

**Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

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

**COMMENTS OF
CONSUMER FEDERATION OF AMERICA, CONSUMERS UNION,
FREE PRESS, MEDIA ACCESS PROJECT, NEW AMERICA FOUNDATION,
AND PUBLIC KNOWLEDGE**

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SUMMARY

A proper analysis of the CMRS markets in the United States will indicate that the wireless market as a whole demonstrates an absence of effective competition, is likely to become less competitive, and produces active and ongoing consumer harms as a result of insufficient competition. The Commission should evaluate competition in its upcoming *Fourteenth Report* through the Commission's standard framework of market structure, provider conduct, consumer behavior (or consumer choice), and market performance – but the Commission should also consider a broader range of factors in each aspect of this framework, reflecting long accepted economic literature. Under the Commission's standard framework, especially when considering the full range of relevant factors, the CMRS markets are demonstrably uncompetitive. Additionally, significant barriers to entry and barriers to growth will likely ensure that CMRS markets remain uncompetitive absent regulatory intervention by the Commission.

A number of specific factors, largely ignored by the Commission in past CMRS reports, demonstrate substantial limits on competition and barriers to entry and growth. At a minimum, the Commission should examine the impact of HHIs at the regional level, using the granular detail collected for the *Thirteenth Report* to question why some EAs have particularly high levels of concentration. The Commission should examine parallel pricing and parallel conduct from providers, and the signs such behavior presents of competitive problems. The Commission should consider the impact of early termination fees, lengthy contracts, and handset exclusivity arrangements on consumer behavior and choice. The Commission should factor profitability into its examination of market performance. Finally, the Commission should take a close look at substantial barriers to entry and growth in CMRS markets, including limited spectrum resources

disproportionately held by a few incumbent carriers, excessive costs for special access services, and loopholes in the existing roaming regulations.

Above all, the Commission should interpret the concept of “effective competition” through the lens of the user at every opportunity, and should examine all obstacles to consumer choice and innovation. The Commission should strive to put the needs and concerns of individuals above those of industry. The stakes of proper market analysis are high and will only get higher; wireless technologies are an increasingly significant platform for economic activity, public participation, and social interaction. The Commission’s misguided diagnosis of the wireless industry’s competitive health, and its failure to pursue pro-competitive regulatory reform, can only undermine or hold back the larger potential of wireless platforms.

Following a detailed examination, the Commission cannot but find that the current CMRS markets and regulatory structures have produced fewer choices for consumers in pricing models, services, applications, and devices. The absence of effective competition has also limited innovation, particularly in the adjacent device market, and has discouraged investment to improve the quality of wireless networks. The Commission must recognize and address the failures of the current CMRS markets by intervening to limit barriers to entry, consumer choice, and innovation.

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The Consumer Federation of America, Consumers Union, Free Press, Media Access Project, the New America Foundation, and Public Knowledge (“Commenters”) respectfully submit these comments in response to the *Public Notice* of the Federal Communications Commission (“Commission”) seeking input on the state of competition in the Commercial Mobile Radio Service (“CMRS”) market for the Commission’s upcoming *Fourteenth Report*.

I. INTRODUCTION

The wireless industry has continued to grow over the years, with mobile phones becoming a pervasive presence in the lives of Americans. It is estimated that more than 270 million mobile phones are in use in the U.S.¹ Consumers use their mobile devices more and more – for mobile voice, data, and Internet access. Mobile broadband is expected to ultimately

¹ See Testimony of Chris Murray, Senior Counsel, Consumers Union regarding “Competition in the Wireless Industry” before the U.S. House of Representatives Subcommittee on Communications, Technology, and the Internet, Committee on Energy and Commerce, 2 (May 7, 2008).

reach 30-35% of the total user base.² Wireless services have undoubtedly grown – but growth should not be mistook for effective competition. In fact, while the mobile market continues to grow, it continues to grow less and less competitive, because the current wireless market and regulatory structures inhibit competition, consumer choice, and innovation.

The Commission is obligated by statute to examine the wireless, or CMRS, market to conduct “an analysis of whether or not there is effective competition.”³ Effective competition in the CMRS markets requires, among other things, minimal barriers to entry and growth for competitors, maximal consumer choice, and an absence of explicit barriers to innovation – all features not present in the wireless market. There are pronounced and extensive barriers to effective competition in the modern CMRS markets, including limited access to spectrum; unreasonable prices, terms, and conditions for special access; and horizontal concentration in both the wireless and wireline markets.

The Commission’s *Thirteenth Report* evaluated only a narrow range of the factors required for a proper determination of effective competition. Based on a shallow analysis of a limited subset of market factors, examining a too-broadly defined market, and ignoring the majority of practical impediments to competition and the clearest signs of market problems, the *Thirteenth Report* concluded that the CMRS market was competitive. A more thorough analysis using even the same criteria and data from the *Thirteenth Report* would reveal the severe problems with competition in CMRS markets. An accurate analysis – incorporating a proper determination of the relevant markets, a focus on the consumer and limits to consumer choice,

² See McKinsey & Company, *Perspectives on the Evolution of the U.S. Wireless Industry* 15 (2009).

³ 47 U.S.C. § 332.

and consideration of the fine-grained factors used in industrial economics to evaluate workable competition in markets – would present an even more dire, and even more accurate picture.

There is little reason to believe the current markets and regulatory structure will support or promote more competition in the future. The lack of effective competition has led to provider conduct including handset exclusivity arrangements and parallel pricing regimes that harm consumers, inhibit innovation, and further limit competition. The Commission must acknowledge the failures of the current regulatory structure to bring about meaningful competition, and should take the necessary actions to revive and expand competition going forward.

These comments focus on the major analytical criteria of structure, conduct, behavior, and performance, as used by the Commission in the *Thirteenth Report*. Even with these limited criteria, proper analysis of the CMRS markets reveals insufficient competition. However, the study of industrial economics generally considers a much richer set of criteria within these broader categories for determining whether competition is workable.⁴ For example, within the realm of structural criteria, one factor worth considering is whether the market includes artificial barriers to mobility and entry, such as handset exclusivity arrangements.⁵ Within the realm of conduct, two factors of note include the presence of exclusionary or coercive tactics (see, again, the example of handset exclusivity arrangements), and the level of misinformation or obscured information in sales promotions.⁶ In the category of performance, profit levels that are more

⁴ See, e.g., F. M Scherer and David Ross, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* (Houghton Miffling: Boston, 1990), p. 53-54.

⁵ *Id.*

⁶ *Id.*

than that sufficient to reward investment, efficiency, and innovation may be signs of problems with competition.⁷

The Commission should apply a more detailed economical analysis of the CMRS markets in the *Fourteenth Report* using more finely-grained tools, focusing on the perspective of the user and of promoting consumer choice.

II. THE FCC'S STANDARD FOUR FACTORS SHOW LIMITED COMPETITION.

Properly applying the four factors used in past Commission CMRS reports – market structure, provider conduct, consumer behavior, and market performance – and incorporating all relevant elements of each factor demonstrates that the CMRS markets are not, in any way, demonstrating signs of effective competition. Commenters urge the Commission to conduct a detailed analysis of the CMRS markets in the *Fourteenth Report*, and to apply a much more thorough interpretation of structure, conduct, behavior, and performance.

A. Structure Shows the Market is Not Competitive.

1. The HHI values in the Thirteenth Report show a highly concentrated market.

Contrary to the conclusions of the *Thirteenth Report*, a weighted national average HHI of 2674 is not a high level of competition. Under general antitrust analysis, HHI levels above 1800 are considered “highly concentrated.”⁸ Commenters expect the national average HHI to be even higher for the 2008 data to be used in the *Fourteenth Report* – the introduction of the 3G iPhone and the importance of mobile Internet access as a growth driver, particularly in a weak economy,

⁷ *Id.*

⁸ Department of Justice and Federal Trade Commission, *Merger Guidelines*, 1997, Section 1.5; see also Neil B. Cohen and Charles A. Sullivan, *The Herfindahl-Hirschman Index and the New Antitrust Merger Guidelines: Concentrating on Concentration*, 62 Tex. L. Rev. 453, 461 (1983).

will likely result in large carriers with popular devices attracting a disproportionate share of new and switching customers. But even if HHI levels have not increased, any HHI level above 1800 in any individual economic area (“EA”) indicates severely limited competition under traditional analyses. Of the 171 EAs reported in the *Thirteenth Report*, exactly one had an HHI under 1800 – and barely, at 1795.⁹ Colloquially, if “four is few” and “six is many,” the gold standard for “many competitors” is 6 equal-sized competitors, or an HHI of 1667 – which no EA comes near.

A deeper examination of the EA data in the *Thirteenth Report* paints a bleaker position than even the high average HHI of 2674 indicates. Economies of scale should indicate a pattern across the EAs under which urban areas have more competitors and lower HHI than rural areas because competitors have more to gain from competing aggressively in those markets – but instead, according to 2007 data, both the most and least competitive regions are the most rural, demonstrating distortions compared to what would be expected from a competitive environment.¹⁰ Furthermore, many EAs demonstrate substantially higher than average HHIs, ranging from the 4000s into the low 6000s, and in an unobstructed, competitive market, the potential benefit of market growth in these areas at least (if not others) would be sufficient to encourage additional investment and new entrants.

2. A better definition of the markets would reveal even less competition.

Although the *Thirteenth Report* properly separated mobile services from other non-substitutable services, such as Wireless Local Area Network services, the *Report* nevertheless

⁹ See *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, Thirteenth Report*, 23 FCC Rcd 2241 at Table A-3 (2008) (“*Thirteenth Report*”).

¹⁰ Although population numbers in an arbitrary region are not an exact match for population density, the EAs used in the *Thirteenth Report* center around metropolitan areas, and thus large areas are indeed generally also dense areas.

found it reasonable to analyze mobile voice and mobile broadband together, based in part because these services are often advertised and bundled together.¹¹ The *Report* also explains the joint analysis, in part, on the lack of better data.¹² But, combining these markets obscures competitive problems arising from greater concentration in mobile broadband services than mobile voice services. Mobile broadband and Internet access services, and the advanced wireless handsets capable of using them to full extent, are disproportionately available to large incumbent carriers, because of the market “features” of handset exclusivity arrangements for smart phones, excessive backhaul rates for Internet traffic, disproportionate holdings of spectrum efficient for mobile Internet usage, and other impediments to mobile Internet service offerings by competitors.¹³ Furthermore, growth in the wireless market as a whole is driven by growth in mobile Internet access services, particularly in a rough economy.¹⁴ Therefore, any limits on competition in the mobile Internet access and broadband markets are particularly significant, and have ancillary impact on the ability of providers to compete in the mobile voice market. The Commission must therefore analyze mobile broadband data separately in the *Fourteenth Report*.

In the *Thirteenth Report* and past reports, the Commission’s primary consideration for determining whether to treat two products as being in the same market is ostensibly consumer-

¹¹ See *Thirteenth Report* at paras. 7, 34.

¹² See *id.* at para. 33 (“However, the numbering data provide an estimate of mobile telephone subscribers in general, without regard to whether subscribers use mobile broadband and other data services as well as mobile voice services. As a result, the data do not provide a way of distinguishing mobile telephone subscribers who still use their handsets primarily or exclusively for voice calls from those who also subscribe to, and actively use, mobile data services, or the smaller subset of subscribers who have already migrated to mobile broadband networks and devices.”).

¹³ See *infra* Sections II(E)(3) and III.

¹⁴ Om Malik, “Downturn or Not, Mobile Broadband is Growing Fast,” *GigaOm* (March 17, 2009), at <http://gigaom.com/2009/03/17/downturn-or-not-mobile-broadband-is-growing-fast/>. See also AT&T, “AT&T Investor Update,” at p. 7, April 22, 2009, at http://www.att.com/Investor/Financial/Earning_Info/docs/1Q_09_slide_c.pdf.

focused – whether consumers view the products to be substitutes.¹⁵ From the perspective of the consumer, mobile data services that do not allow the consumer to connect to the Internet – such as Verizon’s V Cast Mobile TV service – do not serve as substitutes for true mobile Internet access services.¹⁶ In the *Thirteenth Report*, the Commission treated the growth in mobile Internet access services and in other, non-Internet, mobile data services to be an indicator of growth in the broader wireless market¹⁷ – a true statement, but one with little bearing on the current state or future of competition in the separate markets for mobile voice services, mobile data services, and mobile Internet access services. We urge the Commission to treat these services more distinctly in the *Fourteenth Report*. A deeper evaluation of these services will indicate a higher degree of concentration and more obstacles to competition among providers of mobile data and mobile Internet access services as compared to mobile voice services.

B. Conduct Shows the Market is Not Competitive.

Commenters urge the Commission to take a more detailed look at provider conduct in the *Fourteenth Report*. The *Thirteenth Report* evaluated provider conduct primarily through traditional metrics such as price rivalry, capital expenditures, advertising expenditures, and

¹⁵ See *Thirteenth Report* at para. 32.

¹⁶ The Commission recognized this in their proceeding on broadband data collection. “When counting such subscribers, we direct providers to exclude subscribers whose choice of content is restricted to only customized-for-mobile content,⁸⁶ and to exclude subscribers whose subscription does not include, either in a bundle or as a feature added to a voice subscription, a data plan providing the ability to transfer, on a monthly basis, either a specified or an unlimited amount of data to and from Internet sites of the subscriber’s choice.” *Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*, WC Docket No. 07-38, Notice of Proposed Rulemaking, 22 FCC Rcd 7760, 7772 at para. 23 (2008).

¹⁷ See *Thirteenth Report* at paras. 164-167.

investment.¹⁸ By examining price and non-price rivalry at only the most general levels, and often in language more reminiscent of advertising literature than critical analysis, the *Thirteenth Report* failed to identify any specific instances of provider conduct reflecting insufficient competition. Despite this ignorance, providers have adopted parallel pricing structures for voice, data, and SMS services, and have adopted parallel limitations on the usage of services, particularly mobile Internet access services. These parallel behaviors demonstrate an absence of competition among providers, as none is willing to offer substantially more open terms of service or to offer a broader range of user-friendly pricing models.

1. Provider parallel pricing indicates an absence of effective competition.

Significant consolidation and lack of effective federal oversight of the wireless industry have greatly diminished price competition in the CMRS markets. In a variety of ways, the four national wireless carriers – AT&T, Verizon, Sprint, and T-Mobile – have priced their services in parallel, potentially generating a substantial increase in prices. U.S. consumers paid an average of \$506 per year for wireless service in 2007, much more than users in most other developed nations.¹⁹ In particular, substantially parallel (and substantially above-cost) text message prices and mobile data usage prices reflect a stark failure of competition over price in wireless services.

a. Voice plans

Monthly voice plan options provided by the four largest carriers do not reflect the variable lifestyles of the American consumer. Instead, these plans offer little flexibility and consumer choice. Most CMRS providers' monthly plans offer a minimum of 200-450 minutes for \$29.99-\$39.99 per month, and offer a prepaid or "pay-as-you-go" service for customers who choose not to purchase a monthly plan. Pay-as-you go services range in cost from 10 cents to 20

¹⁸ See *id.* at paras. 110-176.

¹⁹ See Organization for Economic Co-Operation and Development, *OECD Communications Outlook 2007*, 6 (2007). The OECD average is \$439 per year.

cents per minute, depending on the provider – a high price even in comparison to international calling card rates. While carriers will claim that these plans comprise a broad range of options for the consumer, these limited choices effectively force the majority of consumers to pay more per month to purchase more minutes than they need, and reveal weak price rivalry.

Further, CMRS providers have failed to take advantage of economies of scale despite a recent boom in the volume of mobile subscribers, demonstrating a classic example of market power and anticompetitive behavior. U.S. wireless subscribers have nearly tripled between 2000 and 2008, topping 270 million, or 87 percent of the population, in December of last year.²⁰ Wireless provider earnings reflect this massive subscriber growth. Annualized total wireless revenues for the CMRS industry amounted to over \$148 billion in 2008, up from around \$45 billion in 2000 and \$19 billion in 1995.²¹ Yet, pricing plans remain largely parallel, and monthly plan and pay-as-you-go options remain costly for customers looking for economical solutions.

b. Data plans

As wireless data usage has increased in recent years, more wireless voice service providers have begun to offer data services alongside voice service. But the prices charged for these services seem far removed from any possible cost, indicating supracompetitive profits and a stark absence of provider rivalry over data prices. Usage charges over minimal initial allowances can easily bump a consumer's bill by several thousand dollars. AT&T's \$65 per month plan, for instance, includes 5GB of data service, with an overage charge of \$0.00048 for each additional *kilobyte*, adding up to a whopping \$480 for every extra gigabyte of data

²⁰ U.S. cell phone subscribers amounted to about 207 million in 2005, about 109 million in 2000, and about 33 million in 1995. See CTIA, "Wireless Quick Facts: Year End Figures," at http://www.ctia.org/media/industry_info/index.cfm/AID/10323.

²¹ See *id.*

transmitted.²² Oklahoma wireless user Billie Parks, for instance, received a bill for about \$5,000, mostly comprised of charges for overstepping AT&T's 5GB data cap.²³

c. SMS fees

CMRS carriers have adopted parallel, and increasing, pricing structures to maintain high text messaging, or SMS, rates. Since 2005, rates to send and receive individual text messages on the networks of all four major carrier networks have simultaneously doubled from 10 cents to 20 cents per message.²⁴ In 2003, T-Mobile charged as little as 5 cents per message to customers who did not sign up for a monthly text messaging plan.²⁵ When questioned about the apparent abuses of market power,²⁶ the providers noted their monthly SMS plans, which can charge users as little as 1 cent for a single message, or provide unlimited messaging for a flat fee. However, the carriers neglected to explain why the price of *individual* text messages, for customers who choose not to buy a monthly plan, have increased. They failed to also address why all four companies raised the prices for individual messages by equal amounts at largely identical times.

²² See generally "Cell Phones and Cell Phone Plans," AT&T Wireless, at <http://www.wireless.att.com/cell-phone-service/welcome/index.jsp>. These rates reflect pricing for BlackBerry and PDA "Personal + tethering" data plan without an individual or FamilyTalk voice plan. International per-kilobyte data charges are much higher.

²³ See Martin Perez, "AT&T, Radio Shack Sued For \$5,000 Netbook Bill," *Information Week* (March 2, 2009), at <http://www.informationweek.com/news/telecom/business/showArticle.jhtml?articleID=215600328&subSection=News>.

²⁴ See Marguerite Reardon, "The Rising Cost of Texting," *CNet News* (July 1, 2008), at http://news.cnet.com/8301-10784_3-9982251-7.html.

²⁵ See Kristin Dizon, "Text Messaging Makes Cell Phones Even Hotter Among Kids," *Seattle Post-Intelligencer* (September 30, 2003), http://www.seattlepi.com/lifestyle/141809_texting30.html.

²⁶ See Letter from Senator Herb Kohl, Chairman of Subcommittee on Antitrust, Competition Policy, and Consumer Rights, to Verizon Wireless, AT&T, Sprint, and T-Mobile (Sept. 9, 2008), available at <http://kohl.senate.gov/LT%20-%20cell%20ph%20CV.pdf>.

In other words, they failed to acknowledge concerns about the potentially anticompetitive nature of their pricing practices for individual SMS messages.²⁷

Price increases for text message services reflect a failure of competition, because they do not align with increasing costs but only increasing profits. The cost a carrier incurs by transmitting an SMS message has not increased in recent years. Text messaging files are very small, and the price of their transmission is negligible for the provider. An SMS message travels as a wireless signal from the handset, through the wired telephone network, and as a wireless signal to the receiving handset. The text message is a free rider inside a so-called “control channel,” or space that is already being used to operate the wireless network. In other words, a text message does not use up any extra spectrum once the carrier pays the cost of the underlying infrastructure and storage equipment. Thus, any revenue received by the provider on incremental text message usage is nearly pure profit.²⁸ To put these profits in perspective: considering how little data is transferred in an SMS message, at 20 cents per message, consumers pay the equivalent of almost \$1,500 per megabyte of data transferred, a rate over seventeen times more expensive than receiving data from the Hubble Space Telescope.²⁹ Streaming a single typical song at SMS data rates would cost a consumer more than \$5,000.³⁰ The failure to

²⁷ See generally Letter from AT&T to Herb Kohl, Chairman of Subcommittee on Antitrust, Competition Policy, and Consumer Rights (“Chairman Kohl”) (October 6, 2008); Letter from Sprint to Chairman Kohl (October 6, 2008); Letter from T-Mobile to Chairman Kohl (October 3, 2008).

²⁸ See Randall Stross, *What Carriers Aren’t Eager to Tell You About Texting*, THE NEW YORK TIMES (December 28, 2008).

²⁹ See Gabriel Gache, “Space Science Data Transmission Four Times Cheaper than SMS,” *Softpedia* (May 12, 2008), at <http://news.softpedia.com/news/Space-Science-Data-Transmission-Four-Times-Cheaper-than-SMS-85381.shtml> (identifying that at 5 cents per message, SMS data transfers are 4.4 times more expensive than data transfer to and from the Hubble telescope).

³⁰ Assuming an MP3 file size of 3.5 MB, typical for a 3.5 minute song.

compete by maintaining or lowering text message prices to reflect cost therefore should be considered by the Commission in the *Fourteenth Report's* evaluation of provider conduct.

2. Provider conduct in non-pricing aspects reflects insufficient competition.

The *Thirteenth Report* spent considerable time discussing new “app stores” and similar new functionality offered by carriers, and pointed to these features as indicative of provider competition. The Commission is right to consider innovation as a sign of market competition. However, in 2008, the continued evolution of these offerings reflect substantial limitations on innovation and on competition, demonstrated by ongoing limitations imposed by the wireless carriers on the development of applications for wireless devices and wireless Internet access services – limitations that are undesired by users of the networks, reflecting insufficient competition and high switching costs, and limitations that serve no clear purpose other than to limit competition even further.

Limitations on the use of services are a signal of inefficiency and ineffectiveness in the mobile Internet access market. In an efficient market, consumers would be able to acquire the full use and functionality they value from their services. But, mobile Internet access service providers continue to impose substantial (and substantially undesirable) limitations on the applications available through the store and the uses of the Internet access service. For example, the popular Skype VoIP program is not permitted to operate over AT&T's 3G network – a situation which AT&T lobbyist Jim Cicconi explained by saying “We absolutely expect our vendors not to facilitate the services of our competitors.”³¹ AT&T gave the same treatment to Sling Media's SlingPlayer Mobile application, forbidding its operation over the 3G network,

³¹ See Leslie Cauley, “Skype's iPhone limits irk some consumer advocates,” *USA Today* (February 2, 2009), at http://www.usatoday.com/tech/news/2009-04-01-att-skype-iphone_N.htm.

defending the decision solely by pointing to language in the terms of service.³² Finally and most recently, the debut of Apple's iPhone 3G-S was awaited anxiously by fans, who were subsequently disappointed to learn that AT&T did not permit the operation of several of its features.³³

But AT&T is not alone – all four major nationwide wireless carriers have substantial limitations in the terms of service for their mobile Internet access services. Given the degree of similarity in the usage limitations, and the absence of any major wireless carrier willing to offer a mobile Internet access service without limitations (despite the insistence of some that the network would support all uses), providers are certainly not engaging in aggressive competition over non-price service features in the mobile Internet access service market.

In the *Fourteenth Report*, the Commission should consider limitations on usage as provider conduct indicating a lack of effective competition. These limitations on usage should especially be considered where they are adopted in parallel and ostensibly without a basis in limitations in the network.

C. Behavior Shows the Market is Not Competitive.

Through lengthy standard contracts backed by high early termination fees (“ETFs”), common practices of forcing or triggering contract extensions, and substantial barriers to consumer choice of wireless devices, consumers face substantial obstacles in choosing and switching providers. In an effectively competitive market, consumers should have minimal

³² See Chris Riley, “AT&T’s Not-So-Secret Veto over 3G SlingPlayer Mobile,” *SavetheInternet.com Blog* (May 13, 2009), at <http://www.savetheinternet.com/blog/09/05/13/att's-not-so-secret-veto-over-3g-slingplayer-mobile>.

³³ See Kevin Kelleher, “Why Does my iPhone Suck?” *Reuters* (June 12, 2009), available at <http://www.reuters.com/article/bigMoney/idUS337036694420090612>.

barriers to “voting with their feet” and switching to a provider who offers better quality or features or lower price. In the *Thirteenth Report*, in its section on “consumer behavior,” the Commission essentially ignored these obstacles, and spent a scant ten paragraphs on all of the barriers to user switching of service providers.³⁴ The benefits of local number portability for switching were praised for three full paragraphs, but only one was spent on ETFs, and the Commission discussed the benefits of long-term contracts and minimized the consumer harm of the practice.³⁵ Handset exclusivity and other practical obstacles to switching went unmentioned. In the *Fourteenth Report*, the Commission must take more seriously these practical impediments to consumer switching, to determine the impact that they have on consumer choice and on effective competition.

1. High early termination fees limit consumer switching and hinder competition.

Early termination fees lock customers into lengthy contracts, limiting switching and the ability of consumers to “vote with their feet” by leaving a current provider when another provider can make a better offer. Early termination fees are essentially penalties levied when a consumer wishes to change or cancel the terms of their wireless agreement. Early termination penalties by CMRS carriers create artificial barriers to open competition in the wireless market and present difficult choices for the consumer. Rather than facilitating the mobility and flexibility that most consumers rightfully expect from the use of mobile devices, ETFs lock mobile customers into long-term contracts that fail to acknowledge the speed of technological progress in the mobile device market. While these pricing structures undoubtedly benefit the wireless carrier by providing a reliable customer base for the longer term, they fail to promote competition for lower prices and improved services. Indeed, ETFs facilitate oligopoly operating

³⁴ *Thirteenth Report* at paras. 177-186.

³⁵ *Id.* at 185.

structures in the wireless market, since carriers are permitted to divide customers among themselves without the threat of suddenly losing them to a competing CMRS provider.

2. Contract extensions limit consumer switching and hinder competition.

Contract extensions further limit consumer switching and thus hinder competition. When consumers choose to alter their voice and/or data plans or purchase a new mobile device due to certain lifestyle changes, many CMRS carriers require those consumers to extend the end-date of their contracts by one or two years.³⁶ At times, providers have enacted hidden or opaque contract extensions without warning the consumer.³⁷ Sprint, for instance, has been the target of litigation for failing to notify customers that their contracts were being extended when they added more cell phone minutes or made other small changes to their plans.³⁸ Contract extensions, hidden or not, are unjustified business practices established to worsen the anticompetitive nature of ETFs. Moreover, contract extensions further legitimate the use of early termination penalties, and force customers to stay with one provider. Contract extensions substantially limit subscriber switching, and thus serve as impediments to effective competition.

3. Handset exclusivity arrangements restrict consumer choice of devices.

Handset exclusivity arrangements – contracts between device manufacturers and wireless service providers to limit devices to be offered with only one wireless service – artificially limit consumer choice, restrict device innovation, and lead to higher prices. Of the ten most popular handsets in the market in 2008, eight were tied to various network providers under exclusive

³⁶ Though the *Thirteenth Report* notes that this is not a universal practice. *See id.*

³⁷ Providers also charge a fee to *upgrade* your handset. *See, e.g.,* “T-mobile Reinstates Useless \$18 Handset Upgrade Fee,” *Consumerist* (April 26, 2009), <http://consumerist.com/5228100/t+mobile-reinstates-useless-18-handset-upgrade-fee>.

³⁸ *See* Brian Bakst, “Minnesota Says Sprint Duped Customers,” *Associated Press* (September 27, 2007), available at <http://www.wirelessforums.org/alt-cellular-sprintpcs/sprint-sued-unapproved-contract-extensions-29588.html>.

deals.³⁹ For the consumer, the result is an artificial restriction on choice of service provider and on switching service providers.⁴⁰ In addition to limitations on the consumer's choice of service provider, the consumer faces artificial limitations on a choice of device, because exclusivity arrangements are also a barrier to entry for new entrants in the market for wireless devices.⁴¹ The continued operation of handset exclusivity arrangements in CMRS markets and their impact on consumers and consumer choice should be recognized in the *Fourteenth Report* as an indication of ineffective competition.

Exclusivity arrangements impact not only consumer choice, but also market structure, as they constitute a barrier to entry for small service providers. As a direct consequence of exclusive deals between device manufactures and incumbent national service providers, small service providers cannot offer the use of popular handsets and smartphones over their networks. Thus, their services are less attractive to consumers who are driven towards the popular devices that are offered by the incumbent providers, leading to further increase in their market power. These arrangements are of particular concern with respect to the future of wireless services. The future of wireless services, broadband access, and wireless Internet access services in particular,

³⁹ See Kristen Beckman, "By the Numbers: Top Ten Most Popular U.S Handsets in November," RCR Wireless (January, 8, 2009) available at <http://www.rcrwireless.com/article/20090108/wireless/901079989/1081/newsletter33>.

⁴⁰ In contrast, almost 70–80% of the phones in Europe and Asia are sold independent of the wireless providers. See, e.g., Margarita Schwartzman, "Cheap Unlocked Cell Phones: Switch Cell Phone Providers Without Losing Your Phone," *Articlesbase* (June 5, 2008), at <http://www.articlesbase.com/cell-phones-articles/cheap-unlocked-cell-phones-switch-cell-phone-providers-without-losing-your-phone-439210.html>.

⁴¹ For example, as Dell was considering developing a smartphone, it was faced with significant challenges, including the need to carve out an exclusivity arrangement with a carrier, to market its smartphone. See Justin Scheck, "Dell Prepares to Dial Into Smartphone Marketplace," *The Wall Street Journal* (January 30, 2009), available at <http://online.wsj.com/article/SB123327385680231133.html>.

are tied to the use of smart phones,⁴² and without the ability to offer them, rural providers will not have the ability to generate enough revenues to deploy 3G networks.⁴³ Thus, if no action is taken, a similar anti-competitive environment will ensue for the coming 4G network markets.

Additionally, handset exclusivity arrangements give wireless service providers leverage to exert influence over handset innovations that do not meet their approval. Currently, a handset manufacturer is at the whim of the network carrier (with whom the exclusivity contract is drawn) when it introduces new features to market its handset. For example, Nokia was forced to remove some of its features, like Wi-Fi, for the ability to market its e61 phone in the U.S. Nokia was required to eliminate these features because AT&T, the network provider, was apprehensive that consumers would take advantage of VOIP services, thereby reducing the minutes of its wireless phone services.⁴⁴ In another example, RIM (the manufacturer of Blackberry) was prohibited by AT&T from offering free mapping services to Blackberry users since AT&T wanted to offer consumers its own mapping services for a fee.⁴⁵ Also, AT&T has blocked, disabled, or mutated various other features such as Bluetooth technology, SIM card mobility, direct sound and photo file transfer capabilities, GPS services, and call timers (*i.e.*, to keep track of minutes used).⁴⁶

Exclusive deals are not required by the structure of CMRS markets, and instead serve as artificial impediments to competition and innovation. CMRS markets in the U.S. are established

⁴² See, e.g., Richard Wray, "Mobile phone firms bank on smartphones to bail out the industry," *The Guardian* (Feb. 14, 2009), at <http://www.guardian.co.uk/business/2009/feb/15/mobile-world-congress-report-fewer-delegates>.

⁴³ See Reply Comments of United States Cellular Corporation, Attachment, William P. Rogerson, *An Economic Analysis of Exclusivity Arrangements between the Big Four Wireless Carriers and Handset Manufacturers* at 3 n.5, Docket No. RM-11497 (February 23, 2009).

⁴⁴ See Tim Wu, *Wireless Carterphone*, 1 INTERNATIONAL JOURNAL OF COMMUNICATION 389 (2007), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=962027.

⁴⁵ See Jessica Vascellaro, "A Fight Over What you Can Do on a Cellphone," *The Wall Street Journal* at A1 (June 14, 2007).

⁴⁶ See *id.*

markets for devices. In an established market, device manufacturers do not have to rely on exclusive arrangements with service providers to market their devices or to ensure sufficient revenues to fund the research and development of new products and services. Indeed, this is the case in other established markets, such as Asia and Europe. Handset manufacturers in Asia and Europe are able to sell 70-80% of devices independent of exclusive deals with service providers.⁴⁷ Thus, rather than representing an essential feature of the market, handset exclusivity deals are an artificial impediment to competition in CMRS markets.

The market power that U.S. carriers enjoy through the sale of mobile devices not only exacerbates the effects of consolidation in the wireless industry; it also facilitates the provider's leverage to operate via anticompetitive practices, such as the use of handset exclusivity and early termination fees. Under the U.S. wireless market framework, if consumers wish to forgo the high cost of purchasing a cellular phone at full price and using a prepaid cellular plan, they are required to sign a contract with the provider for 1-2 years. In exchange, providers offer to subsidize the price of a new mobile device, thus justifying the use of those contracts so that the consumer can "pay off" the cost of the subsidized phone. Lack of regulation to diversify the sales of mobile devices has thus facilitated the anticompetitive behaviors discussed above, including handset exclusivity and the use of ETFs by CMRS carriers.

⁴⁷ See Marguerite Reardon, "Will unlocked cell phones free consumers," *CNet News* (January 24, 2007), available at http://news.cnet.com/Will-unlocked-cell-phones-free-consumers/2100-1039_36152735.html.

D. Performance Shows the Market is Not Competitive.

1. Revenue and usage do not accurately reflect problems with competition.

The Commission must consider cost alongside revenue and usage in the *Fourteenth Report*. Without considering the declining costs of providing service, as well as the differences between fixed and marginal cost, an evaluation of performance based on average revenue and usage cannot accurately measure the effectiveness of competition. In the *Thirteenth Report*, the Commission focused primarily on average revenue and usage of services. This analysis reveals increasing usage and decreasing average price per unit – but it hides the fact that costs continue to decline, and that profits continue to rise. Moreover, carriers structure pricing mechanisms to drive users into higher usage brackets that increase their profit margins. Wireless services, along with many other telecommunications services, bear high fixed costs and relatively low marginal costs. A provider that can increase subscriber usage and simultaneously bill for this use at rates well above marginal cost – even by offering discounts for ever more usage, while still keeping the marginal discounted price above cost) – can increase total revenue, increase subscriber usage, and simultaneously increase total profit. In other words, increased revenue and increased usage, even paired with decreasing ARPU, may not be a sign of successful market performance – perversely, if paired with supracompetitive profits and provider refusal to provide adequate low-cost pricing options, these facts may indicate substantial problems with competition.

2. Examining profitability would demonstrate a lack of effective competition.

The *Thirteenth Report* focused its analysis of market performance on average revenue per unit, or ARPU, reporting that ARPU for voice services decreased but was balanced out by increases in ARPU for data services.⁴⁸ The *Thirteenth Report* also considered network quality

⁴⁸ See *Thirteenth Report* at para. 195.

and minutes of use, among other factors. Although these factors can indicate a healthy industry and a valuable product for consumers, they fail to demonstrate effective competition. Substantial increasing profits can be generated in an insufficiently competitive industry, while still delivering a desirable product at reduced prices, by failing to lower prices at a rate that matches ever-decreasing costs.

To remedy this, the *Notice* proposes that the *Fourteenth Report* use the profitability of CMRS providers, in part, to determine market performance.⁴⁹ Commenters strongly support such an approach. Evaluating provider profitability accurately identifies the level of aggressive competition in an industry, because in an effectively competitive market, if any incumbent provider is generating supracompetitive profits, a new entrant will develop to undercut the incumbent and get a piece of the pie. In the contrapositive, if incumbent providers generate “abnormal profits” and new entrants do not develop, then the market does not demonstrate effective competition. Commenters also support the continued tracking of minutes of use and network quality for voice services, as both indicate market performance from the consumer’s perspective. Similarly, the *Fourteenth Report* may also wish to begin tracking bytes of use for mobile broadband and mobile Internet access services.

III. BARRIERS TO ENTRY AND GROWTH FURTHER LIMIT COMPETITION.

Even when done properly, market concentration analysis, the overwhelming focus of the *Thirteenth Report*, can only indicate distortions – it cannot explain them. To measure effective competition, and particularly to promote competition, the Commission must look deeper into the

⁴⁹ See *Wireless Telecommunications Bureau Seeks Comment On Commercial Mobile Radio Services Market Competition*, Docket No. 09-66, Public Notice, at 12 (May 14, 2009) (“*Notice*”).

source of these distortions in the *Fourteenth Report*. In particular, the wireless market demonstrates high barriers to entry and growth, including limited availability of spectrum, rapidly rising prices for wireless backhaul, glaring loopholes in roaming regulations, and exclusive deals for popular new devices exclusively offered to large incumbent carriers.

In the *Thirteenth Report*, the Commission considered primarily spectrum availability as a limit on entry and growth; a scant two paragraphs were spent on other barriers to entry, and the *Report* did not mention many of the most substantial, practical barriers to entry and growth faced by small and nascent wireless service providers, particularly providers of mobile Internet access service. Proper analysis of CMRS markets in the *Fourteenth Report* should demonstrate that the current market and regulatory structure cannot adequately remedy ongoing problems with competition. Thus, to promote competition through growth and new entrants in the market, the Commission should consider regulatory reform as necessary to enable true effective competition.

A. Special Access Service Prices Are Barriers to Growth and Entry.

Another barrier to entry and growth in CMRS markets, particularly in the market for mobile Internet access services, is the current norm of unreasonable special access pricing, terms, and conditions, enabled by the Commission's recent deregulation and "price flexibility" for special access services. Smaller (and new) carriers that do not own substantial wired infrastructure rely on special access transmission paths to support their telecommunication businesses, and in particular their mobile Internet access services.⁵⁰ Currently, few incumbent providers of special access exist. As a result, they are able to use their market power to offer

⁵⁰ Special access also caters to the telecommunication needs of vital institutions like hospitals, universities and banks.

high special access prices.⁵¹ For example, in 2007, Verizon received a 700% rate of return for the use of its special access services.⁵² These types of special access rates introduce hurdles for small and new wireless providers, especially when they have to compete with the incumbents (who are already at an advantage due to special access pricing) in the last mile of the network. Paying supracompetitive rates for these services raises the costs of their inputs far above those of their competitors, thus allowing limited competition in the special access market to produce limited competition in the mobile Internet access services market. The Commission should evaluate the impact of limited special access service choices and rising special access rates on mobile Internet access services.

Furthermore, the Commission should evaluate the mechanisms it currently uses to analyze the special access market. The Commission currently assesses the need for special access price regulation based on market competition. However, the Commission's methodology for measuring special access competition has been evaluated as incorrect in numerous studies. The Commission measures competition by the number of competitive carriers who set up their equipment on an incumbent's network in Metropolitan Statistical Areas.⁵³ By setting up equipment in the incumbent's network, the small competitive carrier is assumed to have made a long term investment that will keep a check on any market power that the incumbent exerts. According to the Government and Accountability Office ("GAO"), this gives an inaccurate

⁵¹ See, e.g., Peter Bluhm and Robert Loube, *Competitive Issues in Special Access Markets*, National Regulatory Research Institute (January 21, 2009); Matthew Lasar, "Report Reignites Fights over Special Access Rates," *Ars Technica* (January 26, 2009), at <http://arstechnica.com/tech-policy/news/2009/01/report-reignites-fight-over-special-access-rates.ars>.

⁵² See Derek Turner, Free Press, *Dismantling Digital Deregulation: Towards a National Broadband Study* (2009).

⁵³ See Bluhm and Loube, *supra* note 51.

estimation of competition.⁵⁴ The GAO has noted that the Commission's assessment does not take into account that some of these competitive carriers either merge with the incumbents or do not survive in the long term.⁵⁵ The GAO suggested that pricing and market power also factor in the equation for determining competition.⁵⁶ The National Association of Regulatory Utility Commissioners has also advised the Commission against the use of its current methodology for measuring competition in special access markets.⁵⁷

In the *Fourteenth Report*, the Commission should consider the impact of special access services as a barrier to entry and growth for mobile Internet access services, and should measure this impact by the rapidly increasing rates of return, not an outdated, proven ineffective special access competition methodology.

B. Consolidation Creates Barriers to Growth and Entry.

Consolidation of market power in CMRS markets has created barriers to entry for new entrants and fosters an anti-competitive environment. The absence of spectrum caps and integration between wireline and wireless providers generate substantial advantages in developing service and in acquiring new subscribers, advantages that skew a level playing field and have a direct impact on effective competition.

1. The elimination of spectrum caps has facilitated consolidation.

The Commission should consider the impact of the removal of spectrum caps on competition. Without a spectrum cap or an effective spectrum screen, established incumbent providers have an advantage, through leveraging existing assets and credits, in purchasing new

⁵⁴ See U.S. Government and Accountability Office, *Telecommunications: FCC Need to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services* (November 19, 2006).

⁵⁵ See *id.*

⁵⁶ See *id.*

⁵⁷ See Bluhm and Loube, *supra* note 51.

spectrum. To prevent incumbent wireless providers from getting a substantial advantage, spectrum caps were introduced by the Commission in 1994.⁵⁸ Spectrum caps were eliminated in 2003 under the premise that no single wireless provider had significant market power that could prove to be a threat to competition.⁵⁹ Since 2003, the elimination of spectrum caps has led to a market with heavily concentrated spectrum holdings and incumbents who therefore have substantial advantages in improving service and service quality, as well as acquiring new spectrum that becomes available.

For example, the recent 700 Mhz spectrum auction substantially increased the market power of the two largest wireless incumbents – AT&T and Verizon.⁶⁰ Even when Commission regulations force one of the two big carriers to divest spectrum, the other of the two often purchases it, leaving unchanged the market share held by the big two.⁶¹ The elimination of spectrum caps has enabled the two largest providers to use their purchasing power at spectrum auctions and ward off new entrants in CMRS markets. The Commission should consider readopting a spectrum cap to ensure that small and new providers are able to access the available spectrum resources of the nation. At a minimum, the Commission should consider in the *Fourteenth Report* the impact of concentrated spectrum holdings on market entry and growth.

⁵⁸ See Simon Romero, “F.C.C Is Expected to Lift Airwave Spectrum Cap,” *The New York Times* at C6 (November 8, 2001), available at <http://www.nytimes.com/2001/11/08/business/fcc-is-expected-to-lift-airwave-spectrum-cap.html>.

⁵⁹ See Press Release, Federal Communications Commission, FCC Announces Wireless Spectrum Cap To Sunset Effective January 1, 2003 (November 8, 2001), available at http://www.fcc.gov/Bureaus/Wireless/News_Releases/2001/nrw10129.html.

⁶⁰ See Bryan Gardiner, “In Spectrum Auction, Winners Are AT&T, Verizon and Openness,” *Wired* (March 20, 2008), at <http://www.wired.com/epicenter/2008/03/fcc-releases-70>.

⁶¹ John Paczkowski, “AT&T and Verizon Sitting in a Tree, D-U-O-P-O-L-Y,” *Digital Daily* (May 11, 2009), at <http://digitaldaily.allthingsd.com/20090511/att-and-verizon-sitting-in-a-tree-d-u-o-p-o-l-y/>.

2. *Joint ownership and lack of intermodal competition among wireline and wireless providers restrain growth in the wireless market.*

Joint operation and ownership of wireline and wireless service by some incumbents may serve as restraints on growth and competition in CMRS markets. The impacts of these structures ought to be recognized by the Commission in the *Fourteenth Report*. CMRS carriers that are also incumbent wireline providers – namely AT&T and Verizon – hold disproportionate power. Incumbents hold the capacity to position themselves and their products to ensure that customers who “cut the cord” from the wireline service will remain users of wireless service offered by the same provider. It has been estimated that after its merger with Cingular, AT&T gained an 82% probability of capturing a customer who cancelled his or her wireline service into AT&T’s wireless pool.⁶² As a former Bellsouth CEO described in 2001, “Wireless substitution is now a fact. That’s okay. We tend to own both.”⁶³

Additionally, incumbents hold the exclusive ability to bundle wireline and wireless services to dissuade their customers from wireline-wireless substitution and to retain their overall subscriber base. In 2004, for example, Verizon introduced its “iobi” platform, which integrated wireline, wireless, and data services so that customers could access features of each in a seamless fashion.⁶⁴ Although wireline-wireless bundling may not have received the same success as some other bundling ventures, intermodal market power held by wireline incumbents grants them substantial advantages of access to current, new, and changing wireless subscribers.

⁶² See Lawrence J. Spiwak, “Fixed-Mobile ‘Intermodal’ Competition in Telecommunications: Fact or Fiction?” *Phoenix Center Policy Bulletin* No. 10 at 9 (March 31, 2004).

⁶³ Duane Ackerman, “More Callers Cut off Second Phone Lines for Cellphones, Cable Modems,” *Wall Street Journal* at B1 (November 15 2001).

⁶⁴ See Zimmerman, P. R., *The Cingular/AT&T Wireless merger, wireline-affiliated wireless carriers, and intermodal competition in telecommunications*, Working Paper (2005). Zimmerman also mentions a similar effort by Bellsouth and Cingular in their launch of a service that provided a single pool of minutes for both wireless and long-distance wireline use.

Although these market advantages do not necessarily merit regulatory intervention, the Commission should take their effects into account when examining barriers to entry and growth in the wireless market in the *Fourteenth Report*.

C. Access to Spectrum Remains a Barrier to Entry and Growth.

Thanks in part to consolidation of holdings, and in part to the finite nature of spectrum usage, limited availability of spectrum continues to restrict growth in and entry into the wireless market. But, with a proper regulatory regime, spectrum access should not be a substantial deterrent. Additional spectrum can be made available, and new technologies can enable more efficient and effective use of the spectrum. The Commission should examine in the *Fourteenth Report* the potential for unlicensed use of spectrum to increase the efficiency of spectrum usage, and the potential for an inventory of government spectrum to allow for additional resources to be made available for commercial usage.

1. The Commission should inventory federal spectrum usage.

In the *Fourteenth Report*, as in previous reports, the Commission should recognize that spectrum is a limited resource. The Commission should continue to examine possible areas of spectrum that are available or could be made available for commercial use. In particular, a large part of the spectrum allocated to broadcasting, military, and other services lies fallow today.⁶⁵ Some of this spectrum may be suitable for reassignment for commercial purposes. To maximize use of this spectrum, the Commission should conduct a full inventory of the nation's spectrum resources, and should consult with NTIA and other branches of the government to promote the efficient use of spectrum.

⁶⁵ See, e.g., "Congress considers inventory of spectrum use in America," Free103point9 Newsroom (March 25, 2009), at <http://blog.free103point9.org/2009/03/congress-considers-inventory-of.html>.

2. *Unlicensed use will enable greater use of and access to spectrum.*

The Commission should consider in the *Fourteenth Report* the possibility of unlicensed spectrum use to help alleviate the market problems created by limited spectrum resources. Undoubtedly, an unlicensed regime should have certain regulations in place to ensure that devices cooperate fairly in using the spectrum.⁶⁶ However, unlicensed use of more spectrum will help maximize vitality of CMRS markets. Advanced spectrum technologies are enabling efficient and interference-free uses of spectrum on an unlicensed basis. Technologies such as spread spectrum radio and “smart” devices that can coordinate at low power levels without interference are in growing use today. These technologies allow data to be sent between various “smart” devices without interference. Additionally, the link between the frequency of a signal and the amount of data that can be sent on this frequency is decoupled, allowing for greater data transmission rates even on lower frequencies.

The benefits of unlicensed spectrum are long term and proven.⁶⁷ Wi-Fi is an enormous affirmation of the power of unlicensed spectrum; from its use in homes, office LANs, parks, and public places (amenity unwiring) to wireless ISP (Starbucks, T-Mobile), Wi-Fi has become a platform for user created value and innovation.⁶⁸ While the benefits of unlicensed spectrum are clear, in some instances a balance between licensed and unlicensed use of the spectrum is required. For instance, although unlicensed use enables greater utilization of the spectrum,

⁶⁶ A “greedy” device that does not conserve the shared spectrum by using greater transmission bandwidth or long transmission intervals would be controlled by implementing technical rules (*i.e.*, modulation, back-off schemes, etc.).

⁶⁷ While an auction of the fallow spectrum for exclusive use to a limited number of entities would reap immediate capital, it would stifle the perpetual gains of an open spectrum.

⁶⁸ See, *e.g.*, Clay Shirky, “The Possibility of Spectrum as a Public Good,” *Networks, Economics and Culture* (August 13, 2004), available at http://www.shirky.com/writings/spectrum_public_good.html.

applications such as broadcast television and public safety communications require greater quality of service, and thus would be better served by licensed spectrum allocations.⁶⁹

Additional policy changes can allow the existing unlicensed spectrum to be more effectively used. By recently opening up TV white spaces for unlicensed use,⁷⁰ the Commission has taken the first step – but, more must be done to ensure that markets throughout the country, especially rural and underserved areas, will benefit from the opening of these fallow bands in the spectrum. Currently, transmission in white spaces is limited to low power devices. This hinders the adoption of wireless use in rural areas since low power transmission requires a network with many towers, access points, and repeaters to maintain signal strength. Promoting transmission using a higher power level in rural and underserved areas would make wireless broadband more accessible to these communities. The Commission should consider these possibilities for efficient spectrum use in the *Fourteenth Report* and in its other ongoing proceedings.

D. Loopholes in Roaming Regulations Are Barriers to Entry and Growth.

Current loopholes in the Commission’s treatment of automatic roaming obligations enable incumbents to place substantial obstacles in the path of their competitors. The Commission should consider the impact of these policies on market entry and growth in the *Fourteenth Report*, and should close these loopholes in a separate proceeding to promote competition to fulfill its statutory duties.

Instrumental to the ability of new carriers to enter a market, or for existing carriers to enter new regional markets, is the ability to establish roaming agreements to ensure smooth

⁶⁹ See Jon Peha, Carnegie Mellon University, *Emerging Technology and Spectrum Policy Reform* (January 2007) available at http://www.itu.int/osg/spu/stn/spectrum/workshop_proceedings/Background_Papers_Final/Jon%20Peha%20ITU%20spectrum%20workshop.pdf.

⁷⁰ See *In the Matter of Unlicensed Operation in the TV Broadcast Bands, Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, 23 FCCRcd 16807, Second Report And Order And Memorandum Opinion And Order (2008).

service coverage for consumers as the carrier acquires spectrum rights and builds out towers. Incumbent providers have little incentive to offer roaming agreements on favorable terms, other than to ensure that they can get fair terms when they need roaming; therefore, large carriers have no incentive to treat small competitors fairly. Recognizing this, in August 2007, the Commission ruled that voice roaming, or the ability to place a call outside of a CMRS provider's network without taking special action to initiate that call, is a common carrier service that must be provided on a "just, reasonable, and non-discriminatory basis."⁷¹ In other words, carriers could not refuse to provide roaming service to other carriers when technologically possible, and carriers could not charge unreasonable rates for the service.

However, the Commission enacted two harmful limitations to these automatic roaming obligations that result in continued substantial limitations to market entry and growth. First, the Commission placed a so-called "home" or "in-market" exception that allows CMRS carriers to refuse to provide automatic roaming in any area where the requesting carrier holds a wireless license or spectrum usage rights – regardless of whether the requesting carrier has built towers or can offer service in the area without requiring roaming. The exception now gives large facilities-based network operators, such as AT&T and Verizon, the ability to deny roaming to a smaller competitor if that competitor has a license within a large operator's "home" area. This creates a disincentive for small companies to seek out additional spectrum licenses – a precondition for building towers and expanding service and growing as a competitor. These concerns are particularly harmful in regions adjacent to their current service territories, those regions where

⁷¹ *In the Matter of Reexamination of Roaming Obligations of Commercial Mobile Radio Service Providers*, WT Docket 05-265, Report And Order And Further Notice Of Proposed Rulemaking, 22 FCC Rcd 15817 (2007) ("Roaming FNPRM").

they can most profitably grow their coverage and yet most need to maintain service for their existing customers.

Second, the Commission also limited the mandate for automatic roaming to real-time, two-way switched voice and data services that are interconnected with the public switched telephone network, along with push-to-talk and SMS services. The Commission chose not to extend automatic roaming obligations to non-interconnected services, including in particular data services such as mobile Internet access. Unequal treatment of different mobile wireless services presents a confusing, yet potentially costly, framework for the consumer. It further limits the ability of smaller competitors and new entrants to provide their customers high-quality, high-range mobile broadband and mobile Internet access services, the very services most needed for growth in modern CMRS markets (and properly considered separate markets in themselves).

The combination of these two loopholes creates substantial barriers to entry and growth for would-be competitors in CMRS services. At a minimum, the impact of these policies on the state and growth of competition should be evaluated in the *Fourteenth Report*. The Commission should also close these loopholes in order to better promote competition in CMRS markets.

IV. CONCLUSION

Effective competition leads to lower prices, higher speeds, better services, broader deployment, and more innovation. To achieve these benefits, Congress directed the Commission to monitor and work to promote effective competition in CMRS markets. Without effective competition, network investments are reduced, prices remain high, and consumers suffer while inflating the profit margins of major corporations. Past CMRS reports issued by the Commission have ignored many glaring signs of limits on effective competition, as well as numerous factors

indicating that the wireless market will not dig itself out without regulatory intervention. A more detailed examination of CMRS markets will reveal their problems, and should encourage the Commission to aggressively pursue pro-competitive regulatory policies in other contexts to revive and expand wireless competition.

Specifically, the Commission should examine the impact of HHIs at the regional level, using the granular detail collected for the *Thirteenth Report* to question why some EAs have particularly high levels of concentration. The Commission should examine parallel pricing and parallel conduct from providers, and the signs such behavior presents of competitive problems. The Commission should consider the impact of early termination fees, lengthy contracts, and handset exclusivity arrangements on consumer behavior and choice. The Commission should factor profitability into its examination of market performance. Finally, the Commission should take a close look at substantial barriers to entry and growth in the market, including limited spectrum resources disproportionately held by a few incumbent carriers, excessive costs for special access services, and loopholes in the existing roaming regulations. Conducting a detailed examination of CMRS markets will undoubtedly reveal substantial problems with competition, and numerous indications that competition will not substantially improve absent regulatory intervention.

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