

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

In the Matter of)
)
Policies Regarding Mobile Spectrum) WT Docket No. 12-269
Holdings)

REPLY COMMENTS OF SPRINT NEXTEL CORPORATION

SPRINT NEXTEL CORPORATION

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Table of Contents

I. INTRODUCTION AND SUMMARY 1

II. THERE IS STRONG SUPPORT IN THE RECORD FOR AMENDING THE COMMISSION’S RULES TO ADDRESS THE TWIN BELLS’ ANTI-COMPETITIVE AGGREGATION OF SPECTRUM BELOW 1 GHz.....7

 A. Without Commission Action, the Twin Bells Will Continue to Engage in Anti-Competitive Foreclosure Strategies to Protect Their Dominant Share of Low-Band Spectrum.....9

 B. The FCC’s Spectrum Aggregation Policies Should Recognize the Unique Characteristics of Different Spectrum Bands and Especially Spectrum Below 1 GHz.....12

 C. The Commission Should Adopt a Low-Band Spectrum Cap and an Explicitly Weighted Spectrum Screen to Promote Competition with the Twin Bells.....16

III. THE TWIN BELL PROPOSALS TO INCREASE THE AMOUNT OF 2.5 GHz SPECTRUM COUNTED UNDER THE SPECTRUM SCREEN IGNORE WELL-REASONED FCC ANALYSIS AND WOULD DISTORT THE FCC’S COMPETITION GOALS19

IV. THE COMMISSION’S ATTRIBUTION POLICIES SHOULD NOT DISCOURAGE INNOVATIVE BUSINESS MODELS SUCH AS SPECTRUM HOSTING AND SPECTRUM SHARING ARRANGEMENTS28

V. CONCLUSION.....30

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I. INTRODUCTION AND SUMMARY

As the Commission has routinely recognized, spectrum is an essential input in the provision of wireless service and has become even more important in recent years with the exploding consumer demand for mobile broadband communications.¹ Its importance to wireless carriers cannot be overstated. The Commission’s recognition of spectrum as an essential input to the wireless ecosystem has not, however, occurred in a vacuum: the Commission’s analysis of spectrum holdings and the various analytic tools it has adopted – including a previous spectrum cap and the current spectrum screen – constitute one aspect of the Commission’s statutory responsibility to promote competition in the wireless industry.

In examining spectrum holdings, the Commission has used tools like the spectrum screen to evaluate the level of competition within the wireless industry. At once profoundly local, and yet quintessentially *national*, spectrum commands the Commission’s attention precisely because

¹ See, e.g., *Policies Regarding Mobile Spectrum Holdings*, Notice of Proposed Rulemaking, 27 FCC Rcd 11710, ¶ 2 (2012) (*Notice*); *Annual Report and Analysis of Competitive Market Conditions With Respect to Mobile Wireless, Including Commercial Mobile Services*, Fifteenth Report, 26 FCC Rcd 9664, ¶ 266 (2011) (*Fifteenth Report*); *Application of AT&T Inc. and Qualcomm Inc.*, Order, 26 FCC Rcd 17589, ¶ 43 (2011) (*AT&T – Qualcomm Order*).

it is the life-blood of the wireless industry.² Without adequate access to the necessary mix and amount of spectrum, other wireless broadband providers will face significant challenges in competing with the nation's two largest wireless carriers, AT&T and Verizon, which already control a dominant mix of valuable spectrum holdings. And without sufficient wireless broadband competition against the "Twin Bells," the public benefits resulting from innovation, a wide choice of products and services, and robust price competition will fade and disappear.

While the Commission has long recognized the distinct impacts of spectrum concentration geographically – considering how concentration affects competition at both the local and national level – its analysis in other respects no longer reflects the ways in which market *participants* view the specific input the Commission endeavors to evaluate. Developed during a period of relative competitive parity among wireless carriers, in which the available spectrum bands (the Cellular, Specialized Mobile Radio (SMR), and Personal Communications Service (PCS) Bands) were themselves marked by relative parity, the spectrum screen treated spectrum as market participants generally viewed spectrum: a largely undifferentiated input accessible to a wide range of carriers.

Perhaps no band typifies this undifferentiated approach to spectrum aggregation better than PCS: the single largest commercial mobile radio service (CMRS) allocation, with blocks of different sizes to accommodate different services and needs, the PCS Band hosts not only all four nationwide carriers, but regional carriers as well. The universality of the PCS Band is demonstrated not simply in the diversity of carriers holding PCS licenses (and the mature

² The local nature of spectrum as an input is characterized by the way in which it is licensed on a geographic basis and the fact that today's nationwide carriers arose from smaller, regionally-focused wireless providers. At the same time, the seamless connectivity, wireless innovation, and ubiquity that consumers today expect are a function of the economies of scale and scope nationwide carriers have accomplished by assembling licenses covering the entire country – demonstrating the national aspects of the spectrum input.

ecosystem flourishing around them), but in the fluidity of the market for PCS spectrum: PCS licenses are readily swapped, disaggregated, partitioned, sold and aggregated as carriers match their spectrum assets to varying demand and business plans across differing geography, population density, and competitive forces.

Today, however, the paradigm of relatively undifferentiated spectrum inputs for commercial wireless services no longer reflects reality. The dramatic growth in broadband services and technologies as well as the Commission's auctions of Advanced Wireless Service (AWS) and 700 MHz spectrum for commercial wireless services, the partial reallocation and reconfiguration of the 2.5 GHz Band for commercial wireless use, the 800 MHz Band Reconfiguration Order, and, most recently, the Commission's reallocation of the 2 GHz MSS spectrum to primary terrestrial broadband use have dramatically changed the way carriers view the value, utility and desirability of commercial spectrum bands. The creation of boutique band classes, the industry-wide transition to wideband technologies, the striking disparities in the cost of capital between the largest two carriers and all others, and the introduction of new spectrum bands with considerably different propagation characteristics both above and below the bedrock PCS Band force carriers to no longer view spectrum as undifferentiated and each megahertz as indistinguishable. Market participants now incorporate significantly more granular factors in their analysis of spectrum, including the quantity available, the extent to which they can deploy devices leveraging the same economies of scale of other intra-band licensees, the extent to which adjacent operations potentially encumber full operational use or create interference risks, and the specific propagation characteristics of different bands or frequencies. These granular factors motivate the ways in which carriers seek to assemble spectrum portfolios (whether through

auction or acquisition), and as a consequence have profound effects on competition within the wireless industry.

In other words, focusing only on the amount of spectrum a carrier can access misses the mark. What are equally, if not more, important in evaluating the competitive consequences of relative spectrum access among commercial broadband carriers are the inherent propagation and utility characteristics of the spectrum as well as regulatory impediments, interference considerations, and legacy licensing limitations on ubiquitous broadband use. These factors have to be considered in evaluating the competitive consequences of spectrum holdings, whether the acquiring carrier is a new entrant obtaining spectrum for the first time or a well-established incumbent obtaining additional spectrum for its network. Perhaps no carrier can attest to this better than AT&T, which recently, through an elaborate and multi-year effort, obtained Commission approval to address the unique and challenging characteristics of its Wireless Communications Service (WCS) spectrum and found a way to put this spectrum to use for wireless broadband. Though the Commission recently determined that 20 MHz of the 30 MHz WCS allocation should count towards the spectrum screen,³ it continues to ignore market dynamics by effectively treating a megahertz of the WCS spectrum as comparable to a megahertz of far more useful 700 MHz spectrum or core PCS spectrum.

Similarly, the 2.5 GHz Band appears to offer a large quantity of contiguous spectrum suitable for wireless broadband use. Its desirability is compromised, however, by regulatory, propagation, and legacy licensing realities that significantly and substantially complicate its utility and value for wireless broadband communications – including potentially interfering

³ *Applications of AT&T Mobility Spectrum LLC, New Cingular Wireless PCS, LLC, Comcast Corporation, Horizon Wi-Com, LLC, NextWave Wireless, Inc., and San Diego Gas & Electric Company for Consent to Assign and Transfer Licenses*, WT Docket No. 12-240, Memorandum Opinion and Order, FCC 12-156, ¶ 31 (rel. Dec. 18, 2012) (*AT&T WCS Order*).

adjacent operations, its shorter propagation relative to 700 and 800 MHz spectrum (resulting in considerably higher deployment costs), the fact that 60 percent of this band can only be licensed to educational entities and must serve their educational mission before excess capacity can be leased to commercial carriers, and its varying availability in major metropolitan areas (a factor which significantly complicates device and equipment development and deployment).⁴

The record in this proceeding demonstrates that spectrum below 1 GHz plays an especially important role as wireless providers seek to compete effectively in the marketplace. Yet the Commission's current spectrum screen has not prevented the nation's two largest wireless providers, AT&T and Verizon, from controlling the dominant share of sub-1 GHz spectrum, including more than 85 percent in the top 10 U.S. markets. The Twin Bells' dominant share of low-band spectrum, with its superior signal coverage and in-building penetration characteristics, enables them to deploy mobile broadband networks at lower capital and operational costs compared to their rivals, which must rely more heavily on high-band frequencies that require more infrastructure to provide comparable coverage and thus higher costs for both initial deployments and ongoing operations. These advantages undermine the Commission's efforts to promote wireless competition with the Twin Bells and the innovation and competitive pricing resulting therefrom.

The Commission's existing spectrum screen is insensitive to these market dynamics – dynamics which animate the very competition the screen is intended to safeguard. The comments in this proceeding strongly support revising the Commission's spectrum screen to

⁴ The many factors that continue to warrant excluding the 2.5 GHz EBS channels and some of the BRS spectrum from the spectrum screen are detailed in Section III, *infra*. This is not to say, of course, that 2.5 GHz spectrum is not useful. Devoted to deploying spectrum to meet the needs of their customers (including, optimally, through a mix of high, mid and low band spectrum), vendors and carriers have found ways to utilize different frequencies in complementary ways – if perhaps at considerable cost.

better reflect the deployment utility differences among spectrum bands allocated for terrestrial commercial use, including adopting a cap on spectrum aggregation below 1 GHz – the frequencies that are particularly desirable for efficient, economic wireless broadband coverage of vast swaths of rural America. With the Commission hard at work on designing the incentive auctions for 600 MHz spectrum, the outcome of this proceeding will have major consequences on the future of wireless broadband competition.

Two recent industry events demonstrate conclusively that the spectrum screen cannot effectively promote competition without taking into account the varying value and utility of different spectrum blocks. On December 11, 2012, the Commission reallocated the 2 GHz former MSS spectrum block of 2000 – 2020/2180 – 2200 MHz, a total of 40 MHz currently licensed to DISH, to primary terrestrial mobile broadband use.⁵ Reallocating spectrum for primary terrestrial broadband use has increased its value, according to industry analysts, from the \$2.8 billion DISH paid for it to as much as \$12 billion.⁶ Only a few days later, Sprint announced its proposed acquisition of 100 percent of the shares of Clearwire, which holds licensed and leased 2.5 GHz spectrum totaling significantly more than 40 MHz in many markets.⁷ Yet the total value ascribed to the Sprint – Clearwire transaction is approximately \$10 billion for the

⁵ *Service Rules for Advanced Wireless Services in the 2000-2020 MHz and 2180-2200 MHz Bands*, WT Docket No. 12-70, Report and Order and Order of Proposed Modification, FCC 12-151 (rel. Dec. 17, 2012).

⁶ Anton Troianovski, Shalini Ramchandran and Sarah Portlock, *Dish Network Wins a \$9 Billion Spectrum Prize*, THE WALL STREET JOURNAL, Dec. 12, 2012, available at: <<http://online.wsj.com/article/SB10001424127887324296604578175701069249008.html>> (“At a stroke, the FCC has now raised its value to as much as \$12 billion, according to some analysts’ estimates.”).

⁷ Press Release, Sprint Nextel Corp., *Sprint to Acquire 100 Percent Ownership of Clearwire for \$2.97 per Share* (Dec. 17, 2012), available at: <http://newsroom.sprint.com/article_display.cfm?article_id=2477>.

entire enterprise, not just the licensed and leased spectrum.⁸ In other words, although the recently reallocated 2 GHz Band is highly desirable and useful in broadband deployments, the 2.5 GHz Band spectrum, for all the reasons discussed herein, is less broadband-suitable, offers less utility and is less valuable – even though there is more of it. The spectrum screen must account for these realities if it is to be accurate, reliable, and *effective* in assessing the competitive implications of spectrum aggregation.

As this most recent example indicates, the extent to which different bands diverge from the bedrock PCS Band – in both advantageous and disadvantageous ways – should be reflected in the Commission’s treatment of these holdings. Only by acknowledging the ways in which the specific characteristics of different spectrum bands profoundly affect the scope and vibrancy of competition can the Commission endeavor to accurately evaluate spectrum as a competitive input. If the Commission is to examine spectrum as an integral competitive input within the wireless industry, its analysis must reflect the significant ways in which this input has become differentiated – and how these differences impact competition. This proceeding offers the Commission an opportunity to reform its spectrum policies to better achieve the Commission’s pro-competitive goals.

II. THERE IS STRONG SUPPORT IN THE RECORD FOR AMENDING THE COMMISSION’S RULES TO ADDRESS THE TWIN BELLS’ ANTI-COMPETITIVE AGGREGATION OF SPECTRUM BELOW 1 GHz

In its comments in this proceeding, Sprint urged the Commission to modify its spectrum aggregation policies to recognize the distinctions among different spectrum bands and to address the competitive harms caused by the Twin Bells’ domination of spectrum holdings below 1 GHz. A significant number of commenters expressed the same concerns. T-Mobile, for example,

⁸ *Id.* (“This transaction results in a total Clearwire enterprise value of approximately \$10 billion . . .”).

urged the Commission to “recogniz[e] the difference in the value of spectrum above and below 1 GHz,” and stated that it is “vital for the Commission to implement rules to prevent excessive aggregation of desirable spectrum below 1 GHz.”⁹ Similarly, the Competitive Carriers Association (CCA) observed that the current spectrum screen’s failure “to account for important differences between high and low frequency bands” has enabled AT&T and Verizon “to aggregate vast amounts of beachfront spectrum . . . while too often avoiding the heightened competitive scrutiny that should apply” to the Twin Bells’ spectrum acquisitions.¹⁰ Free Press pointed out that the Twin Bells’ “inherent advantages as legacy monopolists” helped give them “an early lead in spectrum,” which they have now parlayed into dominant spectrum positions, particularly below 1 GHz; Free Press further stated that the Commission “has the flexibility and the duty to consider the difference in value between spectrum blocks.”¹¹ Myriad other commenters expressed similar views regarding the value of distinguishing between high and low band spectrum under the Commission’s competitive review.¹²

⁹ Comments of T-Mobile USA, Inc. at 14, 16 (T-Mobile Comments). (Unless otherwise noted, all comments cited herein were filed in WT Docket No. 12-269 on November 28, 2012.)

¹⁰ Comments of the Competitive Carriers Association at 2 (CCA Comments).

¹¹ Comments of Free Press at 7, 11 (Free Press Comments).

¹² *See, e.g.*, Comments of the Computer & Communications Industry Association (CCIA) at 6, 10-17 (CCIA Comments) (describing the dominant Twin Bell spectrum position below 1 GHz and the important differences among high and low band spectrum); Comments of the Rural Telecommunications Group, Inc. at 8 (“[T]he FCC should make a distinction between spectrum below 1 GHz and spectrum at or above 1 GHz.”); Comments of John Peha on behalf of Public Knowledge at 2 (Peha/Public Knowledge Comments) (“[T]he FCC’s spectrum screen must treat spectrum assignments differently depending on their frequency band.”); Comments of the Internet Innovations Alliance (IIA) at 3 (filed Nov. 21, 2012) (“Future spectrum screen analyses should acknowledge such competitiveness, in addition to recognizing differential values of spectrum with varying propagation characteristics.”); Comments of the Writers Guild of America, West, Inc. at 4 (“As noted in the *NPRM*, lower frequency spectrum has more favorable propagation characteristics that can result in lower infrastructure costs and better service, yet the Commission’s current spectrum screen process does not account for such differences. Therefore, appropriate weighting of spectrum to include qualitative differences is the critical first step

In their comments, AT&T and Verizon do not dispute that they control the vast majority of mobile broadband spectrum below 1 GHz, nor do they dispute the significant marketplace and technical differences between low-band and high-band spectrum. The Twin Bells nonetheless argue that these undisputed facts do not warrant any changes to the Commission’s spectrum aggregation policies – except in ways that perpetuate the spectrum screen’s methodological flaws while giving the Twin Bells significantly more “headroom” to pursue more spectrum concentration. As explained below, the Twin Bells’ “do nothing” proposal is not supported by the record and would subvert wireless competition and the public interest.

A. Without Commission Action, the Twin Bells Will Continue to Engage in Anti-Competitive Foreclosure Strategies to Protect Their Dominant Share of Low-Band Spectrum

AT&T and Verizon claim that that they do not have the incentive or ability to engage in foreclosure strategies in acquiring spectrum, but the evidence demonstrates the contrary. Indeed, the Twin Bells already have executed a strategy that currently forecloses their competitors from acquiring significant amounts of low-band spectrum, particularly in the top markets. As Sprint explained in its comments, together the Twin Bells control approximately 75 percent of the spectrum below 1 GHz that is suitable for commercial mobile broadband use, including 86 percent of such spectrum in the top 10 markets and more than 80 percent in the top 50 markets.¹³ The Twin Bells’ 700 MHz holdings are even more dominant. In the top 54 markets, AT&T and Verizon together control 92 percent of the paired 700 MHz spectrum suitable for commercial mobile broadband use; in the top 10 markets, they hold 100 percent.¹⁴

towards a spectrum policy that promotes competition and limits control of the most valuable spectrum by the top firms within the industry.”).

¹³ Comments of Sprint Nextel Corp. at 5-6 (Sprint Comments).

¹⁴ CCIA Comments at 5.

The Commission has previously recognized “the possibility that mobile service licensees might exert undue market power or inhibit market entry by other service providers if permitted to aggregate large amounts of spectrum.”¹⁵ The risk of such market power has become very real with the Twin Bells’ aggregation of the large majority of currently available mobile broadband spectrum below 1 GHz. By acquiring the dominant share of low-band spectrum, particularly in larger markets, the Twin Bells have to date succeeded in precluding the other U.S. national carriers as well as many smaller carriers from acquiring the low-band spectrum they need to complement higher band spectrum holdings and thereby compete more effectively with the two largest wireless providers.¹⁶

The Twin Bells’ bidding strategies in past spectrum auctions suggest that they will act similarly to protect their share of low-band spectrum in the upcoming 600 MHz TV spectrum incentive auction. The incentive auction may well be the only opportunity for other competitive carriers to acquire low-band spectrum for the foreseeable future. The FCC’s 2008 700 MHz auction demonstrated, however, that both AT&T and Verizon will bid aggressively to ensure their spectrum dominance. The Twin Bells together captured more than 70 percent of the spectrum in that auction on a MHz-POP basis, with their bids amounting to \$16 billion out of the

¹⁵ Notice ¶ 7, quoting *Implementation of Sections 3(n) and 332 of the Communications Act – Regulatory Treatment of Mobile Services*, Third Report and Order, 9 FCC Rcd 7988, ¶ 239 (1994) (*CMRS Third Report and Order*).

¹⁶ To be clear, the Twin Bells are not violating the Commission’s rules or policies in attempting to acquire as much spectrum, particularly low-band spectrum, as they can under the existing competitive review process. The purpose of Commission regulation as to spectrum aggregation is to promote and nurture competition, particularly when marketplace forces fail to do so. Thus, the objective of this rulemaking is to determine whether the Commission’s spectrum aggregation policies should be revised in light of changes in spectrum availability, differing spectrum characteristics, the wireless telecommunications industry’s market structure, and the effectiveness of the Commission’s existing rules and policies – in combination with market forces – in maintaining and assuring that the public continues to receive the many benefits of effective wireless broadband competition.

total \$19.6 billion bid in the auction.¹⁷ A number of studies and analyst reports have concluded that AT&T and Verizon appear to have engaged in retaliatory bidding and blocking strategies to prevent smaller competitors from acquiring spectrum rights in prior spectrum auctions. A 2007 study, for example, found that some major incumbents, including AT&T's predecessor companies, engaged in such strategies in Personal Communications Service (PCS) and Advanced Wireless Service (AWS) auctions to block smaller rivals.¹⁸ Another analyst report explained that Verizon's extremely high bidding in certain markets in Auction 35, an auction of PCS licenses, appears to have been motivated by an effort to block entry by wireless competitors in its incumbent local exchange carrier territory.¹⁹

The Twin Bells' determination to protect their anti-competitive dominance of low-band spectrum also can be seen in their lobbying for legislation that would have stripped the Commission of its statutory authority to conduct spectrum auctions in a manner that promotes competition. In particular, during the debates concerning the Middle Class Tax Relief and Job Creation Act of 2012 (2012 Act), AT&T and Verizon strongly lobbied for a legislative provision

¹⁷ Stifel Nicolaus, *Some Further Thoughts on 700 MHz Auction Results* (March 24, 2008).

¹⁸ See Dr. Gregory Rose, *Spectrum Auction Breakdown: How Incumbents Manipulate FCC Auction Rules to Block Broadband Competition*, New America Foundation – Wireless Future Program, Working Paper No. 18 (June 2007), available at: <http://www.newamerica.net/files/WorkingPaper18_FCCAuctionRules_Rose_FINAL.pdf>.

¹⁹ A report by Lemay-Yates Associates explained:

In [Auction 35], Verizon in particular had bid and won many of the markets in which it is the incumbent provider and original “Bell” licensee dating from the first awards of analogue cellular spectrum. Verizon bid in a number of the very large and attractive markets where it operates as the incumbent local exchange carrier (ILEC). . . . The high value to an incumbent protecting its core markets clearly played out.

Lemay-Yates Associates, Inc., *Evolution of Spectrum Valuation for Mobile Services In Other Countries*, at 10-11 (March 2003), available at: <[http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/microcellsch_c.pdf/\\$FILE/microcellsch_c.pdf](http://www.ic.gc.ca/eic/site/smt-gst.nsf/vwapj/microcellsch_c.pdf/$FILE/microcellsch_c.pdf)>.

that would have effectively precluded the Commission from establishing a pro-competitive spectrum cap in the upcoming incentive auction of TV broadcast spectrum, thereby clearing the way for AT&T and Verizon to engage in bidding strategies in that auction to foreclose rival carriers from acquiring low-band spectrum.²⁰ Fortunately, numerous members of Congress opposed this provision, which ultimately was not adopted.²¹ As Sprint explained in its initial comments, Congress instead included a provision in the 2012 Act reaffirming that the Commission, as part of its rulemaking authority, can adopt and enforce rules of general applicability, such as spectrum caps adopted through rulemaking, that promote the public interest.²² Under this authority, the Commission can – and should – adopt spectrum aggregation rules that promote greater access to low-band spectrum for competitors of AT&T and Verizon.

B. The FCC’s Spectrum Aggregation Policies Should Recognize the Unique Characteristics of Different Spectrum Bands and Especially Spectrum Below 1 GHz

AT&T and Verizon advance a number of arguments in their comments as to why they believe the Commission should ignore significant differences among spectrum bands in its spectrum aggregation policies. None of these arguments has any merit.

The Twin Bells claim that the Commission has declined to differentiate among spectrum bands in its spectrum policies in the past, but that is demonstrably false. In the Commission’s previous CMRS spectrum cap, the Commission limited the amount of SMR spectrum attributed under the cap to 10 MHz because it considered SMR spectrum to be encumbered in comparison

²⁰ See Karl Bode, *Verizon, AT&T Lobby to Weaken FCC Spectrum Authority - Duopoly Protection Language Buried in Jobs Bill*, BROADBAND DSL REPORTS (Feb. 9, 2012), available at: <<http://www.dslreports.com/shownews/Verizon-ATT-Lobby-to-Weaken-FCC-Spectrum-Authority-118302>>.

²¹ See Letter from Senator Herb Kohl to Congressman Dave Camp and Senator Max Baucus (Feb. 9, 2012), available at: <<http://www.dslreports.com/r0/download/1726272~1341210bc62d9965ba401399f36c0a64/Kohl.pdf>>.

²² Sprint Comments at 2-3.

with cellular band spectrum, particularly given the fact that SMR was traditionally licensed on a site-by-site basis and interleaved with other allocations, thereby limiting its contiguity and thus its ability to support certain technologies.²³ Moreover, in recent years, the Commission has repeatedly recognized differences among frequency bands, particularly low-band and high-band spectrum.²⁴

AT&T and Verizon cannot dispute the signal propagation advantages of low-band spectrum,²⁵ nor can they dispute the very different marketplace valuations placed on different spectrum.²⁶ They instead argue that the marketplace has taken these factors into account, and that the Commission need not be concerned about the aggregation of low-band spectrum because a wireless provider purportedly does not need low-band spectrum to deploy a mobile broadband network.

²³ *CMRS Third Report and Order* ¶ 275.

²⁴ *See, e.g., Notice* ¶ 35; *Fifteenth Report* ¶¶ 289-300.

²⁵ *AT&T – Qualcomm Order* ¶ 49 (“AT&T itself has recognized this distinction [between low and high-band spectrum] in the context of its bid to acquire T-Mobile, where it asserted that a significant benefit to T-Mobile customers would be their newly acquired access to AT&T spectrum below 1 GHz, enabling those customers to receive both extended rural coverage and ‘superior in-building and in-home service’ due to access to AT&T’s spectrum below 1 GHz.”); *see also* Fran Shammo, Chief Financial Officer and Executive Vice President, Verizon, *Verizon Communications Inc. at Oppenheimer & Co. Technology & Communications Conference*, FD (FAIR DISCLOSURE) WIRE (Aug. 10, 2011) (“[A]t 700 MHz, the building penetration is phenomenal. So we believe it is a competitive advantage there.”); Fran Shammo, Chief Financial Officer and Executive Vice President, Verizon, *Verizon at Morgan Stanley Technology, Media & Telecom Conference*, FD (FAIR DISCLOSURE) WIRE (March 1, 2011) (“We have the 700 MHz contiguous across the United States, which puts us in a different realm than some other carriers.”); Ralph de la Vega, President and CEO, AT&T Mobility, *AT&T’s First Quarter 2012 Earnings Call*, FD (FAIR DISCLOSURE) WIRE (April 24, 2012) (“[W]e prefer low band spectrum.”); Peter Ritcher, Senior Vice President and Wireless Chief Financial Officer, AT&T, *AT&T at Credit Suisse Group Convergence Conference*, FD (FAIR DISCLOSURE) WIRE (March 9, 2011) (“[L]ow-frequency spectrum obviously [has] much better sort of in-building penetration, much better build characteristics with that kind of spectrum.”).

²⁶ *See* CCIA Comments at 15-16 (describing data showing that higher frequency spectrum trades at a fraction of the price of lower frequency spectrum in auctions and private sector transactions).

These Twin Bell arguments, however, are refuted by the Commission’s 2011 *AT&T – Qualcomm Order*, which found that that AT&T’s large sub-1 GHz holdings raised significant competitive concerns. Notwithstanding AT&T’s arguments that all spectrum bands should be treated alike, the *AT&T – Qualcomm Order* found “that it is prudent to inquire about the potential impact of AT&T’s aggregation of spectrum below 1 GHz as part of the Commission’s case-by-case analysis.”²⁷ The Commission further found that “[p]ost-transaction, AT&T would hold a significant proportion of the available spectrum suitable for the provision of mobile voice or broadband services, particularly below 1 GHz spectrum, that has technical attributes important for other competitors to meaningfully expand their provision of mobile broadband services or for new entrants to have a potentially significant impact on competition.”²⁸ The Commission accordingly imposed a number of conditions on the proposed transaction to address the competitive concerns raised by AT&T’s aggregation of low-band spectrum.

The Commission’s findings in the *AT&T – Qualcomm Order* reflect the laws of physics, which, as both the Commission and the Department of Justice have recognized, result in different frequency bands having “widely disparate technical characteristics that affect how the bands can be used to deliver mobile services.”²⁹ The “excellent propagation characteristics” of low-band spectrum allow for better coverage across larger geographic areas and “superior in-building and in-home service,” which in turn enables a wireless provider “to significantly reduce the costs of building and maintaining a network compared to higher-band spectrum.”³⁰ As CCIA explained

²⁷ *AT&T – Qualcomm Order* ¶ 49. As described in the *Notice*, ¶ 35 n.112, a number of countries have adopted spectrum caps and other regulatory measures that recognize the competitive importance of low-band spectrum.

²⁸ *AT&T – Qualcomm Order* ¶ 51.

²⁹ *Id.* ¶ 49.

³⁰ *Id.* ¶¶ 31, 49 (citations and internal quotation marks omitted).

in its comments, a broadband network using only 2.5 GHz spectrum can require approximately four or five times as many base stations to achieve the same network coverage as a network using 700 MHz spectrum.³¹ A high-band network thus faces higher capital (*i.e.*, the cost of deploying additional cell sites) and operating costs (*i.e.*, the cost of rent, maintenance, backhaul, and other ongoing costs of maintaining the additional cell sites) than a low-band network. As Professor Jon Peha, the FCC’s former Chief Technologist, explained in his comments, the “issue is cost; adding a cell may mean spending a half million dollars on a new cell tower.”³² Without access to sufficient low-band spectrum, a wireless carrier will face significant competitive disadvantages relative to the Twin Bells.

High-band frequencies, of course, also have important advantages. In particular, high-band spectrum is well suited for increasing network capacity in high-traffic urban areas because the shorter propagation of high-frequency signals facilitates the deployment of a higher density of cell sites. The key point is that deploying an efficient, competitive mobile broadband network requires a *mix* of low-band, mid-band and high-band spectrum. As the Commission has described, there are “important complementarities that come with holding spectrum assets in different bands,”³³ and industry observers agree that a “combination of higher spectrum ... for the capacity layer, and sub-1 GHz spectrum for improved coverage in rural areas and for urban in-building, is considered optimal.”³⁴ AT&T and Verizon each hold such an “optimal” mix of spectrum holdings and are deploying LTE networks using both low-band (700 MHz) and higher-

³¹ CCIA Comments at 13.

³² Peha/Public Knowledge Comments at 3.

³³ *Fifteenth Report* ¶ 297.

³⁴ Alan Hadden, *Mobile Broadband – Where the Next Generation Leads Us*, IEEE WIRELESS COMMUNICATIONS, at 9 (Dec. 2009), available at: <http://www.gsacom.com/downloads/pdf/GSA_IEEE_articles1209.php4>.

band (AWS) spectrum. Indeed, AT&T has recently emphasized that it has “a strong spectrum position relative to our peers with a solid blend of low and high band assets.”³⁵

The Commission has thus correctly “acknowledge[d] that the combination of spectrum below 1 GHz and higher frequency spectrum may be helpful for the development of an effective nationwide competitor that can address both coverage and capacity concerns.”³⁶ Accordingly, contrary to the Twin Bells’ arguments in this proceeding, the Commission’s spectrum aggregation policies cannot ignore the important differences among spectrum bands and the Twin Bells’ anti-competitive dominance of sub-1 GHz spectrum.

C. The Commission Should Adopt a Low-Band Spectrum Cap and an Explicitly Weighted Spectrum Screen to Promote Competition with the Twin Bells

Low-band spectrum not only has unique technical and cost advantages, it is in very short supply. There is nearly twice as much mobile broadband spectrum above 1 GHz (270 MHz) as below 1 GHz (144 MHz).³⁷ And, as explained above, AT&T and Verizon control the lion’s share of this relatively small amount of low-band spectrum. To address the competitive harm arising from their dominant control of these key spectrum bands, the Commission should take two steps: a new sub-1 GHz spectrum cap and a revised spectrum screen.

Sub-1 GHz Spectrum Cap. As proposed in Sprint’s comments, the Commission should establish a cap for spectrum below 1 GHz. The cap should be applied on a prospective basis only, making it vitally important for the Commission to adopt the cap prior to the TV spectrum incentive auction. Contrary to the assertions of AT&T and Verizon, a spectrum cap is an effective, easy-to-administer mechanism for addressing anti-competitive spectrum aggregation,

³⁵ John Stankey, Group President and Chief Strategy Officer, AT&T Inc., *AT&T Inc. 2012 Analyst Conference*, FD (FAIR DISCLOSURE) WIRE (Nov. 7, 2012).

³⁶ *AT&T – Qualcomm Order* ¶ 49 n.140.

³⁷ *Id.* ¶ 49 n.142.

particularly in the auction context. As T-Mobile observed in its comments, adopting “bright-line spectrum limits for initial licenses acquired through competitive bidding . . . provides certainty to bidders and is far more administratively efficient than a post-auction case-by-case review.”³⁸

Indeed, in its Notice of Proposed Rulemaking in its pending proceeding on the 600 MHz incentive auction, the Commission recognized the importance of such bright-line rules when it solicited comment on whether to specifically adopt a rule barring any participant from acquiring more than one-third of all 600 MHz spectrum.³⁹

Explicitly Weighted Spectrum Screen. The Commission should also modify its spectrum screen, which would continue to apply to all spectrum holdings suitable for mobile telephony and broadband services, to take into account the important technical, licensing, legacy, and marketplace differences among different spectrum bands. The Commission could, for example, assign explicit relative value-weightings to different spectrum bands based on publicly available information about prices paid at FCC auctions and in secondary market transactions. AT&T and Verizon express concerns about the feasibility of such an approach given the variation in spectrum prices over time and other factors. But, as described in Sprint’s comments, there is sufficient, market-based information concerning spectrum prices that can be used to greatly

³⁸ T-Mobile Comments at 1. The importance of such certainty has also been highlighted by AT&T. See, e.g., Chloe Albanesius, *AT&T Demands More Spectrum, Slams FCC (Again)*, PC MAGAZINE (Jan. 26, 2010), available at: <<http://www.pcmag.com/article2/0,2817,2399387,00.asp>> (“We don’t know what spectrum caps are going to apply with one transaction to the next,” Stephenson said. “The first issue is not identifying [available] spectrum, but what the rules are.”); Remarks of Randall Stephenson, AT&T, *How to Further the Mobile Technology Revolution*, The Brookings Institution, at 56 (June 12, 2012), available at: <<http://www.brookings.edu/~media/events/2012/6/12%20mobile%20technology%20revolution/20120612%20mobile%20technology%20revolution%20uncorrected%20transcript>> (“I mean, what we’re trying to do is encourage the FCC to bring some level of predictability into our industry and predictability in terms of, well, how much spectrum can we own? What deals can we do? What spectrum can we go out and try to procure?”).

³⁹ *Expanding the Economic and Innovation Opportunities of Spectrum through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, ¶ 384 (2012).

improve the accuracy of the Commission's current spectrum screen. The law does not require the Commission to achieve absolute perfection in formulating such rules and policies, especially in circumstances like this where a spectrum screen is simply an instrument for identifying spectrum transactions requiring closer competitive analysis.⁴⁰ A weighted spectrum screen can be based on conservative assumptions that minimize the risk that transactions that clearly pose no competitive threat are subject to closer scrutiny. A weighted screen can thus be implemented in an accurate and effective way, and will be a substantial improvement over the current screen which assumes, despite compelling evidence to the contrary, that all spectrum bands are the same for competitive assessment purposes.

Some commenters proposed that the Commission establish a rebuttable presumption that transactions exceeding the spectrum screen are contrary to the public interest.⁴¹ Sprint opposes the application of such a presumption. Where a transaction exceeds the spectrum screen, the Commission should preserve the flexibility it has under its current screen rules and policies to assess the specific facts and circumstances without prejudice or a heightened burden of proof. As noted above, the spectrum screen should continue to serve as a convenient tool for identifying transactions that warrant further scrutiny on a case-by-case basis, not as a mechanism for making even presumptive public interest determinations.

⁴⁰ See, e.g., *Vonage Holdings Corp. v. FCC*, 489 F.3d 1232, 1242 (D.C. Cir. 2007) (noting that “[p]erfection, however, is not what the law requires” when the Commission formulates a rule); *WorldCom, Inc. v. FCC*, 238 F.3d 449, 462 (D.C. Cir. 2001) (“The relevant question is whether the agency’s numbers are within a ‘zone of reasonableness,’ not whether its numbers are precisely right.”) (citation and internal quotation marks omitted); see also *Cablevision Systems Corp. v. FCC*, 649 F.3d 695, 717 (D.C. Cir. 2011) (“We generally defer to an agency’s decision to proceed on the basis of imperfect scientific information, rather than to invest the resources to conduct the perfect study.”) (citation and internal quotation marks omitted).

⁴¹ See CCA Comments at 16; Comments of MetroPCS Communications, Inc. at 11.

III. THE TWIN BELL PROPOSALS TO INCREASE THE AMOUNT OF 2.5 GHz SPECTRUM COUNTED UNDER THE SPECTRUM SCREEN IGNORE WELL-REASONED FCC ANALYSIS AND WOULD DISTORT THE FCC'S COMPETITION GOALS

In their comments, AT&T and Verizon argue that the Commission should count all or nearly all of the spectrum in the 2.5 GHz Band under the spectrum screen.⁴² The Commission should reject these arguments as they ignore well-reasoned Commission analysis regarding the 2.5 GHz Band and distort the Commission's pro-consumer competition goals.

As an initial matter, these Twin Bell arguments fail the common sense test. Counting all or virtually all 2.5 GHz spectrum under the spectrum screen would lead to absurd results. Under this approach, the already dominant Twin Bells would gain more "headroom" under the screen to acquire even more spectrum in the lower bands they already dominate and which provide them with demonstrated initial and ongoing cost advantages. Meanwhile, Sprint, because of its current majority interest in Clearwire, would face a much more restrictive new spectrum screen threshold in numerous markets around the United States.⁴³ Despite the fact that it has significantly less low-band spectrum than AT&T and Verizon (and overall less suitable broadband spectrum under the spectrum screen), Sprint would find it difficult to enhance its broadband service and improve its competitive position through future spectrum acquisitions – including acquiring access to the competitively-important low-band spectrum of which Sprint has a substantial deficit in comparison to AT&T and Verizon. The Twin Bell spectrum screen proposals thus would only exacerbate the trend toward their duopoly control of the wireless

⁴² Comments of AT&T Inc. at 36-43 (AT&T Comments); Comments of Verizon Wireless at 18-27.

⁴³ Sprint recently entered into an agreement to acquire the remaining equity interest in Clearwire that it does not already own. *See* Amendment attached to ULS File No. 0005483246 and filed in IB Docket No. 12-343 (Dec. 20, 2012).

marketplace and turn the Commission's competition policies on their head. Indiscriminate inclusion in the Commission's spectrum screen of the entire 2.5 GHz Band, despite its significant and extensive differentiating characteristics, as discussed below, would undermine the Commission's competitive goals, thereby further advantaging the Twin Bells' spectrum domination.

The Twin Bells' position is also fundamentally contrary to repeated and recent Commission analysis of how to treat 2.5 GHz spectrum for purposes of the spectrum screen. Since 2008 when it first incorporated the 2.5 GHz Band into its spectrum screen analysis, the Commission has excluded EBS spectrum and counted 55.5 MHz of BRS spectrum as suitable and available for mobile telephony services.⁴⁴ The Commission affirmed this approach in its order approving the assignment of SpectrumCo's AWS spectrum to Verizon,⁴⁵ and most recently

⁴⁴ See *Sprint Nextel Corporation and Clearwire Corporation; Applications for Consent to Transfer Control of Licenses, Leases, and Authorizations*, Memorandum Opinion and Order, 23 FCC Rcd 17570, ¶ 70 (2008) (*Sprint Nextel-Clearwire Merger Order*), *aff'd*, Order on Reconsideration, FCC 12-157 (rel. Dec. 19, 2012); *Applications of Cellco Partnership d/b/a Verizon Wireless and Rural Cellular Corporation for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager Leases*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 12463, ¶ 47 (2008) (*Verizon-RCC Merger Order*); *Applications of AT&T Inc. and Centennial Communications Corp. for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, Memorandum Opinion and Order, 24 FCC Rcd 13915, ¶ 44 (2009); *Applications of AT&T Inc. and Deutsche Telekom AG for Consent to Assign or Transfer Control of Licenses and Authorization*, Order, 26 FCC Rcd 16184, Appendix – Staff Analysis and Findings, ¶¶ 45 nn.136, 137 (2011); *AT&T – Qualcomm Order* ¶¶ 39-40 & n.120, 42.

⁴⁵ *Applications of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses; Applications of Verizon Wireless and Leap for Consent To Exchange Lower 700 MHz, AWS-1, and PCS Licenses; Applications of T-Mobile License LLC and Cellco Partnership d/b/a Verizon Wireless for Consent to Assign Licenses*, Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd 10698, ¶¶ 59-60, 63 (2012). The Commission did, however, indicate its intention to more fully examine what should be included in its spectrum screen in a forthcoming proceeding; *i.e.*, this proceeding.

in approving the assignment of various WCS licenses to AT&T.⁴⁶

In addition to Sprint (as well as Clearwire), a number of other commenters in this proceeding support continuation of the Commission's current treatment of 2.5 GHz spectrum. NTCH states that "EBS spectrum should not be included" in the spectrum screen because it "cannot be accurately described as available for commercial use since, unlike all other flexible-use mobile spectrum, some or all of it must either be devoted to educational purposes or must be available for that purpose."⁴⁷ The Competitive Carriers Association in its comments argues that "the Commission should decline to set a deadline by which EBS spectrum would be deemed 'suitable and available,' given the unresolved limitations on the use of that spectrum for mobile broadband."⁴⁸

Certainly, there have been no developments since the Commission's most recent analysis of the 2.5 GHz Band that would justify a significant departure from its existing spectrum screen approach. First, there are technical factors as well as regulatory and licensing issues that continue to diminish the utility of *all* 2.5 GHz spectrum. As discussed *supra* at 4-5 and 14-15, the 2.5 GHz Band has below average signal propagation in terms of distance and in-building penetration. Because transmissions at 2.5 GHz do not travel as far as signals in the other commercial wireless bands, operators in this band must deploy significantly more cell sites than licensees using, for example, 800 MHz or PCS spectrum. With fewer cell sites needed, build-out

⁴⁶ *AT&T WCS Order* ¶ 32. The Commission in this decision rejected AT&T's argument for including the full 2.5 GHz Band in its spectrum screen, explaining that there was no compelling evidence to change its approach in that proceeding. Notably, however, the Commission did include in its spectrum screen analysis the 20 MHz of "non-guardband" WCS spectrum that was acquired by AT&T. *Id.* ¶ 31.

⁴⁷ Comments of NTCH, Inc. at 5-6.

⁴⁸ CCA Comments at 15.

in those lower-frequency bands can typically be achieved at less expense to carriers and, if adequate competition exists, lower cost to consumers.⁴⁹

Clearwire and other BRS licensees also face regulatory and licensing issues that make their 2.5 GHz spectrum very different from other commercial wireless bands and significantly less favorable for the provision of mobile broadband service. The process of implementing and superimposing new rules over the Commission’s legacy licensing framework at 2.5 GHz has resulted in a complex, balkanized regulatory and licensing environment. BRS licensees that hold Basic Trading Area (BTA) licenses are subject to complicated geographic carve-outs in the form of thousands of incumbent BRS licensees that have idiosyncratic geographic license areas that do not conform to the Commission’s typical geographic or political boundaries. Accordingly, a potential 2.5 GHz broadband provider must navigate this “crazy-quilt” licensing scheme by layering irregularly shaped geographic licenses and leases across multiple channels to assemble enough spectrum to create a wideband (10 or 20 MHz) channel suitable for deploying LTE broadband service. The reality is even more challenging for the 2.5 GHz EBS channels, which are also licensed in non-uniform, irregularly-shaped geographic areas. These EBS channels can only be used for commercial service on an excess-capacity leased basis from eligible educational entities which retain at least five percent of the system’s capacity for their educational mission, and are subject to periodic lease renegotiation rights that can significantly increase the cost of such leased spectrum access, as detailed below. The Twin Bells cannot deny the plain reality that it takes more spectrum at 2.5 GHz – and significantly more planning and coordination – to deploy a broadband network than is required in the lower frequency commercial bands that they dominate.

⁴⁹ *Fifteenth Report* ¶ 293.

In addition to these factors that affect the 2.5 GHz Band generally, other issues at 2.5 GHz make specific portions of this band unsuitable for mobile telephony/broadband services.⁵⁰ As a result, the Commission to date has excluded BRS Channel 1 (BRS-1), the 2.5 GHz Middle Band Segment (MBS), the J and K guard bands, and EBS spectrum from its spectrum screen analyses, and it should continue to do so moving forward. At the bottom of the 2.5 GHz Band, BRS-1 remains encumbered by other operators and services. BRS licensees must share the 2496-2500 MHz Band with the co-primary mobile satellite service (MSS), broadcast auxiliary service (BAS), and fixed microwave licensees, as well as with operators of industrial, scientific, and medical (ISM) devices. Furthermore, the peripheral spectral location of BRS-1 and the channel's adjacency to EBS frequencies have made it difficult for Clearwire and other 2.5 GHz licensees to incorporate this channel into their wireless broadband operations.⁵¹ Based on these factors, the Commission should continue to exclude BRS-1 from its spectrum screen calculations.⁵²

The Commission should also continue to exclude the J and K guard bands at 2568-2572 MHz and 2614-2618 MHz from the spectrum screen. As a general matter, the purpose of guard bands is to create a buffer zone of spectrum that provides limited or no service in order to protect adjacent operations from interference. In this case, the J and K guard bands are clearly not suitable for mobile broadband deployments because they are assigned in small increments and are limited to operations that are secondary to adjacent-band systems in the LBS, MBS, and

⁵⁰ See *Sprint Nextel-Clearwire Order* ¶¶ 67-69, 71; *AT&T-Centennial Merger Order* ¶ 44.

⁵¹ *Sprint Nextel-Clearwire Order* ¶ 68.

⁵² In 2006, AT&T's predecessor company expressed alarm about this sharing and stated its belief that "BRS-1 should not be relegated to co-primary status and that the threat of harmful interference persists." Petition for Partial Reconsideration of BellSouth Corporation, *et al.*, WT Docket No. 03-66, at 7 (July 19, 2006). The 2006 statements of AT&T's predecessor are correct and support the exclusion of BRS-1 from the screen.

UBS.⁵³ Given these factors, the Commission has stated that “it would be highly improbable that those channels could be used unless an operator aggregated all of the channels in a market.”⁵⁴

Contrary to the Twin Bells’ claims, the Commission should also continue to omit the 42 MHz of spectrum in the MBS at 2572-2614 MHz from its spectrum screen analysis. In reconfiguring the 2.5 GHz Band, the Commission intended this spectrum to be used primarily for high-site, high-power video operations. The Commission’s power limits and other technical rules for this spectrum were designed to ensure, among other things, that EBS licensees could operate facilities in the MBS that were substantially similar to their pre-transition high-power systems.⁵⁵ In crafting these rules, the Commission made clear that “[a] facility in the MBS should not be subject to interference from an adjacent licensee that has discontinued high-powered operations and converted to cellularized, low-power operations.”⁵⁶ The Commission has further noted that “low-power, cellularized operations in the MBS could be subject to interference from legacy high-power video operations.”⁵⁷ Indeed, AT&T’s predecessor entities previously recognized the encumbrances in this portion of the 2.5 GHz Band, stating that the Commission established the MBS to “preserve existing high-power operations, including

⁵³ See *Sprint Nextel-Clearwire Order* ¶ 69; 47 C.F.R. § 27.5(i)(2) (establishing guard band channels with 0.33333 MHz in bandwidth); 47 C.F.R. § 27.1222 (guard band operations are secondary).

⁵⁴ *Sprint Nextel-Clearwire Order* ¶ 67.

⁵⁵ *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Third Order on Reconsideration and Sixth Memorandum Opinion and Order and Fourth Memorandum Opinion and Order and Second Further Notice of Proposed Rulemaking and Declaratory Ruling, 23 FCC Rcd 5992, ¶ 83 (2008).

⁵⁶ *Id.*

⁵⁷ *Sprint Nextel-Clearwire Order* ¶ 67.

distance-learning and other educational video programming.”⁵⁸ Given the primary purpose of this spectrum, the MBS should not be subject to the Commission’s spectrum screen.⁵⁹

Finally, the Commission should maintain its existing and well-reasoned policy of excluding the 112.5 MHz of EBS spectrum from its spectrum screen analysis. As the Commission pointed out just a year and a half ago in its *Fifteenth Report*, “the primary purpose of EBS is to further the educational mission of accredited public and private schools, colleges, and universities.”⁶⁰ EBS licensees serve non-profit educational objectives that create far different incentives than the profit motive that typically drives commercial licensees and lessors of commercial licenses. EBS spectrum therefore cannot be equated with commercial wireless spectrum, and EBS and commercial frequencies cannot be viewed as fungible components of a commercial network.

Clearwire and other commercial wireless operators at 2.5 GHz generally are not even eligible to be licensed in EBS spectrum, where such eligibility is limited to educational entities.⁶¹ Instead, Clearwire and other operators must enter into EBS lease agreements that are subject to a wide range of special restrictions that are “designed to maintain the primary educational character of service provided.”⁶² These lease obligations and restrictions significantly reduce the

⁵⁸ Comments of BellSouth Corp., *et al.*, WT Docket No. 03-66, at 8 (Sept. 8, 2003).

⁵⁹ Moreover, all but two channels of MBS are allocated for EBS use, presenting essentially a double challenge on using this spectrum for commercial wireless broadband service.

⁶⁰ *Fifteenth Report* ¶ 281 n.815.

⁶¹ In its prior incarnation as BellSouth, AT&T proposed elimination of the prohibition against a commercial operator acquiring EBS spectrum, warning that “[c]hanging the technical rules [of the 2.5 GHz Band] alone may not be enough to stimulate the capital investment necessary” to “develop a viable product attractive to customers.” Reply Comments of BellSouth Corp., *et al.*, WT Docket No. 03-66, at 28 (Oct. 23, 2003) (quoting with approval Comments and Reply Comments of Network for Instructional TV (NITV), WT Docket No. 03-66, at 3-4).

⁶² *Fifteenth Report* ¶ 281 n.815.

operational utility of this spectrum, a circumstance not faced by spectrum lessees in other commercial wireless bands. In particular, the Commission continues to require that at least five percent of an EBS licensee's spectrum be reserved for educational use,⁶³ and some EBS licensees negotiate lease agreements that reserve a considerably greater percentage of spectrum capacity to meet their educational needs or allow them to recapture their EBS spectrum at any time during the lease term to meet those needs. These arrangements may devote one-fourth or more of an EBS licensee's available spectrum to high-site, high-power educational video programming, for instance, or may require the commercial operator to construct and operate educational facilities on the licensee's behalf. In addition, EBS leases often contain carefully negotiated provisions and means of consideration designed to meet an EBS licensee's educational needs. If the Commission reversed course now and included EBS frequencies in its spectrum screen calculations, this about-face could disrupt the carefully tailored relationships between EBS licensees and their lessees by forcing the divestiture of EBS spectrum or by limiting the pool of potential EBS lessees due to spectrum aggregation considerations.

Other differences between EBS leases and spectrum leases in commercial bands further impede the use of EBS spectrum for mobile telephony/broadband services. The Commission limits EBS leases entered into after July 2006 to thirty-year terms with a mandatory lessor "right of review" at 15 years into the term and every five years thereafter.⁶⁴ These term limits and rights of review create significant business uncertainty for EBS lessees not faced by licensees of commercial spectrum. In addition, as the Commission has pointed out, EBS spectrum is licensed solely on a site-specific basis, resulting in the absence of any licensee in various unassigned EBS

⁶³ 47 C.F.R. § 27.1214(b)(1).

⁶⁴ *Id.* § 27.1214(e).

“white spaces.”⁶⁵ The existence of these white spaces at 2.5 GHz further complicates the use of this spectrum for wireless broadband purposes.⁶⁶ The important differences in the characteristics (technical and regulatory) of EBS spectrum from traditional licensed spectrum are observable from Clearwire’s valuation of its spectrum portfolio: though Clearwire’s spectrum holdings are comprised predominantly of EBS spectrum, the valuation of its BRS licenses exceeds that of its EBS leases by a factor of greater than 2 to 1.⁶⁷

⁶⁵ *Fifteenth Report* ¶ 281 n. 815; *Sprint Nextel-Clearwire Order* ¶ 71; *Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC for Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and De Facto Transfer Leasing Arrangements and Petition for Declaratory Ruling*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 17444, ¶ 67 (2008).

⁶⁶ According to AT&T, site-based EBS licensing and the existence of EBS white spaces do not help justify the exclusion of EBS spectrum from the spectrum screen, given that the Commission includes other site-based spectrum bands in its screen calculations. AT&T Comments at 41. The only other site-licensed spectrum cited by AT&T is the 850 MHz cellular band, however, and circumstances in that fully-developed band are simply not comparable or relevant to the Commission’s treatment of encumbered 2.5 GHz spectrum. First, AT&T and other cellular incumbents enjoy interference-protected “Cellular Geographic Service Areas” that encompass those portions of Cellular Market Areas that were built out within five years of initial licensing; true site-based licensing in the band applies only to sites outside and along the outer contours of licensees’ CGSAs. Moreover, in the Commission’s pending rulemaking on cellular licensing reform, AT&T highlighted the enormously successful development of 850 MHz cellular spectrum under the band’s current licensing scheme. In opposing the Commission’s proposed overlay licensing framework, AT&T argued that this proposed framework “is designed to solve a problem that does not exist – the lack of build-out in the cellular services. In fact, the Commission accurately touts the widespread construction and service to the public that has been achieved in the cellular service, with the vast majority of CMAs already substantially served with 95% or greater coverage or with no unserved areas greater than 50 square miles.” Reply Comments of AT&T, WT Docket No. 12-40, at 2-3 (June 14, 2012). With respect to cellular “white spaces,” AT&T added that that “in many other CMAs, the unserved area is not practical to serve because it is too small, is irregular in shape, or is located in difficult to serve areas.” *Id.* at 3. Clearly, unlike in the 2.5 GHz Band, the presence of cellular white spaces in no way impedes carriers’ service to the public.

⁶⁷ Clearwire Corp., Quarterly Report (Form 10-Q), at 12 (Oct. 26, 2012), *available at*: <<http://files.shareholder.com/downloads/CLWR/2231058108x0xS1442505-12-42/1442505/filing.pdf>>.

The Twin Bells downplay or ignore the technical and regulatory distinctions at 2.5 GHz as well as this marketplace evidence, and assert once again that Sprint (through Clearwire) has the most extensive spectrum holdings for wireless broadband services. AT&T for its part hypocritically asks the Commission to count all 194 MHz of BRS/EBS spectrum toward the spectrum screen, while at the same time urging the Commission to include only 20 MHz out of its 30 MHz of less-encumbered WCS spectrum in its screen calculations.⁶⁸ The Commission should not be swayed by such flawed, inconsistent arguments. Its spectrum screen analysis has correctly recognized the various encumbrances in the 2.5 GHz Band which led the Commission to count no EBS spectrum and 55.5 MHz of spectrum under the screen. The Commission should reject the AT&T and Verizon arguments for counting any additional 2.5 GHz spectrum under the screen.

IV. THE COMMISSION’S ATTRIBUTION POLICIES SHOULD NOT DISCOURAGE INNOVATIVE BUSINESS MODELS SUCH AS SPECTRUM HOSTING AND SPECTRUM SHARING ARRANGEMENTS

“The Commission’s competition policies with respect to spectrum holdings have been designed to preserve competitive opportunities in the mobile wireless marketplace and retain incentives for efficiency and innovation.”⁶⁹ The Commission should keep these goals in mind as it reviews its attribution rules. In particular, the Commission should ensure that its attribution rules do not discourage “efficiency and innovation” and the competitive access to spectrum resources that its spectrum policies seek to promote in the first place.

⁶⁸ AT&T Comments at 42-43. As described *supra* at note 46, the Commission in the *AT&T WCS Order* agreed that only the 20 MHz of non-guardband WCS spectrum should be counted in its spectrum screen analysis. *AT&T WCS Order* ¶ 31. Similarly, in the 2.5 GHz band, the Commission should continue to exclude BRS-1, MBS spectrum, the J and K guard bands, and EBS spectrum from its spectrum screen calculations.

⁶⁹ *Fifteenth Report* ¶ 305.

Regulators and wireless providers are exploring a range of innovative arrangements that promote more efficient use of spectrum and greater access to spectrum assets by multiple parties. For example, spectrum hosting arrangements between a spectrum holder and a network operator allow the spectrum holder to leverage an established network infrastructure and deploy services much more efficiently and quickly, while at the same time provide the network operator access to additional spectrum capacity. Spectrum sharing is another innovative arrangement that the FCC and the National Telecommunications and Information Administration “have identified ... as a way to increase spectrum capacity and efficiency.”⁷⁰ Indeed, spectrum sharing models have been pursued in Europe.⁷¹ To explore these benefits, T-Mobile is conducting spectrum sharing tests with government agencies in federal government spectrum.⁷²

Spectrum hosting, spectrum sharing, and similar arrangements promote greater access to spectrum, spur new competition and new entrants, and thereby promote the objectives underlying the Commission’s spectrum aggregation policies. In the past, however, the Commission’s attribution policies have at times had the unintended effect of discouraging such arrangements. In considering changes to its attribution rules, the Commission should avoid discouraging

⁷⁰ Linda K. Moore, Congressional Research Service, *Spectrum Policy in the Age of Broadband: Issues for Congress*, at 7 (Aug. 29, 2012) (CRS Report), available at: <<http://www.fas.org/sgp/crs/misc/R40674.pdf>>. A Presidential advisory group has recommended greater sharing of federal government spectrum with commercial operators. President’s Council of Advisors on Science and Technology, *Realizing the Full Potential of Government-Held Spectrum to Spur Economic Growth* (July 2012), available at: <http://www.whitehouse.gov/sites/default/files/microsites/ostp/pcast_spectrum_report_final_july_20_2012.pdf>.

⁷¹ See, e.g., *Spectrum Sharing – a Boost for Wireless Throughout Europe*, Blog of Neelie Kroes, Vice-President of the European Commission (Sept. 3, 2012), available at: <<http://blogs.ec.europa.eu/neelie-kroes/spectrum-sharing/>>; Press Release, Telenor, *Telenor and Tele2 to Build Joint 4G Network in Sweden* (April 14, 2009), available at: <<http://www.telenor.com/news-and-media/press-releases/2009/telenor-and-tele2-to-build-joint-4g-network-in-sweden/>>.

⁷² CRS Report at 7.

arrangements and initiatives that promote greater competitive access to spectrum resources. Otherwise, the attribution rules will be counterproductive to the very goals the FCC's spectrum aggregation policies seek to serve.

V. CONCLUSION

The record in this proceeding supports establishing a bright-line limit on spectrum holdings below 1 GHz as well as a spectrum screen that weights different spectrum bands according to their technical and marketplace differences. These changes, as well as attribution rules that preserve incentives to innovate and promote more efficient spectrum use, will greatly advance the Commission's goals of fostering competition in the mobile broadband marketplace.

Respectfully submitted,

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