

[73] Press Release, AT&T, AT&T Announces New Lower-Priced Wireless Data Plans to Make Mobile Internet More Affordable to More People (June 2, 2010), *available at* http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=30854.

3. Competition Drives the Adoption of Consumer-Friendly Practices.

Competitive forces continue to drive carriers to modify other features and policies. The following chart details many of those practices for several wireless carriers. These policies include, but are not limited to, pro-rating ETFs; increasing consumer transparency regarding ETFs; offering various wireless services without an annual contract; providing money-back guarantees; and providing consumers with tools to monitor their accounts and use of various services on different platforms.

	ETF policies	Trial period	Point of sale information/ documentation	Online, street-level coverage maps	Ability to change plan w/o contract extension	Ability to purchase service w/o a contract (prepaid)	Ability to check usage info/balance from web site, device	Post-paid plan bill shock preventative tools	Provides international roaming information/alerts	Ability to bring your own phone	Ability to pay full price for a handset and take service w/o a contract
AT&T	Prorates new and renewed 1 & 2 year consumer contracts. Fees decline each completed month of the contract (amounts vary by device)[i]	30-day[ii]	Follows CTIA Consumer Code	Yes[iii]	Yes[iv]	Yes[v]	Yes[vi], dial *BAL# for account balance, *MIN# for minutes, and *DATA# for data usage	Smart Limits - determine how and when the phone can be used and sends an alert when the limit for texts or minutes is reached[vii]	Yes[viii]/No	Yes[ix]	Yes[x]
Sprint Nextel	Prorates new and renewed 1 & 2 year consumer contracts. Fees decline by $10 per month, beginning with the 5th month of the contract until reaching $50 for the remaining 5 months of the contract[xi]	30-day[xii]	Follows CTIA Consumer Code	Yes[xiii]	Yes[xiv]	Yes[xv]	Yes[xvi], dial *2 for usage and balance, and *4 for minutes balance	Spending Limit - set a max balance for a given time. For multiple phones accounts, users set spending limits per phone[xvii]	Yes[xviii]/No	Yes[xix]	Yes[xx]
T-Mobile USA	Prorates new and renewed 1 and 2 year consumer contracts. $200 with > 180 days left, $100 with > 90 days left, and the lesser of $50 or the customers' standard monthly charge with < 90 days left[xxi]	14-day (30 days in CA)[xxii]	Follows CTIA Consumer Code	Yes[xxiii]	Yes[xxiv]	Yes[xxv]	Yes[xxvi], dial #MSG# for text balance, #MIN# for minutes used, #BAL# for current balance	Usage Controls - set allowances for voice and texts, and set times when calls, texts and data are restricted[xxvii]	Yes[xxviii]/Yes[xxix]	Yes[xxx]	Yes[xxxi]
Verizon Wireless	Prorates new and renewed 1 & 2 year consumer contracts. Fees decline each completed month of the contract (amounts vary by device)[xxxii]	30-day[xxxiii]	Follows CTIA Consumer Code	Yes[xxxiv]	Yes[xxxv]	Yes[xxxvi]	Yes[xxxvii], dial #BAL for balance, #MIN for minutes balance, #DATA for text and data usage	Family Allowances - set the minutes, messages, and downloads each person gets; automatic notice upon reaching allowance[xxxviii]	Yes[xxxix]/Yes[xl]	Yes[xli]	Yes[xlii]

	ETF policies	Trial period	Point of sale information/ documentation	Online, street-level coverage maps	Ability to change plan w/o contract extension	Ability to purchase service w/o a contract (prepaid)	Ability to check usage info/balance from web site, device	Post-paid plan bill shock preventative tools	Provides international roaming information/alerts	Ability to bring your own phone	Ability to pay full price for a handset and take service w/o a contract
Cricket Wireless	Pre-paid contracts only – No ETFs[xliii]	30-day[xliv]	Follows CTIA Consumer Code	Yes[xlv]	Yes[xlvi]	Yes[xlvii]	Yes,[xlviii] dial *PAY or *611 for account balance	No post-paid plans	International Roaming requires the purchase of roaming minutes, therefore overage is impossible[xlix]	Yes[l]	Yes[li]
Metro PCS	Pre-paid contracts only – No ETFs[lii]	30-day[liii]		Yes[liv]	Yes[lv]	Yes[lvi]	Yes[lvii], dial *99 or 611 for account balance.	No post-paid plans	Does not provide international roaming	Yes[lviii]	Yes[lix]
U.S Cellular	.Starting in the 5th month of the Agreement, the ETF will be reduced by $7.50/month (24 month term) or $18.50/month (12 month term)[lx]	30-day [lxi]	Follows CTIA Consumer Code	Yes[lxii]	Yes[lxiii]	Yes[lxiv]	Yes[lxv], dial #BAL (#225) for current balance, voice minutes and text messages	Overage Protection - set allowances for voice and text, alerts when subscriber is nearing or over limit[lxvi]	Yes[lxvii]/No	No[lxviii]	Yes[lxix]
TracFone Wireless	Pre-paid contracts only – No ETFs [lxx]	30-day[lxxi]		No, national map by device[lxxii]	Yes[lxxiii]	Yes[lxxiv]	Yes[lxxv], voice balance and service end date displayed on device	No post-paid plans	Does not provide international roaming	No[lxxvi]	Yes[lxxvii]
SouthernLINC Wireless	Starting after half of service contract has been satisfied, the ETF will be prorated based on amount of the monthly contract[lxxviii]	15-day[lxxix]	Follows CTIA Consumer Code	No, regional and national maps[lxxx]	Yes[lxxxi]	Yes[lxxxii]	Yes[lxxxiii], dial 646 to hear how many peak and off-peak minutes you have used in your current billing period	Budget Manager Plan - fixed amount of minutes, so no overage charges[lxxxiv]	Does not provide international roaming	Yes [lxxxv]	Yes[lxxxvi]

Many of these policies are addressed in the CTIA Consumer Code for Wireless Service ("Consumer Code").[74] The Consumer Code is designed to give consumers the information they need to make informed decisions regarding their wireless service while still permitting the innovation consumers have come to expect from the wireless industry. For example, signatories adhere to the Code's 10 points, including commitments to disclose rates, additional taxes, fees, surcharges and terms of service; provide coverage maps; make customer service readily accessible; and allow a trial period for new service. Just days ago, CTIA updated the Consumer Code to require carriers to ensure disclosure of data allowances offered in a service plan, whether there are any prohibitions on data service usage and disclosure of whether there are network management practices that will have a material impact on the customer's wireless data experience. The Code also states that prepaid service providers must disclose the period of time during which any prepaid balance is available for use.[75]

Numerous carriers are pro-rating their ETFs to provide more value to their customers. AT&T reduces its ETF by ten dollars for every month of the service plan that is completed.[76] Sprint Nextel pro-rates ETFs on new and renewed consumer contracts for postpaid wireless services.[77] T-Mobile also announced that it would begin pro-rating ETFs over the course of the

---

74 *See* CTIA-The Wireless Association® "Consumer Code for Wireless Service," *available at* http://www.ctia.org/consumer_info/service/index.cfm/AID/10549 (last visited July 29, 2010).

75 Press Release, CTIA-The Wireless Association® Announces Updates to Its "Consumer Code for Wireless Service," *available at* http://www.ctia.org/media/press/body.cfm/prid/1992 (July 28, 2010) (last visited July 29, 2010).

76 AT&T, Returns Policy and Early Termination Fees *available at* http://www.wireless.att.com/cell-phone-service/legal/return-policy.jsp (last visited July 29, 2010).

77 Sprint, Early Termination Fees *available at* http://shop.sprint.com/en/services/termination_fee/early_termination_fee.shtml?ECID=vanity:etf (last visited July 29, 2010).

contract period for postpaid wireless services back in 2008.[78] As early as 2006, Verizon Wireless began pro-rating on new and extended consumer contracts for post-paid wireless services by $5 per month until the contract is completed.[79] Other carriers with prorated ETF policies include SouthernLINC Wireless and U.S. Cellular.[80]

In addition to pro-rating early termination fees, wireless carriers have implemented a number of consumer-friendly disclosure practices to educate consumers regarding ETFs. For example, AT&T has cited "many places" where it discloses the terms and conditions of its service offerings.[81] Sprint provides disclosure of ETF policies before, during, and after the sale and activation of a wireless handset.[82] T-Mobile notes that various terms and conditions, including those regarding ETFs, are "incorporated into T-Mobile's service agreements, T-Mobile's own website and online purchase path, and in various store materials, as well as throughout [its] customer care organization. T-Mobile representatives are trained to highlight

---

78 Press Release, T-Mobile USA, T-Mobile to Introduce More-Flexible Contract Terms for Customers (Nov. 7, 2008) *available at* http://www.tmobile.com/company/PressReleases_Article.aspx?assetName=Prs_Prs_20071107&title=T-Mobile%20to%20Introduce%20More-Flexible%20Contract%20Terms%20for%20Customers.

79 *Verizon makes good on ETF promise*, FIERCE WIRELESS, Nov. 19, 2006, *available at* http://www.fiercewireless.com/story/verizon-makes-good-on-etf-promise/2006-11-20.

80 *See* SouthernLINC Promotions Detail *available at* http://www.southernlinc.com/promodetails.asp (last visited July 29, 2010).

81 Letter from Robert W. Quinn, Jr., Esq., AT&T Services, Inc. to Joel Gurin and Ruth Milkman, Federal Communications Commission, GC Docket No. 09-158, at 4 (Feb. 23, 2010) ("AT&T ETF Letter").

82 Letter from Vonya B. McCann, Sprint Corporation to Joel Gurin and Ruth Milkman, Federal Communications Commission, GC Docket No. 09-158, at 4-5 (Feb. 23, 2010) ("Sprint ETF Letter").

key terms and conditions – including the ETF, where applicable – during the sales process."[83] Verizon Wireless informs customers about ETFs in "multiple ways" including "in print advertising, checklists for sales representatives, scripts of telesales representatives, the Customer Agreement, detailed customer guides, sales receipts, on-line store disclosures and sales confirmation letters that are sent to customers."[84] Verizon Wireless also changed the price cards displayed next to devices in stores to include the amount of the ETF for each device.[85] Furthermore, all four of the largest wireless carriers have "money-back guarantee" policies under which consumers may return devices within a certain period of time with no penalty. AT&T offers a 30-day trial period with no ETF.[86] Sprint provides a similar 30-day guarantee,[87] while T-Mobile offers variable guarantee periods depending on the circumstances of purchase.[88]

---

83 Letter from Thomas J. Sugrue, T-Mobile USA, Inc. to Joel Gurin and Ruth Milkman, Federal Communications Commission, GC Docket No. 09-158, at 4 (Feb. 23, 2010) ("T-Mobile ETF Letter").

84 Letter from Kathleen Grillo, Verizon Wireless to Joel Gurin and Ruth Milkman, Federal Communications Commission, GC Docket No. 09-158, at 2 (Feb. 23, 2010) ("Verizon Wireless ETF Letter").

85 *Id.* at 1.

86 AT&T ETF Letter at 8 ("AT&T was the first in the industry to adopt a 30 day trial period. All customers have the right during the first 30 days of service to cancel service for any reason with no further contractual obligation. They pay only for the service they actually used during the trial period. If they cancel during the trial period, they generally are required to return the handset, and when they do, they will receive a full refund less a restocking fee. They also may choose to keep the handset, and pay the difference between the discounted handset price they originally paid and the regular retail price of the handset.").

87 Sprint ETF Letter at 6 ("If the customer is not satisfied with his or her service, the customer should return the device undamaged and deactivate service within 30 days. Sprint will refund the activation fee and waive the ETF. The customer is only responsible for actual usage through cancellation.").

88 T-Mobile ETF Letter at 7 ("For service plans subject to an ETF, T-Mobile offers customers a 14-day trial period, during which time customers can cancel service for any reason without paying the ETF. For customers in California, the trial period is 30 days; and for non-California customers who activate service online or over the phone, the trial period is 20 days. Customers returning phones in these circumstances are entitled to a refund on a handset purchased along with their activation (with the exception of a very small number of "limited

Verizon Wireless customers can terminate service within 30 days of activation and return or exchange merchandise within 30 days.[89]

Finally, and as stated above, consumers can choose from a variety of pre-paid or "pay-as-you-go" options, foregoing an annual contract. However, most customers still choose term service agreements with ETFs because these agreements offer lower monthly rates, discounted equipment, and discounted service activation fees.

CONSUMER INFORMATION

4. There Exist Numerous Sources of Information That Enable Consumer Education and Benefit.

With so many wireless options available to them, consumers require resources that enable them to measure their options and determine which providers, plans, and devices best meet their needs. To respond to this demand, a multitude of resources have been developed to assist consumers, including considerable publicly available information on carrier operations from wireless providers. In particular, there are a number of resources on the Internet to assist customers in their wireless choices.

Wireless carriers' websites provide significant detail regarding network coverage. Carriers of all sizes have provided to potential customers coverage maps that allow consumers to determine both general coverage and relative coverage quality, with some websites providing

edition" devices), subject to a restocking fee so long as the phone is returned in a "like new" condition and with the original packaging.").

89 Verizon Wireless ETF Letter at 6.

capability to evaluate coverage at the neighborhood or street level.[90] For example, T-Mobile's Personal Coverage Check allows consumers to enter their street address and generate a map that lists the availability of T-Mobile HotSpots and provides six levels of signal strength, ranging from "None" to "Excellent."[91] Carriers' websites also enable consumers to compare pricing plans and handset options available online.

To provide consumers with information to help them make informed choices, carriers representing almost 93 percent of wireless consumers have signed on to CTIA's Consumer Code for Wireless Service.[92] More than half of this Code commits carriers to providing adequate information to consumers in stores, on websites, in advertising, in contract documents, and/or on customer bills. As stated above, the CTIA Consumer Code recently has been updated. Specifically, the signatories to the Code have committed to disclose rates and terms of service, make available maps showing where service is generally available, provide contract terms to customers and confirm changes in service, provide specific disclosures in advertising, and distinguish various elements of monthly bills.[93]

---

90 *See, e.g.*, AT&T, AT&T Coverage Viewer, http://www.wireless.att.com/coverageviewer/ (last visited July 28, 2010); Sprint, Nationwide Coverage, http://coverage.sprint.com/IMPACT.jsp?ECID=vanity:coverage (last visited July 28, 2010); T-Mobile USA, Personal Coverage Check, http://www.t-mobile.com/coverage/pcc.aspx (last visited July 28, 2010); Verizon Wireless, Coverage Locator, http://www.verizonwireless.com/b2c/CoverageLocatorController?requesttype=NEWREQUEST (last visited July 28, 2010); Cricket Wireless, Nationwide Coverage Maps, http://www.mycricket.com/coverage/maps/wireless (last visited July 28, 2010); nTelos Wireless, Coverage Maps and Locator, http://nteloswireless.com/coverage/ (last visited July 28, 2010).

91 T-Mobile USA, Personal Coverage Check, http://www.t-mobile.com/coverage/pcc.aspx (last visited July 28, 2010).

92 CTIA – The Wireless Association®, Consumer Code for Wireless Service, *available at* http://files.ctia.org/pdf/ConsumerCode.pdf.

93 CTIA – The Wireless Association®, Consumer Code, http://www.ctia.org/content/index.cfm/AID/10352 (last visited July 28, 2010).

Customers also may consult any of several independent sources that provide product reviews and guidance. *Consumer Reports* provides interactive cell phone ratings and regularly reviews cell phone service.[94] Similarly, J.D. Power and Associates provides information on carrier network quality twice per year,[95] as well as information on wireless customer care[96] and consumer satisfaction with wireless phones.[97] Other websites offer reviews and information about handsets and carriers[98] and comparison functions across carriers, as well as reviews of other functions and aspects of wireless service.[99]

---

94 Consumer Reports, Cell Phone & Service Guide from Consumer Reports, http://www.consumerreports.org/cro/electronics-computers/phones-mobile-devices/cell-phones-services/cell-phone-service-buying-advice/cell-phone-service-getting-started/cell-phone-service-getting-started.htm (last visited July 28, 2010).

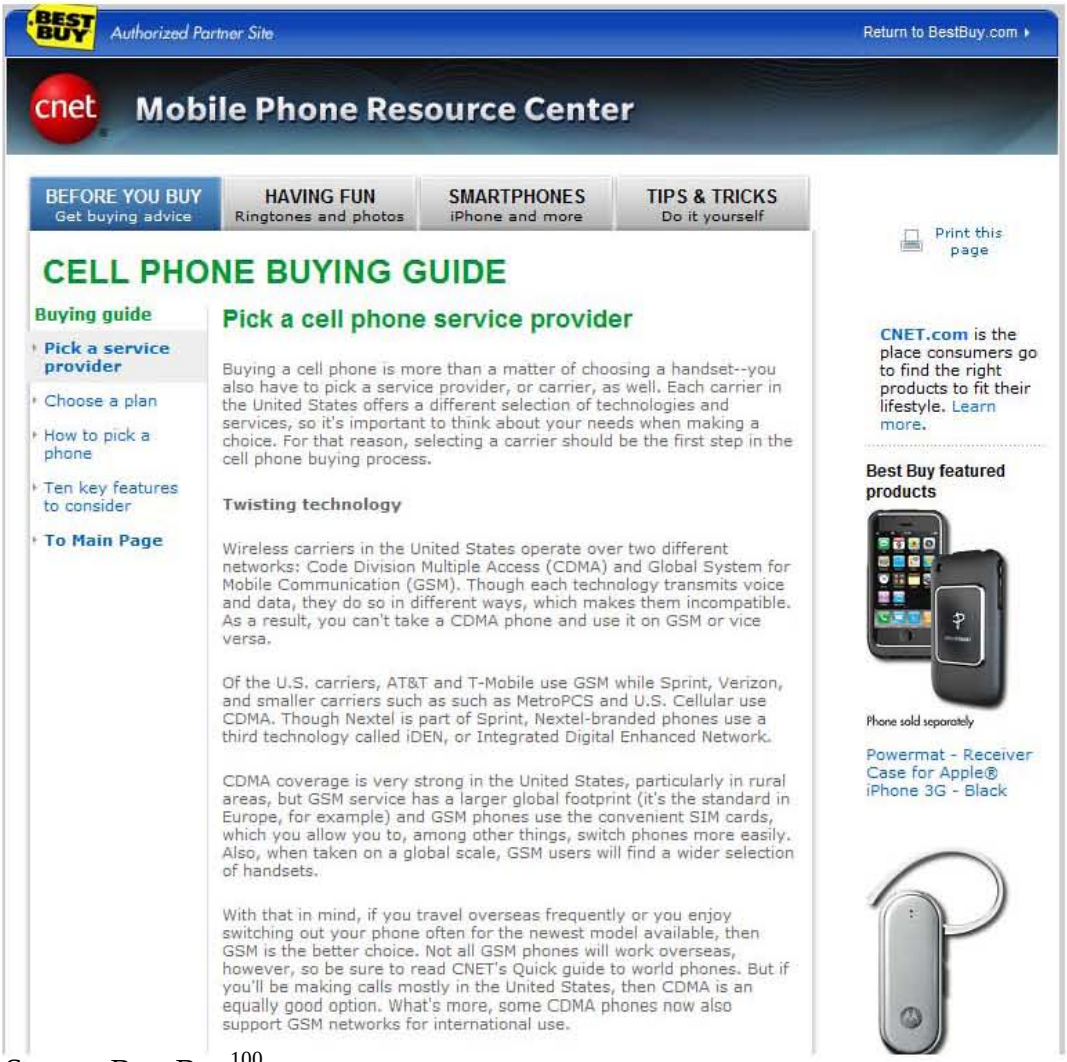
95 J.D. Power, 2010 Wireless Call Quality Performance Study Volume 1, http://www.jdpower.com/telecom/articles/2010-Wireless-Call-Quality-Performance-Study-Volume-1 (last visited July 28, 2010).

96 J.D. Power, 2010 Wireless Customer Care Volume 1, http://www.jdpower.com/telecom/articles/2010-Wireless-Customer-Care-Volume-1 (last visited July 28, 2010).

97 Press Release, J.D. Power, J.D. Power and Associates Reports: Touch Screens Drive Higher Satisfaction with Both Feature-Rich Smartphones and Traditional Mobile Phones (Apr. 1, 2010), http://businesscenter.jdpower.com/news/pressrelease.aspx?ID=2010039.

98 Phone Scoop, http://www.phonescoop.com/ (last visited July 28, 2010); BillShrink, Cell Phone Plans, Credit Cards & CD Rates, Compare and Save Money on BillShrink, http://www.billshrink.com/ (last visited July 28, 2010); Best Buy-CNET *available at* http://bestbuy-cnet.com.com/4352-13749_7-6590054.html; CNET *available at* http://reviews.cnet.com/cell-phone-buying-guide/?tag=leftColumnArea1.0; MountainWireless.com *available at* http://www.mountainwireless.com/.

99 *See, e.g.*, Myrateplan.com, Wireless Phone Service, http://myrateplan.com/wireless/ (last visited July 28, 2009).



Source: Best Buy[100]

In addition, many wireless carriers compete in their ability to provide consumers with tools to monitor their accounts and use of various services on many different platforms. Postpaid wireless customers are able to check their monthly use via the web, by dialing shortcuts from their mobile device, or using applications on their smartphone. Numerous wireless providers, including AT&T, Cellcom, SouthernLINC, Sprint Nextel, T-Mobile, U.S. Cellular, Verizon

[100] CNET – Best Buy Cell Phone Buying Guide, *available at* http://bestbuy-cnet.com.com/4352-13749_7-6590054.html (last accessed 7/30/2010).

Wireless, and others provide consumers the ability to check monthly use via the web or by dialing shortcuts from their mobile device.[101]

Many wireless carriers also provide additional tools for managing use. For example, AT&T, T-Mobile and Verizon Wireless provide methods of parental control or plan monitoring that allow subscribers to limit allotted minutes, messages, and downloads each month.[102] These

---

[101] *See* Posting of Christopher Guttman-McCabe, *Consumer Tip: How to Manage Your Wireless Account*, CTIA Blog (May 12, 2010), *available at* http://www.ctia.org/blog/index.cfm/2010/5/12/Consumer-Tip-How-to-Manage-Your-Wireless-Account (last visited June 28, 2010). *See also*, AT&T, MyWireless, https://www.att.com/olam/dashboardAction.olamexecute (create and sign into "mywireless" account to check usage) (last visited June 25, 2010); Cellcom, Support, http://www.cellcom.com/faq_qa.html?categoryid=2 (last visited July 28, 2010)(MyCellcom allows users to view recent invoices, make payments and check minutes, data and messaging use); SouthernLINC, MyLINC, http://www.southernlinc.com/managemyaccount.asp (MyLINC Office allows you to log into your account and make changes with the click of a button. Once you add the MyLINC Office feature, come back to this page to change or configure email accounts. Go to webpage and click on "Customer Support" in the horizontal toolbar and then "manage my account") (last visited June 25, 2010); Sprint, Check My Usage, http://www.sprint.com/index_c.html (click at bottom on "check my usage" at bottom of page) (last visited June 25, 2010); T-Mobile, My T-Mobile, http://www.t-mobile.com/shop.aspx?WT.srch=1&WT.mc_id=151m1 (click on "My T-Mobile" in the top right corner of the screen to register and to sign in and check minutes and messages used) (last accessed June 25, 2010); U.S. Cellular, *Login*, http://www.uscellular.com/uscellular/ ("Login" in the top of the screen and there one can view minutes used) (last visited June 25, 2010); Verizon Wireless, MyVerizon, http://www.verizonwireless.com/b2c/index.html (click on "MyVerizon" in task bar and usage can be viewed upon login) (last visited June 25, 2010).

[102] *See, e.g.*, AT&T, Smart Limits, http://www.wireless.att.com/learn/articles-resources/parental-controls/smart-limits.jsp (AT&T Smart Limits allows users to determine specifically how and when your child can use the phone such as times of day as well as number of text messages and minutes used per month and gives a warning when the child reaches their limit for texts or minutes) (last visited June 25, 2010); T-Mobile, Family Allowances, https://www.t-mobile.com/shop/addons/services/information.aspx?PAsset=FamilyWireless&tp=Svc_Tab_FW101FamilyAllowances&WT.z_unav=mst_disc_save_FA ("Family Allowances" allows you to determine how many minutes, messages, and downloads each person in a family plan gets. Once enrolled, if a family member reaches an allowance, you'll be automatically notified and their service will temporarily be disabled. There are settings to always allow certain numbers called, even after a family member reaches their allowance. Also, you can change allowances at any time) (last visited June 25, 2010); Verizon Wireless, Parental Controls: Take Control,

features let customers set voice and messaging allowances; receive free text alerts when a family member nears or reaches their limit; designate specific times of day when a family member can't call, message or use data on his or her cell phone (calls to other account members and 9-1-1 are always allowed); and create lists of blocked phone numbers to prevent unwanted calls and text messages from being sent or received.

Importantly, wireless carriers provide usage alerts via text message and cut-off mechanisms. For example, U.S. Cellular provides a free program entitled "Overage Protection."[103] If a customer signs up for this program, U.S. Cellular will send a text message alert when the subscriber is nearing or at the point where overage charges will be incurred for voice or text message use.[104] Sprint Nextel offers its "Spending Limit Program." This program allows users to set a maximum balance their account can reach at a given time, either per phone or for the account as a whole. This ensures that when the subscriber reaches their limit, their service is cut off until the next month.[105]

The unprecedented availability of information enables consumers to make informed choices as to the wireless carrier that will best meet their needs, the calling plan that will provide them with the best value and appropriate features, and the right all-in-one device. Subscribers can use this information to monitor their use of wireless services, and to choose among carriers.

---

https://wbillpay.verizonwireless.com/vzw/nos/uc/uc_overview.jsp (Parental Controls can limit child's use of phone in terms of minutes and text messages) (last visited June 25, 2010).

[103] U.S. Cellular, Overage Protection, http://www.uscellular.com/uscellular/common/common.jsp?path=/overage-protection/index.html (last visited June 25, 2010).

[104] *Id.*

[105] Sprint, Learn about the Spending Limit Program, http://support.sprint.com/support/article/Learn_about_the_Account_Spending_Limit_program/case-wh164052-20100120-111115 (last visited June 10, 2010).

As carriers desire to minimize their churn rates, they constantly endeavor to maintain a high level of customer satisfaction.

C. The U.S. Wireless Marketplace Leads the World in Efficiency, Competition, and Value for Consumers.

1. Concentration and Competition – Foreign Comparison

The U.S. wireless industry continues to provide unparalleled value for consumers. Indeed, the U.S. wireless market is – without question – the most competitive market in the world, and one with the lowest concentration and lowest Herfindahl-Hirschman Index among the 26 Organization for Economic Co-Operation and Development ("OECD") countries monitored by Bank of America Merrill Lynch ("BoA Merrill Lynch").[106] As CTIA has previously documented for the Commission, U.S. wireless consumers also enjoy the lowest cost per minute and the highest minutes of use of all OECD countries.[107]

As shown in the chart below, at the end of 2009 the U.S. wireless market had the second lowest HHI of the 26 OECD countries, trailing only slightly behind the United Kingdom. It is

[106] Bank of America Merrill Lynch does not monitor the wireless markets of the following OECD countries: Iceland; Ireland; Luxembourg; and Slovakia. *See* Glen Campbell et al, Global Wireless Matrix 1Q10: A Modest Recovery, Asia in the Lead, Bank of America Merrill Lynch (Apr. 13, 2010) (reporting year-end 2009 data).

[107] Letter from Christopher Guttman-McCabe, CTIA to Marlene H. Dortch, Federal Communications Commission, WT Docket No. 09-66 (Apr. 29, 2010) ("*CTIA April 29, 2010 Ex Parte*").

worth noting, however, that as of the second quarter of 2010, the U.S. now has the lowest HHI in the OECD after the approval of the merger of two of the UK's operators.[108]

[108] *See, e.g., France Telecom, Deutsche Telekom merge in UK*, Associated Press (Apr. 1, 2010), *available at* http://www.google.com/hostednews/ap/article/ALeqM5hElG71SFgqVHE4-NHNhI5ZWZsMuQD9EQ81GG0.

Wireless Mobile Competition in OECD Countries, 4Q09[109] HHI Values								
Number of Operators	1	2	3	4	5	6	Others	HHI Sum
Australia	1,689.21	1,069.29	686.44	0.00	0.00	0.00	0.00	3,444.94
Austria	1,823.29	924.16	349.69	67.24	0.00	0.00	0.00	3,164.38
Belgium	1,849.00	846.81	635.04	7.29	0.00	0.00	0.00	3,338.14
Canada	1,361.61	912.04	806.56	4.41	4.00	0.16	0.00	3,088.78
Czech Republic	1,656.49	1,361.61	501.76	0.00	0.00	0.00	0.00	3,519.86
Denmark	2,079.36	761.76	388.09	50.41	0.00	0.00	0.00	3,279.62
Finland	1,489.96	1,398.76	576.00	0.00	0.00	0.00	0.00	3,464.72
France	2,246.76	1,253.16	292.41	0.00	0.00	0.00	0.00	3,792.33
Germany	1,310.44	1,024.00	306.25	204.49	0.00	0.00	0.00	2,845.18
Greece	1,971.36	998.56	576.00	0.00	0.00	0.00	0.00	3,545.92
Hungary	2,043.04	1,017.61	529.00	0.00	0.00	0.00	0.00	3,589.65
Italy	1,225.00	1,142.44	432.64	106.09	0.00	0.00	0.00	2,906.17
Japan	2,410.81	772.84	368.64	14.44	0.00	0.00	0.00	3,566.73
Korea	2,560.36	979.69	327.61	0.00	0.00	0.00	0.00	3,867.66
Mexico	5,069.44	436.81	18.49	12.96	0.00	0.00	0.00	5,537.70
Netherlands	2,693.61	605.16	552.25	0.00	0.00	0.00	0.00	3,851.02
New Zealand	2,480.04	2,125.21	16.81	0.00	0.00	0.00	0.00	4,622.06
Norway	3,014.01	918.09	62.41	47.61	0.00	0.00	0.00	4,042.12
Poland	985.96	942.49	912.04	59.29	0.00	0.00	0.00	2,899.78
Portugal	1,909.69	1,267.36	428.49	0.00	0.00	0.00	0.00	3,605.54
Spain	1,883.56	973.44	479.61	7.84	0.00	0.00	0.00	3,344.45
Sweden	2,143.69	846.81	259.21	72.25	0.00	0.00	0.00	3,321.96
Switzerland	3,856.41	424.36	299.29	0.00	0.00	0.00	0.00	4,580.06
Turkey	3,169.69	620.01	353.44	0.00	0.00	0.00	0.00	4,143.14
United Kingdom	712.89	571.21	453.69	428.49	54.76	0.00	0.00	2,221.04
United States	1,017.61	888.04	285.61	139.24	5.29	2.89	30.25	2,368.93

Note that this calculation actually overstates the YE2009 HHI for the US, as it counts all "others" as a single operator with a 5.5% market share, instead of as 140+ separate operators, with market shares ranging from 2.2% to less than 0.001%. Also note that HHIs for Canada and Norway have been adjusted to reflect the existence of additional operators not reflected in the original BofA Merrill Lynch table for those two countries. The HHI for France has been adjusted to include the MVNO subscribers with their underlying carriers.

[109] The U.S. HHI in the table has been updated per market share adjustments to the year-end 2009 numbers made in the most recent BofA Merrill Lynch Global Wireless Matrix (July 9, 2010), at Table 144. In fact, if the top seven wireless carriers were treated separately from the "all other" category, the HHI for the U.S. as of year-end 2009 would fall to 2,355. If this treatment was carried through the first quarter of 2010, the resulting HHI for the first quarter 2010 would be 2,359.

Indeed, of the 26 OECD countries tracked, 12 have three or fewer competitors. Only two – the United States and Canada – have five or more competitors.[110] In fact, in the United States there are eight facilities-based carriers that have approximately one million or more subscribers, with more than 140 separate wireless carriers and more than 43 non-facilities based MVNOs also providing service.[111]

2010 – Number of Competitors per Country:

Countries with Three Providers	Countries with Four Providers	Countries with Five or More Providers
Australia	Austria	Canada
Czech Republic	Belgium	USA
Finland	Denmark	
France	Germany	
Greece	Italy	
Hungary	Japan	
Korea	Mexico	
Netherlands	Norway	
New Zealand	Poland	
Portugal	Spain	
Switzerland	Sweden	
Turkey	UK	

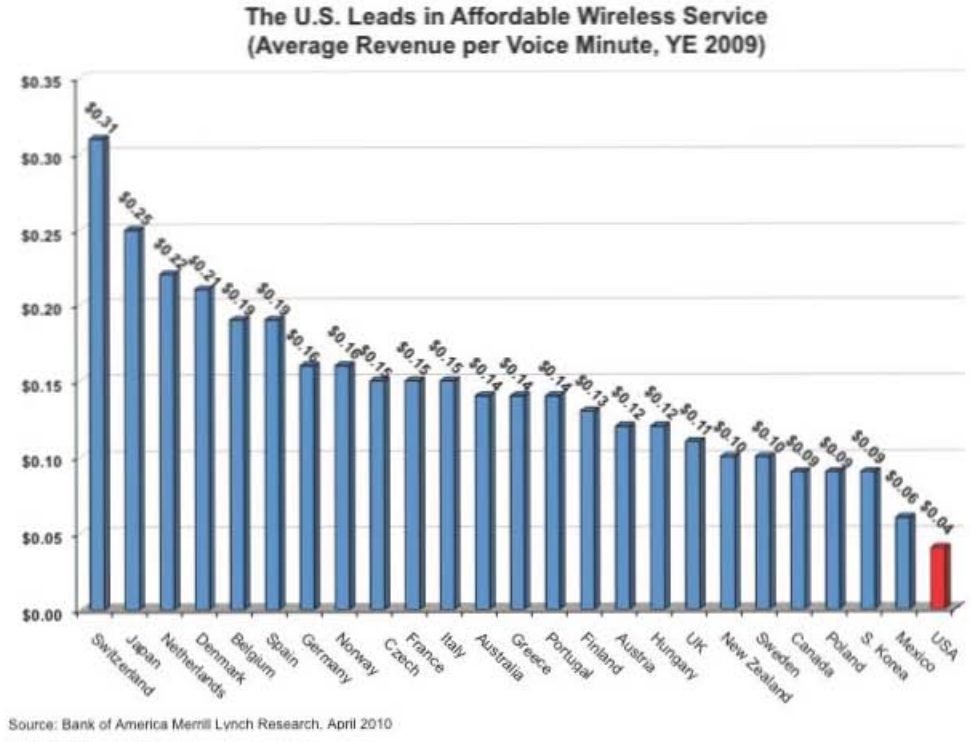
110 *See CTIA April 29, 2010 Ex Parte* at 6.

111 *Id.* at 3.

Similarly, the U.S. market share is not even particularly top heavy: the combined market share of the top two U.S. carriers is less than that of the top two providers in all but one of the 26 OECD countries monitored. The same is true if you consider the market share of the top three providers in each country, as well.[112]

2. Value – Foreign Comparison

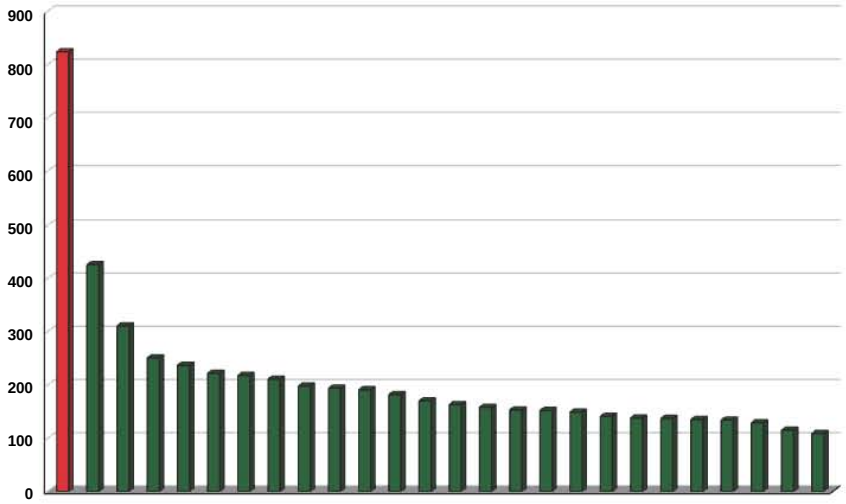
As a result of this competition, U.S. consumers benefit from the lowest effective cost per minute among the 26 OECD countries monitored. As of the end of 2009, the average revenue per voice minute had fallen to $0.04, down from $0.05 in 2008, and continuing to rank as the lowest in the OECD.



[112] *See* BofA Merrill Lynch Global Wireless Matrix (July 9, 2010) at Country Tables. Notably, no single carrier has anything close to a dominant share of the market for mobile wireless services. According to BofA Merrill Lynch, as of year-end 2009, the following were the market shares for the largest wireless providers: Verizon Wireless – 31.9%, AT&T Mobility – 29.8%, Sprint Nextel – 16.9%, T-Mobile USA – 11.8%, MetroPCS – 2.3%, Leap Wireless – 1.7%.

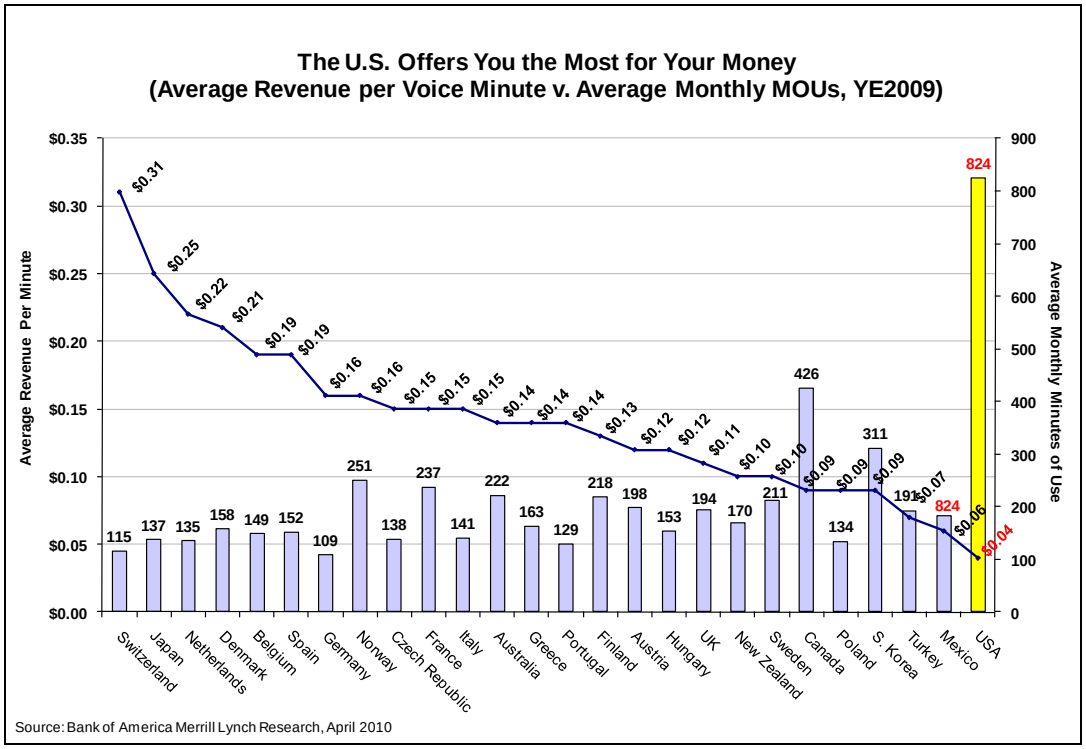
Meanwhile, the United States' average monthly minutes of use ("MOU") continued to rank first of the OECD countries monitored and was almost double that of the nearest OECD country, Canada.

The U.S. Leads in Wireless Voice Service
(Average Monthly Minutes of Use, YE2009)



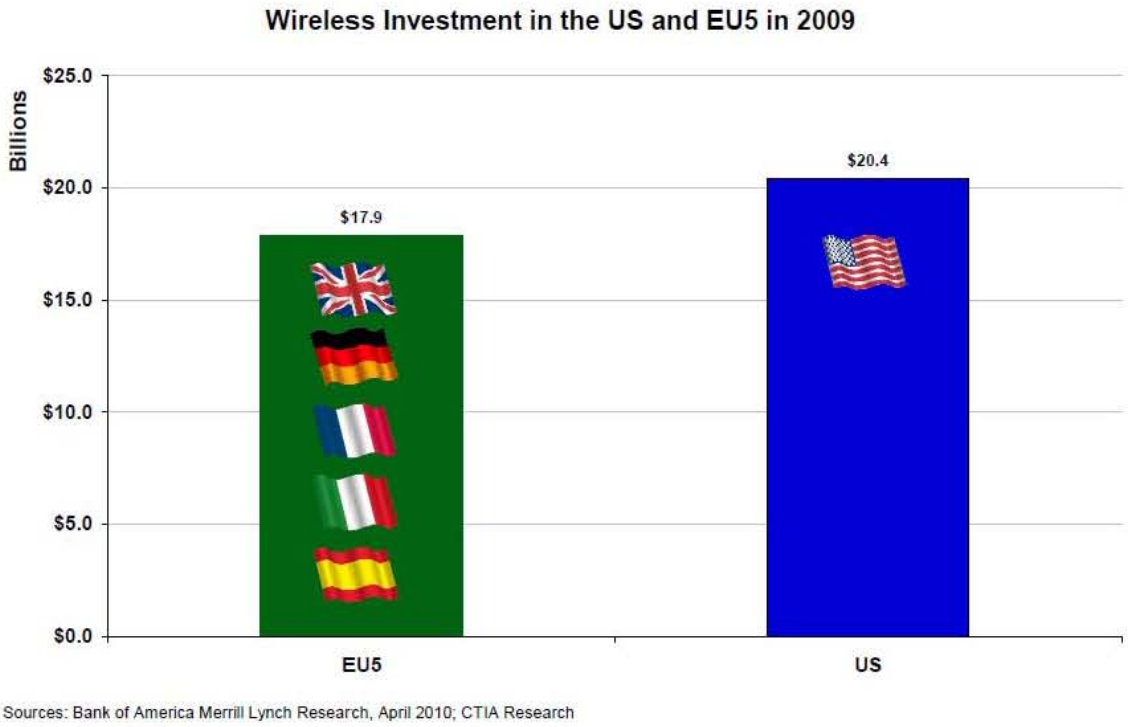
Source: Bank of America Merrill Lynch Research, April 2010

In other words, the United States offers its customers the most for their money.



3. Investment – Foreign Comparison

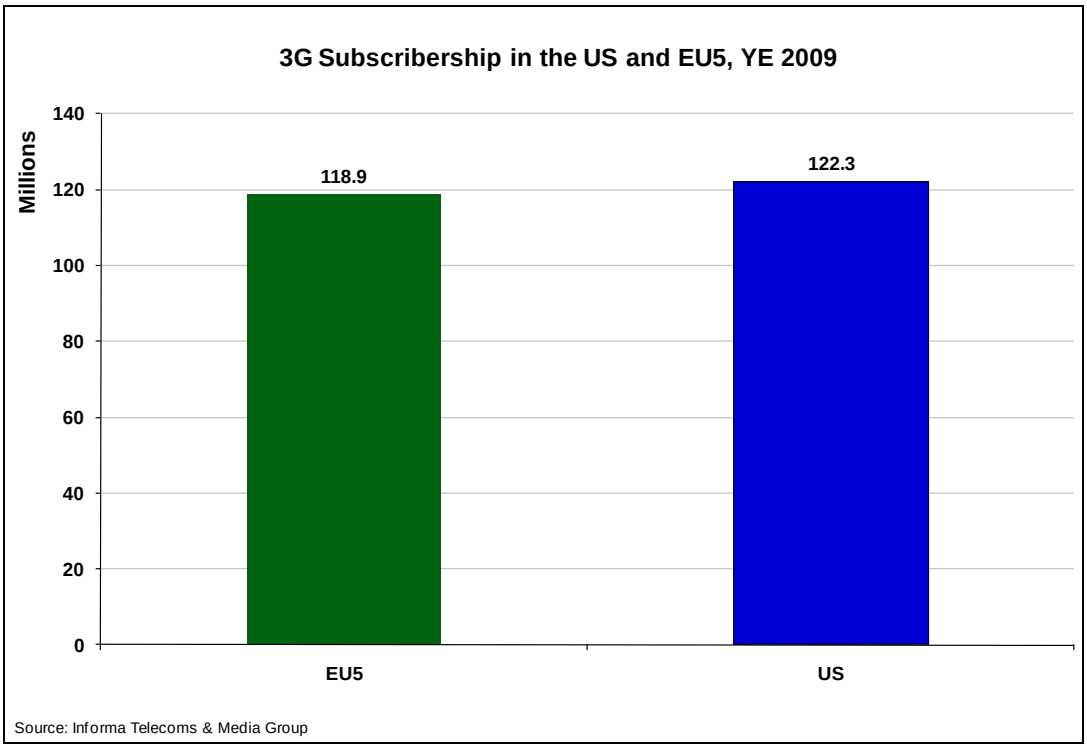
The United States also leads the world in wireless investment. In 2009, U.S. wireless providers invested $20.4 billion in their currently operational networks alone, compared to $17.9 billion invested by wireless providers in the five largest European countries combined.



4. Broadband Deployment – Foreign Comparison

The U.S. also leads the world in mobile broadband deployment and adoption: while the U.S. accounts for only 6 percent of the total world's wireless subscribers, the U.S. has more than 21 percent of the world's 3G subscribers,[113] more than are found in the five largest European countries combined.

113 *CTIA April 29, 2010 Ex Parte* at 15.



Simply put, by each of these measures the competitive wireless ecosystem in the U.S., when compared to other countries, is leading in delivering value to America's wireless consumers. The high level of competition will ensure that the U.S. remains at the forefront of the mobile broadband revolution.

III. THE *14TH REPORT* APPEARS TO CONTAIN SIGNIFICANT FACTUAL AND METHODOLOGICAL ERRORS.

While downplaying the remarkable positive achievements of the mobile industry, the *14th Report* misstates data, skews statistics, contains several inconsistencies, and incorrectly characterizes the coverage of previous reports. As a whole, the *14th Report* does not accurately depict the state of mobile wireless competition.

A. The *14th Report* Fails to Highlight Significant, and Remarkable, Achievements of the Mobile Industry.

A major failing of the *14th Report* is the lack of recognition of the mobile wireless industry's impressive achievements and the resulting benefits to consumers. Among other

shortcomings, the *14th Report* fails to take into account: (1) how consumer prices have decreased while service quality has remained high, (2) how the mobile wireless industry has continued to serve rural populations, (3) how in the face of a poor economic climate, investment not only continued, but actually increased, and (4) how many small facilities-based carriers continued to build out and upgrade their networks despite an extremely difficult economic environment. The omission of these notable accomplishments creates an incomplete impression of the state of the mobile industry.

The *14th Report* does not acknowledge the competitive trends that drove the wireless industry to continue to provide consumers with lower prices and a consistently high quality of service during a challenging economic time. The *14th Report* merely notes, in passing and without analysis, that "[t]he annual Cellular CPI [Consumer Price Index] decreased by approximately 0.2 percent from 2007 to 2008, while the overall CPI increased by 3.8 percent during this period."[114] Thus, while the cost of average consumer goods increased almost 4 percent, mobile carriers were able to deliver the same – and often enhanced – services to consumers *while actually lowering prices*. The *14th Report* also notes, in passing and without commentary, that "[t]he J.D. Power and Associates (J.D. Power) 2009 Wireless Call Quality Performance Study (Volume 1) indicates that network quality for the industry overall has held steady since the 2008 study, with the number of problems reported by consumers remaining virtually unchanged at 15 problems per 100 calls."[115] Continuing to provide excellent service is a notable competitive achievement made even more impressive given that the volume of calls, texts, and data usage increased.

---

114 *14th Report* at 11.

115 *Id.* at 18.

As wireless carriers vigorously compete for subscribers across all demographics, their continued push into increasingly rural areas was not fully considered in the Commission's own analysis of the data in the *14th Report*. While the nearly 1 million potential subscribers in the United States that are outside of current coverage have been given significant attention, an analysis of the *14th Report*'s data demonstrates a rather remarkable achievement by the mobile industry. Table 38, "Estimated Mobile Voice Provided in Rural Areas by Census Block", shows 2,310,870 square miles of rural Census Blocks with "1 or More" providers.[116] Since there are an overall 3,367,687 square miles of rural Census Blocks, that means approximately 1,056,817 square miles exist without any carriers. Taking the total rural population of 60,836,650 and subtracting the 59,907,519 population with "1 or More" carriers leaves 929,131 people without coverage. Those two numbers indicate that the average population density for unserved areas is 0.88 persons per square mile—over *a hundred times less dense than the trigger density for classifying a county as "rural."* Furthermore, 58 percent of those unserved square miles are Federal lands "subject to restrictions that prevent a licensee from providing service or make provision of service extremely difficult."[117] In light of these limitations, the wireless industry has made great strides in meeting the needs of rural populations – an extremely impressive achievement that the Commission failed to give credit.

Also notable is the fact that even smaller players in the mobile wireless industry were able to withstand economic pressures. The *14th Report* notes that the "[t]he total number of smaller, facilities-based providers remained unchanged between April 2008 and October

---

116 *Id.* at 189.

117 *Id.* at ¶ 43.

2009."[118] In other words, during a 16-month period in which the U.S. was experiencing one of the worst economic climates since the Great Depression, all of the smaller facilities-based carriers continued to provide service. The mobile industry thus extended its significant achievements, and by failing to properly acknowledge and account for these accomplishments, the Commission is failing to accurately portray the vibrant competition that marks the U.S. wireless industry.

B. The *14th Report* Incorrectly Suggests That Investment is Declining.

The *14th Report* states "[b]ecause industry revenue has continued to grow, both sources show that capital investment has declined as a percentage of industry revenue over the same period (from 20 percent to 14 percent)"—citing CTIA statistics and industry analysts.[119] This statement not only is incorrect as it pertains to *all* capital investment in 2008, but also oversimplifies the notion of capital investment analysis, suggesting that it should just be a year-to-year calculation applied against revenues instead of a review of the totality of capital expenditures measured over a period of years. The CTIA statistics report only incremental investment in currently operational systems, which does not include investment in greenfield builds. CTIA's statistics also do not report spectrum acquisition costs, which can be considerable. While spectrum costs are acknowledged later in the *14th Report*,[120] the conclusion in the Executive Summary ignores the limitations associated with using a subset of incremental investment data as a proxy for total investment by carriers. As seen in CTIA's chart below using U.S. Census Bureau Annual Capital Expenditures for Structures and Equipment data and FCC

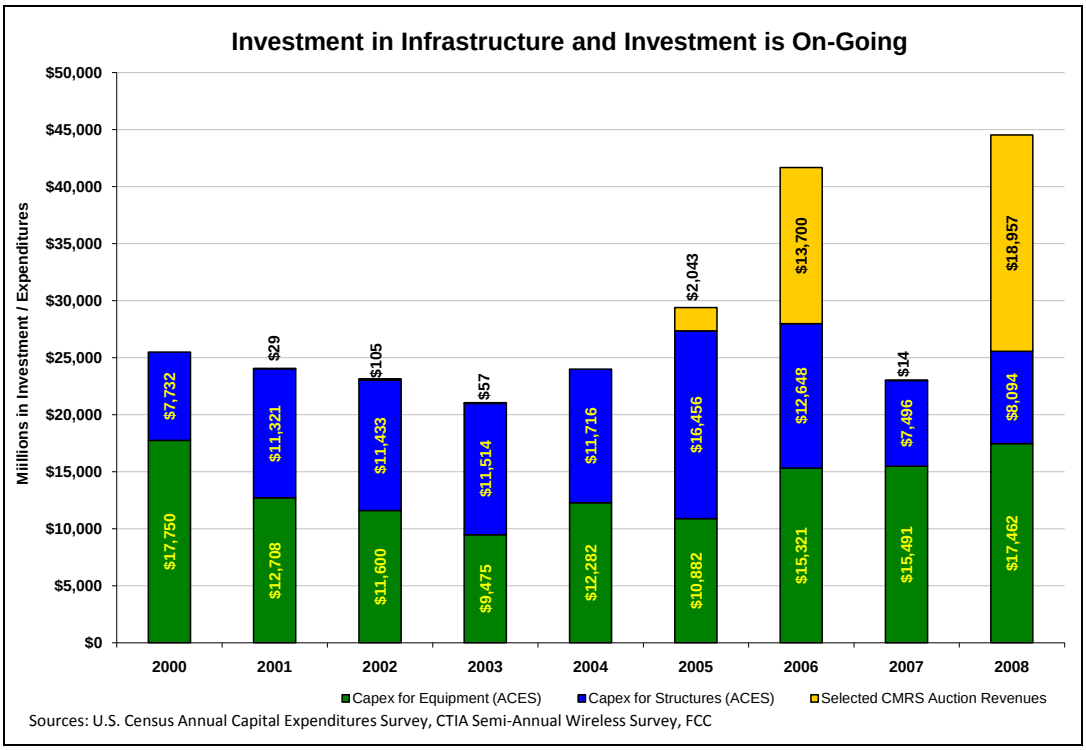
---

118 *Id.* at ¶ 29.

119 *14th Report* at 6, 16, 119-20.

120 *Id.* at 119, 208-10.

auction revenue data, spending on infrastructure and spectrum compromises a significant part of industry investment, and these numbers tend to resemble more of a wave format – up some years, down others. When taken in isolation, 2008 actually had the highest total capital expenditures. These figures also are more consistent with the reporting that the pace of new cell sites deployed went up by almost 50 percent.



C. The *14th Report* Skews Statistics Regarding Continued Industry Concentration.

The FCC's examples of increasing concentration in the provision of mobile wireless services do not withstand scrutiny. The *14th Report* claims that "[o]ver the past five years, concentration has increased in the provision of mobile wireless services," and cites two pieces of

evidence of that increase.[121] CTIA believes that both of those pieces of evidence were not presented in a way that is completely accurate. First, the report states that:

> [t]he two largest providers, AT&T, Inc. (AT&T) and Verizon Wireless, have 60 percent of both subscribers and revenue, and continue to gain share (accounting for 12.3 million net additions in 2008 and 14.1 million during 2009). The two next largest providers, T-Mobile USA (T-Mobile) and Sprint Nextel Corp. (Sprint Nextel), had a combined 1.7 million net loss in subscribers during 2008 and gained 827,000 subscribers during 2009.[122]

This information is misleading. The FCC data actually shows that T-Mobile added nearly 3 million subscribers in 2008, notwithstanding the misimpression left by the report that it lost subscribers.[123] Indeed, aside from ALLTEL, which was acquired, all but one of the reported carriers increased their subscriber bases in 2008 and five of the seven carriers increased their net subscribers in 2009.[124] Except for Sprint and U.S. Cellular, the growth rates of the other reported carriers—T-Mobile, MetroPCS and Leap—exceeded that of AT&T or Verizon Wireless. In terms of 2009 percent increase in net additions, the two most significant carriers were MetroPCS, which posted 23.7 percent growth, and Leap, which posted 28.8 percent growth.[125] While the table shows Verizon Wireless' growth at 26.6 percent, if subscribers from the ALLTEL acquisition are excluded, the growth is only 8.3 percent.[126] This data indicates that multiple providers have continually added subscribers.

---

121 *14th Report* at 5 ¶ 4.

122 *Id.* at 6.

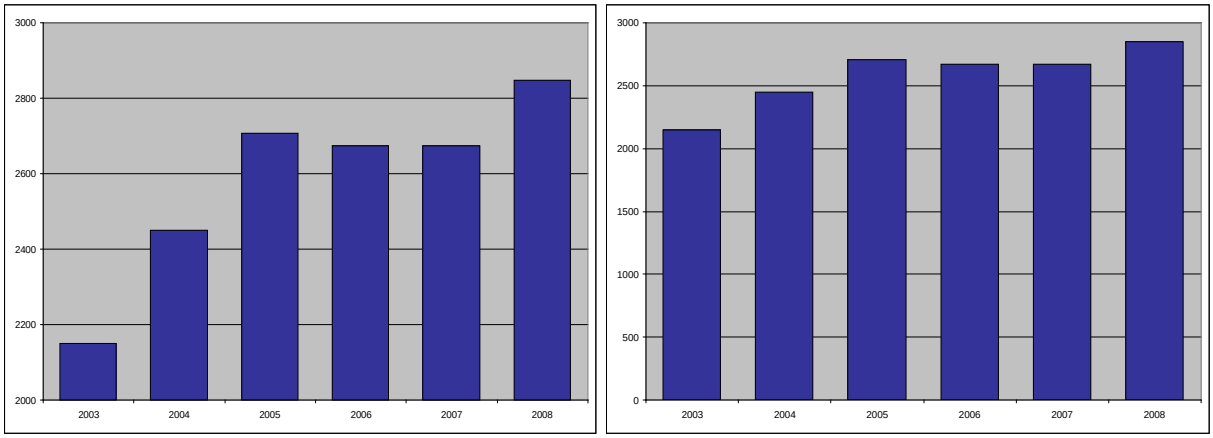
123 *See id.* at 103, Chart 20 (showing T-Mobile had 2,973,000 net subscriber additions in 2008).

124 *Id.* at 9.

125 *Id.* at 9.

126 *14th Report* at 9.

Second, the *14th Report* states that "[o]ne widely-used measure of industry concentration indicates that concentration has increased 32 percent since 2003 and 6.5 percent in the most recent year for which data is available."[127] This information is misleading. The Herfindahl-Hirschman Index ("HHI") data shows the overwhelming majority of the cited increase—555 points—occurred between 2003 and 2005, and that the increase since 2005 has been only been a net increase of 5.2 percent.[128] In fact, in 2008 the HHI increased only 5 points from 2007, rising from 2127 to 2132. As illustrated by the tables below, the *14th Report* also visually exaggerates the change in HHI growth by setting the base of the vertical axis at 2000 points, rather than the conventional method of setting the base at 0.[129]



Thus, the facts noted above establish that the *14th Report* did not present the FCC's evidence in a completely accurate way.

127 *Id.* at 6.

128 *Id.* at 15.

129 *Id.* at 15. This graph modification technique creates a misperception of the statistical data.

D. The *14th Report* and the *Notice* Make Unsupported and Unwarranted Conclusions About Carrier Reported Coverage.

For the first time, the *14th Report* and the *Notice* discount the value of American Roamer data, stating "[w]e note that the American Roamer analysis likely overstates the coverage actually experienced by consumers," and providing as a rationale for that conclusion, "American Roamer reports advertised coverage as reported to it by many mobile wireless service providers, each of which uses a different definition of coverage."[130] This criticism is unfounded. The FCC's competition reports for years have relied upon coverage data provided by American Roamer and have never before criticized the data. This data remains as valuable today as it has been in the past.

Discounting the data because it originates from mobile wireless service providers is irrational because providers are unlikely to misreport data. If they were to misreport data, for example by over-reporting coverage, unhappy customers would likely complain, return products, cancel service, and tarnish the provider's reputation.[131] This criticism of carrier-provided data stands in contrast with other proceedings—for example, the FCC permits carriers to specify contours for build-out showings.[132] Criticizing the data source based on different definitions of "coverage" also is unreasonable. Different air interfaces and technologies have different signal strength or carrier-to-interferer requirements for services. Even different devices using the same

---

130 *14th Report* at n.5; *Public Notice* at 3.

131 Indeed, FCC Quarterly Complaints do not identify "Carrier Marketing and Advertising" as a large source of significant customer complaints. *See* News Release, Quarterly Report on Informal Consumer Complaints Released, April 2, 2010, *available at* http://www.fcc.gov/Daily_Releases/Daily_Business/2010/db0402/DOC-297289A1.pdf.

132 One exception to this is for cellular, where all parties concede that the 32 dBu is irrelevant for actual service.

technologies have different requirements. The simple fact that differences exist does not mean that coverage is "overstated."

The Commission unfairly criticizes the American Roamer data because "[t]he data do not expressly account for factors such as signal strength, bit rate, or in-building coverage, and they may convey a false sense of consistency across geographic areas and service providers."[133] The implication that carriers submit coverage data without regard to signal strength is irrational, and CTIA knows of no evidence suggesting that the American Roamer contours are not based on signal strength. The statement also suggests that "bit rate" or "in-building coverage" are factors that should be accounted for, but does not even suggest that there may be practical problems associated with attempting to perform such types of adjustments and that any metrics judging the extent of that coverage would be arbitrary.

The *14th Report* also fails to note certain significant statistics relating to the growth of the non-"big four" carriers. According to the *14th Report* data, U.S. Cellular's network coverage grew by over 100 percent, and Leap's network growth posted not only the highest absolute gain with 59.5 million additional POPs covered, but also the highest percentage gain of over 300 percent.[134] Small and regional carriers also have conducted substantial additional build-outs and deployments to bring even more speed and capabilities to American consumers.[135] Growth is occurring across the competitive mobile industry, and is in no way limited to the largest carriers.

---

133 *14th Report* at 7 n. 5.

134 *See id.* at 8.

135 *See* Comments of CTIA—The Wireless Association®, CG Docket No. 09-158, CC Docket No. 98-170, WC Docket No. 04-36 at 3-8 (filed July 2, 2010).

E. The *14th Report* Reaches Unsubstantiated Conclusions Regarding Market Participants.

Notwithstanding that the *14th Report* explicitly notes that "potential entry" can be a "competitive constraint on market power," the *14th Report*, without any discussion or analysis, eliminates significant competitors to mobile services without a reasoned basis.[136] The *14th Report* excludes Mobile Virtual Network Operators ("MVNOs") from the discussion despite their relevance to the state of mobile wireless competition.

The *14th Report* provides no reasoned basis for excluding MVNOs from the competitive analysis. The *14th Report* states "[f]or purposes of this Report, the Commission does not count any MVNO or reseller as a competitor in the mobile wireless market when it calculates market concentration."[137] The *14th Report* reasons that "because MVNOs purchase their mobile wireless services in wholesale contracts from facilities-based providers, the ability of MVNOs to compete against their host facilities-based provider is limited," and "MVNOs do not compete through network investments and upgrades as do facilities-based providers."[138] MVNOs do, in fact, compete on price (and other differentiating factors, such as branding) and ignoring their existence does not make sense. The growing significance and competitiveness of MVNOs is highlighted by the *14th Report*'s own statement that "Tracfone had over 14 million subscribers, making it the fifth largest mobile wireless service provider in the United States."[139] This

---

136 *14th Report* at 24 ¶ 12.

137 *Id.* at 32 ¶ 32.

138 *Id.* at 32 ¶ 32.

139 *Id.* at *32* ¶ 33. This ranking has remained true, as Tracfone grew to 14.4 million subscribers by year-end 2009, and to 15.9 million by the second quarter of 2010. *See* America Movil, America Movil's Fourth Quarter of 2009 Financial and Operating Report 15 (Feb. 2, 2010), *available at* http://www.americamovil.com/docs/reportes/eng/2009_4.pdf; America Movil, America Movil's Second Quarter of 2010 Financial and Operating Report 14 (July 22, 2010) *available at* http://www.americamovil.com/docs/reportes/eng/2010_2.pdf.

exclusion also seems to depart, without explanation, from previous FCC competition reports. The *12th Report* cited a statement that "[MVNOs] present even more competition to traditional facilities-based carriers,"[140] and noted a number of MVNO failures by stating "MVNOs have been unsuccessful in competing in the CMRS industry over the past year."[141] The *13th Report* also noted the "flourishing" of MVNOs.[142] The *14th Report*'s exclusion of MVNOs from the competitive analysis misses a significant part of the market.

F. The *Fourteenth Report* Contains Inconsistent and Incorrect Factual Statements.

Inconsistent and incorrect factual statements appear in numerous instances throughout the *14th Report*. CTIA identified numerous errors, including the following.

- In addressing price rivalry in the postpaid service, the *14th Report* acknowledges that "[s]ome of the nationwide operators further differentiated their service plans by attaching additional features to existing plans, without changing core components such as the monthly recurring charge and the number of 'anytime' minutes offered in each tier."[143] The report goes on to state "[w]hile the monthly bill remains unchanged, the additional features are designed to create a *perception* that consumers are getting more value for their money."[144] This assessment is misleading. The inclusion of additional features without increasing the cost is, by definition, enhanced actual value and not merely the "perception" of enhanced value.

- The *Report* states that since the *Thirteenth Report*, "pricing competition among the nationwide service providers in the postpaid market initially centered on changes in

---

140 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 Radio Services, *Twelfth Report*, WT Docket No. 07-71, FCC 08-28 at ¶ 21 (rel. Feb. 4, 2008) ("*12th Report*").

141 *Id.* at ¶¶ 22-23.

142 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 Radio Services, *Thirteenth Report*, WT Docket No. 08-27, DA 09-54 at ¶¶ 18-19 (rel. Jan. 16, 2009) ("*13th Report*").

143 *14th Report* at 58 ¶ 90.

144 *Id*. (emphasis added).

the composition of pricing plans, rather than outright price cuts,"[145] leaving the impression that price competition was not significant. But, only paragraphs later, the *14th Report* states that in the first quarter of 2009, T-Mobile lowered the price of its unlimited national voice calling plan early and in October 2009 reset prices of its tiered offerings at significant discounts to its legacy plans, which "brought its pricing structure more closely into line with that of Sprint Nextel, the least expensive nationwide service provider."[146] The *14th Report* found that as a result, "T-Mobile's price changes appear to have prompted Verizon Wireless and AT&T to narrow the price premium on unlimited service offerings" because "Verizon Wireless reduced the prices of its unlimited voice plans for both individual and shared family offerings" and "[l]ater the same day, AT&T responded to Verizon Wireless's changes with matching price reductions on its unlimited voice plans."[147] This account indicates that price competition remains significant, contrary to the Commission's finding.

- In its discussion of mobile industry profitability metrics, the *14th Report* displays a graph purporting to show "Subscriber Net Additions vs. EBITDA Per Subscriber, 2008."[148] No explanation is provided as to why "subscriber net additions" should have any relationship whatsoever with the "EBITDA per subscriber" or why one should be causally dependent upon the other. Regardless, the graph appears to show Sprint Nextel with between -5,000 and -4,000 "2008 Annual Net Additions"[149] and, assuming that the axis is intended to represent thousands of subscribers (although it is not labeled as such), this data would correlate with the page 9 data showing Sprint Nextel with 4,667,000 lost subscribers in 2008.[150] However, for T-Mobile the graph appears to indicate over 4 million added subscribers while the page 9 data shows slightly less than 3 million adds.[151] Both AT&T and Verizon are shown on the graph with approximately 7 million adds each, while on page 9, AT&T is credited with 8.1 million adds and Verizon with 19.2 million adds.[152] These figures cannot be reconciled. Even absent the factual errors, CTIA also believes profitability is not an appropriate metric for analyzing competition.[153] As it has said before, in competitive

---

145 *14th Report* at 58 ¶ 89.

146 *Id*. at 58 ¶ 91.

147 *Id*. at 59 ¶ 92.

148 *Id*. at 15.

149 *14th Report* at 15.

150 *Id*. at 9.

151 *Id*. at 9, 15.

152 *Id*. at 9, 15. Even if those figures were adjusted for organic (non-acquisition) adds, Verizon should be shown at less than 6 million adds.

153 *See* Comments of CTIA—The Wireless Association®, WT Docket No. 09-66 at 76-78 (filed Sept. 30, 2009).

markets, "[p]rofitability in the intensely-competitive wireless industry is what the government should strive for, not disdain."[154]

- Table 26, entitled "Population-Weighted Average Megahertz Holdings by Provider, by Frequency Band," states that the "[w]eighted average megahertz is the sum of the provider's MHz-POPs, divided by the U.S. population."[155] This explanation obfuscates the data, and does not correctly describe statistical weighting. The reported values, if correctly described, are simply the arithmetic mean comprising the provider's average MHz per person. A weighted mean describes a mean where certain data elements are accorded more statistical relevance and given a "weighting" that mathematically reflects those data elements disproportionately—a population-weighted BTA dataset, for example, would assign a weight to a data element for the New York, NY BTA that is greater than the weight accorded to a data element for the Bemidji, MN BTA. This calls into question whether any of the data sets purporting to be weighted are, in fact, correctly weighted.

These errors and inaccuracies cast doubt on the validity of the *14th Report*'s conclusions about the mobile wireless industry. Greater precision is necessary to ensure that the results of the Commission's annual competition reports truly capture the state of mobile wireless competition.

IV. THE FCC SHOULD REACH THE CONCLUSION THAT THE MOBILE MARKET IS SUBJECT TO EFFECTIVE COMPETITION.

A. The *14th Report* Fails to Comply With the Statutory Mandate.

In addition to the factual and methodological errors detailed in the previous section, the *14th Report* fails to comply with Congress' directive that the Commission's report "shall include . . . an analysis of whether or not there is effective competition."[156] The *14th Report* does not make this finding. Instead, the *14th Report* argues that "rather than reaching an overarching, industry-wide determination with respect to whether there is 'effective competition,' the report complies with the statutory requirement by providing a detailed analysis of the state of competition that seeks to identify areas where market conditions appear to be producing

---

154 Comments of CTIA—The Wireless Association®, WT Docket No. 09-66 at 8 (filed June 15, 2009).

155 *Id.* at 148.

156 47 U.S.C. 332(c)(1)(C).

substantial consumer benefits and provides data that can form the basis for inquiries into whether policy levers could produce superior outcomes."[157]

Importantly, in other circumstances where the FCC has been required by statute to make a finding of effective competition, the agency has not found difficulty in making the required assessments. Specifically, the FCC makes findings that markets are subject to effective competition on a routine basis in the cable television context. The Commission addresses petitions filed by parties pursuant to Section 76.7, 76.905(b)(2) and 76.907 of the Commission's rules for a determination that cable systems serving various franchise areas are subject to effective competition pursuant to Section 623(l) of the Communications Act, and are therefore exempt from cable rate regulation in those communities.[158] The FCC has addressed hundreds of these petitions, each implicating an individual evaluation of effective competition. Under the circumstances, it is unclear why the Commission cannot make the same determination with respect to mobile services.

Instead, the Commission purports that the *14th Report* complies with Congress' mandate because it "tries to identify areas where competition is strong and also areas that could benefit from increased competition."[159] This is not the case. No areas are identified as areas where competition is strong or as areas that could benefit from increased competition. Further, it is not evident where data is provided that is purported to "form the basis for in-depth proceedings, special oversight, or targeted regulations that could promote competition and consumer

---

157 *14th Report* at 5 ¶ 3.

158 *See* 47 U.S.C. § 543(1); 47 C.F.R. § 76.905(b)(4).

159 *14th Report* at 25 ¶ 15.

welfare."[160] As the analysis cited by the Commission as forming the basis for the *14th Report*'s compliance is simply not present, the *14th Report* should not have been deemed compliant with the statute.

B. The Expansion of the Scope of the Report Does Not Preclude a Finding that the Core CMRS Market Is Effectively Competitive.

In the *14th Report*, the Commission decided to expand the scope of its analysis on the basis that "[e]ach of the segments in the mobile wireless ecosystem has the potential to affect competitor and consumer outcomes in the mobile wireless service segment."[161] As a result, the Commission expanded its analysis to include new "upstream" and "downstream" market segments such as device and infrastructure, together with the relationships among these segments.[162] This analytical shift by the Commission, however, does not preclude a finding similar to countless other reports that the core market Congress identified can be characterized as effectively competitive.

The *14th Report* fails to adequately justify the Commission's decision to leave unanswered the question of whether there is effective competition in the wireless ecosystem—an answer mandated by Congress.[163] By all relevant indices, the core CMRS market appears no less vibrantly competitive, and in fact more innovative, than it did at the time of the *13th Report*, in which the Commission properly concluded that "there is effective competition in the CMRS marketplace" and that "U.S. consumers continue to reap significant benefits – including low

---

160 *14th Report* at 25 ¶ 15.

161 *Id*. at 23 ¶ 9.

162 *Id*.

163 *See generally* Reply Comments, CTIA – The Wireless Association®, WT Docket No. 08-27, Declaration of Robert W. Hahn, Robert E. Litan and Hal J. Singer (2008).

prices, new technologies, improved service quality, and choice among providers – from competition in the CMRS marketplace."[164] On that basis, the Commission should at least be able to conclude that the core CMRS market is effectively competitive.

Not only does the *14th Report* fail to adequately justify a departure from the Commission's previous findings of effective competition, but the *14th Report* also ignores market indicators which, as discussed in Section IV *infra*, demonstrate even more robust competition in 2009 than in 2008. For this reason, the *15th Report* should reinstate the finding that the wireless ecosystem is robust and subject to effective competition.

V. CONCLUSION

The Commission's *14th Report* contains serious flaws that must not be repeated as the FCC develops the next Competition Report. Indeed, it is clear that continued competition by existing providers and new entrants, the continuing investment in and rollout of advanced networks, the introduction of innovative devices and calling plans, the explosion of applications, and steadily declining prices alongside increased wireless usage result in competitive benefits to and effective competition for U.S. consumers. The result is that the U.S. is a world leader in wireless innovation, competition, and usage. There is no basis for the *15th Report* not to find

164 *13th Report* at 5 ¶ 1.

effective competition in the U.S. wireless market, and CTIA hopes that the information provided in these comments will assist the Commission in preparing a more accurate and data-driven *15th Report*.

Respectfully submitted,

By: */s/ Brian M. Josef*

Brian M. Josef
Director, Regulatory Affairs

Michael F. Altschul
Senior Vice President and General Counsel

Christopher Guttman-McCabe
Vice President, Regulatory Affairs

Robert F. Roche, Ph.D.
Vice President, Research

CTIA-The Wireless Association®
1400 Sixteenth Street, NW, Suite 600
Washington, DC 20036
(202) 785-0081

July 30, 2010

Endnotes for Consumer Friendly Practices Table:

[i] http://www.wireless.att.com/cell-phone-service/legal/return-policy.jsp (Last accessed June 9, 2010); for equipment-specific ETFs, *see* http://www.wireless.att.com/learn/articles-resources/early-term-fees.jsp (Last accessed June 9, 2010).
[ii] http://www.wireless.att.com/cell-phone-service/legal/return-policy.jsp (Last accessed June 9, 2010).
[iii] *See* http://www.wireless.att.com/coverageviewer/ (Last accessed June 9, 2010).
[iv] *See* http://www.wireless.att.com/answer-center/main.jsp?t=solutionTab&solutionId=KB61945 (Last accessed June 9, 2010).
[v] http://www.wireless.att.com/cell-phone-service/go-phones/index.jsp (Last accessed June 9, 2010).
[vi] https://www.att.com/olam/dashboardAction.olamexecute (Last accessed June 9, 2010) (must create an account and sign in).
[vii] http://www.wireless.att.com/learn/articles-resources/parental-controls/smart-limits.jsp (Last accessed June 10, 2010).
[viii] *See* www.att.com/global; Know Before You Go: http://www.wireless.att.com/learn/international/roaming/know-before-you-go.jsp; Verify Rates: http://www.wireless.att.com/learn/international/roaming/international-roaming.jsp; Travel Guide: http://www.wireless.att.com/learn/international/roaming/travel-guide.jsp; FAQ on International Roaming: http://www.wireless.att.com/learn/international/roaming/faq.jsp (Last accessed June 9, 2010)
[ix] http://choice.att.com/flash/customersdevices.aspx (Last accessed June 9, 2010).
[x] http://www.wireless.att.com/learn/basics/shopping-faqs.jsp#106 (Last accessed June 9, 2010).
[xi] http://shop.sprint.com/en/services/termination_fee/early_termination_fee.shtml?ECID=vanity:etf (last accessed June 9, 2010).
[xii] http://www.sprint.com/landings/returns/ (last accessed June 9, 2010).
[xiii] *See* http://coverage.sprintpcs.com/IMPACT.jsp?PCode=vanity:coverage (Last accessed June 9, 2010).
[xiv] http://support.sprint.com/support/article/Change_your_plan_anytime_without_fees_or_extending_your_service_agreement/case-gz982789-20091023-165539 (Last accessed June 9, 2010).
[xv] http://www.boostmobile.com/about/mediacenter/index.html (Last accessed June 9, 2010).
[xvi] http://www.sprint.com/index_c.html (Last accessed June 9, 2010) (click "check my usage", log in required).
[xvii] http://support.sprint.com/support/article/Learn_about_the_Account_Spending_Limit_program/case-wh164052-20100120-111115 (Last accessed June 10, 2010).
[xviii] Information about travelling internationally with a Sprint phone: http://shop.sprint.com/en/services/worldwide/travelabroad_sprint.shtml; International Voice: http://shop.sprint.com/en/services/worldwide/internationalcoverage.shtml; International Data: http://shop.sprint.com/en/services/worldwide/intl_data_services_coverage.shtml (Last accessed June 9, 2010).
[xix] *See* http://nextelonline.nextel.com/en/legal/legal_terms_privacy_popup.shtml (Last accessed May 29, 2009)
[xx] *See* http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions (Last accessed May 29, 2009)
[xxi] http://www.t-mobile.com/Templates/Popup.aspx?WT.z_unav=ftr__TC&PAsset=Ftr_Ftr_TermsAndConditions&print=true (last accessed June 9, 2010).
[xxii] *Id*.
[xxiii] http://www.t-mobile.com/coverage/pcc.aspx (Last accessed June 9, 2010).
[xxiv] http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions&print=true&WT.srch=2&Result_Inq=answer&InqSource=TMO (Last accessed Dec. 7, 2009) (although some promotional plans require customer to sign another service contract).
[xxv] http://www.t-mobile.com/shop/plans/Prepaid-Plans.aspx (Last accessed June 9, 2010).
[xxvi] http://www.t-mobile.com/shop.aspx?WT.srch=1&WT.mc_id=151m1 (Last accessed June 9, 2010) (click on "My T-Mobile" in the top right corner of the screen to register and to sign in and check minutes and messages used)
[xxvii] https://wbillpay.verizonwireless.com/vzw/nos/uc/uc_overview.jsp (Last accessed June 10, 2010).
[xxviii] What to do before using your phone while traveling internationally: https://support.t-mobile.com/doc/tm22038.xml?related=y&Referring%20Related%20DocID%20List%20Index=1&docid=694&navtypeid=6&pagetypeid=7&prevPageIndex=4; International Roaming Information: http://www.t-mobile.com/International/RoamingOverview.aspx?tp=Inl_Tab_RoamWorldwide (Last accessed June 9, 2010).
[xxix] Once registered on foreign carriers' networks, customers receive the following free text message alerting customer to check settings: "Free T-Mobile Msg: CAUTION: Charges while roaming are higher for voice, web, email & applications. Alter device settings or call +1-505-998-3793 for rates."
[xxx] http://www.t-mobile.com/Templates/Popup.aspx?PAsset=Ftr_Ftr_TermsAndConditions&print=true&WT.srch=2&Result_Inq=answer&InqSource=TMO (Last accessed June 9, 2010) (see number six).
[xxxi] http://www.t-mobile.com/shop/plans/Cell-Phone-Plans.aspx?catgroup=Individual&WT.z_shop_plansLP=individual (Last accessed June 9, 2010) (Even More Plus plans have no annual contract with phones sold at retail prices).
[xxxii] http://www.verizonwireless.com/b2c/globalText?textName=CUSTOMER_AGREEMENT&jspName=footer/customerAgreement.jsp (last accessed June 9, 2010).
[xxxiii] http://www.verizonwireless.com/b2c/globalText?textName=RETURN_POLICY&jspName=footer/returnPolicy.jsp (Last accessed June 9, 2010).
[xxxiv] http://www.verizonwireless.com/b2c/CoverageLocatorController?requesttype=NEWREQUEST&market=All (Last accessed June 9, 2010).
[xxxv] http://news.vzw.com/news/2007/10/pr2007-10-01a.html (Last accessed June 9, 2010).
[xxxvi] http://www.verizonwireless.com/b2c/splash/prepay.jsp?lid=//global//plans//prepaid (Last accessed June 9, 2010).
[xxxvii] http://www.verizonwireless.com/b2c/index.html (Last accessed June 9, 2010) (click on "MyVerizon" in task bar and usage can be viewed upon login).
[xxxviii] https://www.t-mobile.com/shop/addons/services/information.aspx?PAsset=FamilyWireless&tp=Svc_Tab_FW101FamilyAllowances&WT.z_unav=mst_disc_save_FA (Last accessed June 10, 2010).
[xxxix] www.verizonwireless.com/global (Last accessed June 9, 2010).
[xl] Verizon Wireless sends a free text message to customers when they turn on their phone in a foreign county welcoming them to the country, providing dialing instructions for calling from that country back to the U.S., and sending them the 24/7 customer service number for global customers. If the customer is located in a CDMA country, Verizon Wireless also provides the customer with the data roaming rates for that

country. Mobile Broadband customers using VZ Access Manager and operating their device outside of the U.S. must click-through a disclosure screen providing information about potential data charge rates before being allowed to connect.

[xli] http://www.verizonwireless.com/b2c/globalText?textName=CUSTOMER_AGREEMENT&jspName=footer/customerAgreement.jsp (Last accessed June 9, 2010) (see "My Wireless Device"); *see* http://support.vzw.com/clc/faqs/Equipment/faq_phones.html (Last accessed June 9, 2010).

[xlii] http://www.verizonwireless.com/b2c/store/controller?item=phoneFirst&action=viewStoreIndex&lid=//global//phones+and+accessories (Verizon's online phone shop allows pricing options of 1 and 2 year contracts and month-to-month) (last accessed June 9, 2010); *see also* http://news.cnet.com/8301-1035_3-10048123-94.html (Last accessed June 9, 2010).

[xliii] *See* http://www.mycricket.com/support/topic/General-Billing (Last accessed June 23, 2010).

[xliv] http://www.mycricket.com/support/return-policy (Last accessed June 23, 2010).

[xlv] *See* http://www.wireless.att.com/coverageviewer/ (Last accessed June 9, 2010).

[xlvi] http://www.mycricket.com/support/topic/Cricket-Wireless (Last accessed June 23, 2010).

[xlvii] http://www.mycricket.com/paygo/prepaid-mobile-phone-guide (Last accessed June 23, 2010).

[xlviii] https://account.mycricket.com/ (Last accessed June 23, 2010); http://www.mycricket.com/support/topic/Cricket-PAYGo-Account-Balance (Last accessed June 30, 2010).

[xlix] *See* http://www.mycricket.com/support/topic/Roaming (Last accessed June 23, 2010)

[l] http://www.mycricket.com/support/topic/Purchasing-a-Cricket-Phone (Last accessed June 23, 2010).

[li] http://www.mycricket.com/cell-phones (Last accessed June 23, 2010).

[lii] http://www.metropcs.com/customer_support/faq.aspx#1 (last accessed June 23, 2010).

[liii] http://www.metropcs.com/customer_support/returnpolicy.aspx (last accessed June 23, 2010).

[liv] *See* http://www.metropcs.com/coverage/ (Last accessed June 23, 2010).

[lv] http://support.sprint.com/support/article/Change_your_plan_anytime_without_fees_or_extending_your_service_agreement/case-gz982789-20091023-165539 (Last accessed June 9, 2010).

[lvi] http://www.metropcs.com/customer_support/faq.aspx#13 (Last accessed June 23, 2010).

[lvii] http://www.metropcs.com/customer_support/billpay/myaccount.aspx (Last accessed June 23, 2010) (click "check my usage", log in required).

[lviii] http://www.metropcs.com/customer_support/number_portability.aspx (Last accessed June 23, 2010).

[lix] *See* http://www.metropcs.com/shop/phonelist.aspx (Last accessed June 23, 2010).

[lx] http://www.uscellular.com/uscellular/common/common.jsp?path=/site/legal/customer-service-agreement.html (last accessed June 24, 2010).

[lxi] http://www.uscellular.com/uscellular/common/common.jsp?path=/site/legal/customer-service-agreement.html (last accessed June 24, 2010).

[lxii] http://www.uscellular.com/uscellular/common/common.jsp?path=/coverage-map/index.html (Last accessed June 23, 2010).

[lxiii] http://www.uscellular.com/uscellular/plans/showPlandetails.jsp?planid=prod610262 (Last accessed June 23, 2010).

[lxiv] http://www.uscellular.com/uscellular/common/common.jsp?path=/products-services/index.html (Last accessed June 23, 2010).

[lxv] https://loginknx.uscc.com/nidp/idff/sso?id=33&sid=0&option=credential&sid=0 (Last accessed June 23, 2010) (must create an account and sign in).

[lxvi] http://www.uscellular.com/uscellular/common/common.jsp?path=/overage-protection/index.html (Last accessed June 24, 2010).

[lxvii] http://www.uscellular.com/uscellular/common/common.jsp?path=/services/international/index.html (Last accessed June 24, 2010).

[lxviii] http://www.uscellular.com/uscellular/support/faq/faqDetails.jsp?topic=number-portability.html#Q9 (Last accessed June 30, 2010) (see number nine).

[lxix] http://www.uscellular.com/uscellular/cell-phones/showPhones.jsp?prepaid=Y&_requestid=1035164 (Last accessed June 24, 2010).

[lxx] http://www.tracfone.com/why_tracfone.jsp (last accessed June 30, 2010); *see also* http://tracfoneblog.blogspot.com/2007/06/no-hidden-wireless-charges.html (last accessed June 30, 2010).

[lxxi] http://www.tracfone-orders.com/bpdirect/tracfone/Start.do?action=view&market=GSM5AT (Last accessed June 30, 2010).

[lxxii] http://www.tracfone.com/jsplib/verify_mapcov.jsp (Last accessed June 30, 2010).

[lxxiii] https://www.tracfone.com/direct/ValuePlans?app=TRACFONE&lang=en (Last accessed June 30, 2010) (click "Terms and Conditions").

[lxxiv] *See generally* http://www.tracfone.com/ (Last accessed June 30, 2010).

[lxxv] https://www.tracfone.com/direct/MyAccount?app=TRACFONE&lang=en (Last accessed June 30, 2010) (log in required); see also http://www.tracfone.com/redirect_landing.jsp# (Last accessed June 30, 2010) (click "getting started", then "adding airtime").

[lxxvi] http://www.tracfone.com/redirect_landing.jsp# (Last accessed June 30, 2010) (click "promotions and services", then "number portability", then Will I be able to use my existing carrier´s equipment when I move to TracFone?").

[lxxvii] http://www.tracfone-orders.com/bpdirect/tracfone/Start.do?action=view&market=GSM5AT&aid=&vid=&vc=&sahcid=&com=&zip=20009&locale=en&siteType=TR&gotoPhonelist=true&AID= (Last accessed June 30, 2010).

[lxxviii] http://www.southernlinc.com/promodetails.asp (last accessed June 30, 2010).

[lxxix] http://www.southernlinc.com/customersupport/returnpolicy.asp (Last accessed June 30, 2010).

[lxxx] http://www.southernlinc.com/ourcoverage.asp?type=Consumer (Last accessed June 30, 2010).

[lxxxi] http://news.vzw.com/news/2007/10/pr2007-10-01a.html (Last accessed June 9, 2010).

[lxxxii] http://www.southernlinc.com/prepaid/ (Last accessed June 30, 2010).

[lxxxiii] http://www.southernlinc.com/customersupport/abbreviated_dialing_codes.asp (Last accessed June 30, 2010).

[lxxxiv] http://www.southernlinc.com/consumer/service_plans/all_plans.asp#BUDGET (Last accessed June 30, 2010).

[lxxxv] http://www.southernlinc.com/simfaqs.asp (Last accessed June 30, 2010).

[lxxxvi] https://onlinestore.southernlinc.com/phones.aspx (Last accessed June 30, 2010).