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I. INTRODUCTION AND SUMMARY

The Computer & Communications Industry Association (“CCIA”) is an international nonprofit membership organization representing companies in the computer, Internet, information technology, and telecommunications industries. Together, CCIA’s members employ nearly half a million workers and generate approximately a quarter of a trillion dollars in annual revenue. CCIA promotes open markets, open systems, open networks and full, fair and open competition in the computer, telecommunications and Internet industries. Before the Commission, CCIA has continually expressed its support for pro-competitive telecom policies that recognize the reality of an asymmetrical market structures.

Pursuant to the Federal Communication Commission’s (“Commission”) September 28, 2012 Notice of Proposed Rulemaking (“NPRM”),¹ CCIA files these Comments regarding the Commission’s proposed rules “on retaining or modifying the current case-by-case analysis used to evaluate mobile spectrum holdings in the context of transactions and auctions.”² CCIA supports the Commission’s objective to “to ensure that [its] policies and rules afford all interested parties greater certainty, transparency and predictability to make investment and transactional decisions, while also promoting the competition needed to ensure a vibrant, increasingly mobile economy driven by innovation.”³

The Commission’s mobile spectrum holding rules are more important now than ever. In the face of accelerating consumer demand for wireless data and limited additional broadband spectrum, the Commission must ensure that non-dominant competitors have access to critical spectrum resources. Ending the excessive concentration of spectrum resources in the hands of

¹ Policies Regarding Mobile Spectrum Holdings, *Notice of Proposed Rulemaking*, WT Docket No. 12-269, FCC 12-119 (rel. Sept. 28, 2012) (“*NPRM*”).

² *Id.* ¶ 2.

³ *Id.* ¶ 15.

the Twin Bells promises to reinvigorate wireless broadband competition and prevent the higher prices, reduced innovation, and slower deployment that harms consumers. At the same time, the Commission must exercise care to avoid rigid, across-the-board spectrum-holding rules that do not consider the many different ways incumbents and competitors hold and deploy spectrum to provide innovative new broadband services to the public.

The Commission's rules must, in short, reflect a balance between two extremes of overly permissive and overly rigid spectrum-holdings rules. Different carriers have different blends of spectrum bands available to serve their customers, and different spectrum bands have substantially different propagation characteristics that affect their utility and value for providing competitive wireless broadband services. The Commission's rules must recognize these differences, but should stop short of requiring an analysis so granular and band-specific as to offer no predictive value.

To provide clarity for investors and guidance to the industry, the Commission should categorize spectrum bands and then employ two separate spectrum screens – one for commercial mobile spectrum holdings below 1 GHz and another for all commercial mobile capable spectrum holdings – that the Commission would apply on a case-by-case basis. The Commission needs to update its current all-inclusive spectrum screen to reflect changes in spectrum allocations and, in the future, will need to periodically update both spectrum screens to reflect changing allocations, technical rules, and market dynamics that make different spectrum useful for broadband services. To reflect actual market competition, the Commission should continue to administer the screen on a case-by-case basis at both the local and national level. And while the Commission should remain flexible in applying pro-competitive conditions and divestiture requirements, it should take steps to ensure that divestitures actually promote competition rather than simply reinforcing

the dominance of the top two wireless providers. Finally, in deciding what spectrum is attributed to carriers, the Commission must keep pace with the evolving marketplace, including new leasing and spectrum sharing arrangements. These adjustments to the mobile spectrum holdings rules promise to ensure a vibrant and competitive market for years to come.

II. AS THE COMMISSION HAS REPEATEDLY RECOGNIZED, THE TWIN BELLS DOMINATE THE WIRELESS VOICE AND DATA MARKET

AT&T and Verizon Wireless dominate the mobile wireless market. Both AT&T and Verizon received cellular spectrum free of charge when mobile wireless services were first introduced in the mid-1980s. Moreover, as incumbent local exchange carriers, the two companies continue to exploit their respective advantages stemming from control of the critical wholesale wireline infrastructure, upon which all wireless competitors must depend for backhaul capacity. Taking advantage of these benefits, AT&T and Verizon continue to drive the wireless marketplace toward a duopoly.

When the Commission began licensing Cellular Spectrum in 1982, it introduced 50 MHz of spectrum, which it divided into two blocks.⁴ The Commission awarded one of the blocks in each cellular market area to a local incumbent wireline carrier, such as one of the Regional Bell Operating Companies (“RBOCs”) that subsequently, through numerous mergers, developed into the Twin Bells.⁵ As the Commission has recognized, the incumbents received important first-mover advantages as a result of this policy.⁶ “Historically,” the Commission has noted, the

⁴ *Fifteenth Report* ¶ 270.

⁵ *Id.*

⁶ To acknowledge the difference the additional opportunity Verizon, AT&T and other ILECs received from a discriminatory spectrum-distribution mechanism is *not* to say that the consumer price of wireless communication services is somehow raised if licensees pay for their spectrum instead of getting it for free. Because sunk costs are unrecoverable, they should not influence current or future behavior of rational economic firms; however, rational economic firms still benefit from having had their competitors expend resources for spectrum acquisition that they did not have to spend. Evan Kwerel, *Spectrum Auctions Do Not Raise the Price of Wireless Services: Theory and Evidence*, FCC Office of Plans and Policy (Oct. 2000) available at <http://xrl.us/bn3ori>. In this case, the benefit Verizon, AT&T and a few other incumbent local exchange carriers enjoyed from receiving the initial low-frequency

ILECs such as Verizon and AT&T, “have held much of the share of mobile services provided in most markets across the country.”⁷

AT&T’s and Verizon Wireless’s legacy wireline networks also fuel their current market shares and dominance of spectrum. The Commission has explained that “[b]ackhaul connections are an integral component of a wireless service provider’s network” because they “link mobile providers’ cell sites to wireline networks, carrying wireless voice and data traffic for routing and onward transmission.”⁸ As such, the Commission has found that “[b]ackhaul costs currently constitute a significant portion of a mobile wireless operator’s network operating expense, and the demand for backhaul capacity is increasing.”⁹ The Twin Bells are the only vertically integrated wireless providers with control over large segments of the backhaul market. Other wireless providers must purchase backhaul services, often from “the incumbent local exchange carriers against whose wireless affiliates they compete.”¹⁰ It is, therefore, no coincidence that these legacy wireline providers, exploiting free spectrum received from the days prior to Commission’s auction authority and their control over critical wire infrastructure, are the two largest wireless providers today.

By all relevant measures, AT&T and Verizon Wireless dominate the wireless market. For instance, as the Commission Staff explained in the *AT&T/T-Mobile Staff Report*, “[a]s of year-end 2010, AT&T and Verizon Wireless each accounted for over 30 percent of subscribers, and earn[ed] over 30 percent of the industry’s total service revenues.” Indeed, examining a widely used indicator of profitability, earnings before interest, taxes, depreciation and

spectrum allocations for free allowed the Twin Bells to use capital that they would have spent on spectrum resources on other activities, such as network build out, instead. This benefit has had lasting anti-competitive effects.

⁷ *Id.*

⁸ *Fifteenth Report* ¶ 319.

⁹ *Id.* ¶ 322.

¹⁰ *Id.* ¶ 321.

amortization (“EBITDA”), the Twin Bells’ market share is even greater.¹¹ In their report, Commission staff described that “AT&T accounted for 35 percent and Verizon Wireless for 45 percent of total industry EBITDA.”¹² By comparison, Sprint and T-Mobile accounted for a combined 27 percent of subscribers and earnings, and only 16 percent of total industry EBITDA.¹³

AT&T’s and Verizon’s market-dominating positions are both reflected in and reflective of their respective spectrum holdings. That is, Verizon Wireless and AT&T are able to earn more because of their lopsided share of spectrum, and they are able to purchase more spectrum because on how much they earn. As the Commission has noted, “[a]t the national level, AT&T and Verizon have the most substantial spectrum holdings.”¹⁴

The closely interrelated nature of spectrum holdings and market dominance becomes even more clear based on AT&T’s and Verizon’s lopsided spectrum holdings below 1 GHz—the most valuable spectrum for mobile deployment. Combined, the Twin Bells hold “approximately 73 percent of below 1 GHz spectrum [nationwide], measured on a MHz-POPs basis.”¹⁵ That percentage is even greater looking at “the spectrum below 1 GHz suitable for the provision of mobile broadband Verizon Wireless and AT&T together hold approximately 90 percent of Cellular spectrum based on [MHz-POPs].”¹⁶ The Twin Bells have an even greater concentration of spectrum in major markets. AT&T and Verizon together control 92 percent of the paired 700 MHz spectrum suitable for commercial mobile broadband use in the top 54 most populous U.S. markets, and 100 percent of the paired 700 MHz spectrum suitable for commercial mobile

¹¹ *Applications of AT&T, Inc. And Deutsche Telekom AG*, Staff Analysis & Findings, WT Docket No. 11-65, DA-11-1955A2 ¶ 37 & n.112 (rel. Nov. 29, 2011) (“*AT&T/T-Mobile Staff Report*”).

¹² *Id.* ¶ 37 (citing *Fifteenth Report* at ¶ 214).

¹³ *Id.*

¹⁴ *Application of AT&T Inc. and Qualcomm Incorporated for Consent to Assign Licenses and Authorizations*, Order, 26 FCC Rcd 17589, ¶ 45 (2011) (“*AT&T/Qualcomm Order*”).

¹⁵ *Id.* ¶ 48.

¹⁶ *Fifteenth CMRS Competition Report*, ¶ 2.

broadband use in the top 10 markets.¹⁷ As former Commissioner Copps observed, “[b]y any reasonable spectrum screen or other spectrum holdings analysis, this level of concentration should give us pause.”¹⁸

Absent Commission intervention, all signs point to continued concentration of spectrum. In the past 6 months alone, AT&T has purchased WCS licenses from Comcast and Horizon Wi-Com, LLC. It has bought 700 MHz licenses from Ronan Telephone Company, Hot Springs Telephone Company, McBride Spectrum Partners, LLC, Triad 700, LLC, Farmers Telephone Company, Inc., Twin Valley Management, Inc. and the Ponderosa Telephone Company, among many others. It has also acquired AWS licenses from Cavalier Wireless, LLC and David Miller. Through these purchases, AT&T’s population-weighted spectrum holdings increased 1 MHz in the 700 MHz band (25 to 26 MHz), 1 MHz in the 1.9 MHz band (34 to 35 MHz), 1 MHz in the AWS band (6 to 7 MHz), and 15 MHz in the WCS band (13 to 28 MHz).

The Commission has “recognize[ed] 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.”¹⁹ AT&T and Verizon have already aggregated these “large amounts of spectrum” and are already exerting “undue market power.” Indeed, analysts have recognized that market concentration is currently hurting the wireless market.²⁰ The Commission should ensure that the wireless market remains competitive by updating its

¹⁷ See Statement, attached to Letter from Charles W. Logan, Counsel to Access Spectrum, LLC, to Marlene H. Dortch, FCC Secretary, WT Docket No. 06-150, at 1 (June 17, 2010).

¹⁸ *AT&T/Qualcomm Order* (dissent of Comm’r Copps).

¹⁹ *NPRM* ¶ 7 (citing Implementation of Sections 3(n) and 332 of the Communications Act – Regulatory Treatment of Mobile Services, GN Docket No. 93-252, *Third Report and Order*, 9 FCC Rcd 7988, 8100 ¶ 238 (1994) (“CMRS Third Report and Order”).

²⁰ See FitchRatings, *Spectrum Inspection: The Auction Roadmap* at 13 (Apr. 16, 2012) (“[W]ireless operations have experienced a general decline in subscribers, profitability, and EBITDA generation. Fitch expects headwinds on the wireless business to continue and include the competitive landscape, the disadvantages of a regional operator in an increasingly duopolistic market, high unemployment, slow economic recovery, and the lack of an iPhone service offering.”).

spectrum screen and applying it to holdings below 1 GHz in addition to overall spectrum holdings.

III. THE SPECTRUM SCREEN USED IN THE MOST RECENT TRANSACTIONS IS DYSFUNCTIONAL AND DOES NOT PROMOTE COMPETITION

Adopted in 2004, the Commission's spectrum screen is an important tool for the Commission to monitor and promote competition.²¹ The Commission uses the spectrum screen to identify "local markets where an entity would acquire more than approximately one-third of the total spectrum suitable and available for the provision of mobile telephony/broadband services."²² Under this analysis, suitable spectrum is spectrum that can support mobile service based on its physical properties, associated equipment technology, potentially conflicting rules, and incompatible existing uses. Available spectrum is simply spectrum that will be suitable for mobile use in the near term.²³ If a carrier holds more than one-third of the total spectrum suitable and available for mobile service in any given market, the Commission will examine that market more in-depth and determine whether there is "an increased likelihood or ability in those markets for the combined entity to behave in an anticompetitive manner."²⁴ This one-third threshold ensures that "at least three competitors hav[e] access to approximately the same amount of suitable spectrum for providing mobile wireless broadband service."²⁵ For markets that present anticompetitive risks, the Commission has a host of remedies at its disposal, including requiring a provider to divest other spectrum holdings and imposing competitive conditions.

²¹ Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 04-70, *Memorandum Opinion and Order*, 19 FCC Rcd 21522 (2004) ("*Cingular-AT&T Wireless Order*").

²² *NPRM* ¶ 17 (citing *Verizon Wireless-SpectrumCo Order*, FCC 12-95, at ¶ 59).

²³ *NPRM* ¶ 26 (citing *AT&T-Qualcomm Order*, 26 FCC Rcd at 17606 ¶ 38).

²⁴ *NPRM* ¶ 8.

²⁵ *NPRM* ¶ 34.

Under the screen that the Commission has used in evaluating spectrum acquisitions since the 2008 *Verizon Wireless-ALLTEL Order*,²⁶ the Commission has determined that spectrum suitable and available for mobile telephony and mobile broadband services includes cellular (50 MHz), PCS (120 MHz), SMR (26.5 MHz), and 700 MHz (80 MHz) spectrum, as well as AWS-1 (90 MHz) and BRS (55.5 MHz) spectrum where available.²⁷ Thus, for markets where both the AWS-1 and BRS bands are available, there is 422 MHz of suitable and available spectrum. A carrier triggers the screen if it holds greater than 145 MHz, which is approximately one-third of this total (rounded up). For markets where AWS-1 or BRS spectrum are not available, the threshold is adjusted downward accordingly.²⁸ The Commission has previously considered several other bands to include in the spectrum screen, including EBS, MSS/ATC, AWS-2/3, WCS, 3650-3700 MHz, and 2155-2175 MHz, but so far has declined to add these bands to the screen.²⁹ Despite changes in the wireless market since the Commission first employed this screen in 2008, the Commission has used this same screen in the 2009 *AT&T-Centennial Order*,³⁰ the 2011 *AT&T-Qualcomm Order*,³¹ the 2011 *AT&T-T-Mobile Staff Report*,³² and most recently, the August 2012 *Verizon Wireless-SpectrumCo Order*.³³

The Commission's approach to reviewing spectrum concentration is not inherently flawed. As the Commission has recently recognized, however, revisions to the spectrum

²⁶ Applications of Cellco Partnership d/b/a Verizon Wireless and Atlantis Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and *De Facto* Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act, WT Docket No. 08-95, *Memorandum Opinion and Order and Declaratory Ruling*, 23 FCC Red 17444 (2008) ("*Verizon Wireless-ALLTEL Order*").

²⁷ *AT&T-Qualcomm Order* ¶ 39.

²⁸ The screen is 95 MHz where neither BRS nor AWS-1 spectrum is available; 115 MHz where BRS spectrum is available, but AWS-1 spectrum is not available; and 125 MHz where AWS-1 spectrum is available, but BRS spectrum is not available. *AT&T-Centennial Order* ¶ 46.

²⁹ *AT&T-Qualcomm Order* ¶ 39.

³⁰ *AT&T-Centennial Order* ¶ 43.

³¹ *AT&T-Qualcomm Order* ¶ 42.

³² *Applications of AT&T, Inc. And Deutsche Telekom AG*, Staff Report & Analysis, WT Docket No. 11-65, DA-11-1955A2 ¶ 37 & n.112 (rel. Nov. 29, 2011) ("*AT&T-T-Mobile Staff Report*").

³³ *Verizon Wireless-SpectrumCo Order* ¶ 59.

included in the current screen are necessary to reflect the rapidly changing and consolidating marketplace for mobile voice and data services.³⁴ As the Commission explained in the *AT&T-Qualcomm Order*, “revisions to the screen may be necessary” for future transactions.³⁵ The Commission assured that it planned to “continue to monitor any technological or market-driven developments.”³⁶

Indeed, in its *Verizon Wireless-SpectrumCo Order*, the Commission acknowledged that it “intend[e]d to initiate a proceeding soon to review our policies governing mobile wireless spectrum holdings.”³⁷ A couple of examples readily illustrate that the Commission needs to update bands considered available for use under the spectrum screen. For instance, the Commission currently includes the ten-megahertz Upper 700 MHz D Block in the list of spectrum that is suitable and available for broadband, even though the Commission has since reallocated this spectrum exclusively to public safety use for broadband interoperability among first responders. In addition, the Commission has continued to identify Specialized Mobile Radio (“SMR”) spectrum as having 26.5 megahertz of spectrum available even though the band continues to undergo a years-long transition and, upon completion of the transition, will yield only 14 megahertz through which mobile broadband service can be provided.³⁸ Including large segments of spectrum in the spectrum denominator adds considerable headroom for anti-competitive spectrum acquisitions to occur without actually triggering the screen.

These examples only touch upon the revisions necessary to make the spectrum screen reflective of spectrum that is actually suitable and available for mobile use. The Commission should “continue to consider spectrum based on its suitability and availability for a given product

³⁴ *AT&T/Qualcomm Order* ¶ 42.

³⁵ *AT&T-Qualcomm Order* ¶ 42.

³⁶ *AT&T-Qualcomm Order* ¶ 42.

³⁷ *Verizon Wireless-SpectrumCo Order* ¶ 63.

³⁸ *AT&T-Qualcomm Order* ¶ 42; *AT&T/T-Mobile Staff Report* ¶ 45 n.137.

market.”³⁹ But unless the screen is updated, it will remain a dysfunctional tool for promoting competition.

IV. THE FCC SHOULD ADD A SPECTRUM SCREEN FOR SPECTRUM HOLDINGS BELOW 1 GHZ TO ITS SPECTRUM-HOLDINGS ANALYSIS

Different bands of spectrum offer different degrees of utility to provide wireless voice and data services. Although a single spectrum screen for all spectrum bands can offer some measure of guidance to the industry, an all-inclusive spectrum screen remains susceptible to producing both false positives and false negatives. That is, a spectrum-concentration screen that sweeps in too many low-value, high-frequency bands will tend not only to identify potential competitive harm in the aggregation of high-frequency bands where the competitive risk is minimal and the barriers to entry low, but also to overlook potential competitive harm in the aggregation of low-frequency resources where the competitive risk is grave and the barriers to entry are high. The Commission can remedy the failures of the current screen and limit the opportunities for gamesmanship and unintended consequences a single screen creates by adopting a second spectrum-screen for the high-value spectrum below 1 GHz. In deciding whether to adopt a below-1 GHz screen, the Commission must make its decision before the reverse incentive auction in order for the decision to matter because the auction promises to be the greatest.⁴⁰

The Commission’s current all-inclusive spectrum screen treats every megahertz as equally valuable and useful no matter what its frequency, technical, or operational limits. But, as the Commission and its staff have repeatedly noted, “all spectrum is not created equal.”⁴¹ Every

³⁹ *NPRM* ¶ 27.

⁴⁰ See Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, *Notice of Proposed Rulemaking*, Docket No. 12-268, FCC 12-118 (rel. Oct. 2, 2012).

⁴¹ “An Introduction to Spectrum Engineering,” Julius Knapp, Chief, Office of Engineering and Technology, U.S. Federal Communications Commission, as part of the Department of Energy Seminar on Spectrum Policy for the

band has different technical, regulatory, economic, and operational constraints that affect the band's ability to deliver broadband services to consumers. And while differences among spectrum allocations abound, the most pronounced differences – and the only ones that cannot be changed by rule, policy, technology or emergent economic scale – are the technical characteristics of the frequencies below 1 GHz compared to those above 1 GHz.

Systems operating in lower-band spectrum can deliver more signal power and superior performance to consumer than higher-band spectrum operating with the same cell size.⁴² As the Commission has recognized, “the more favorable propagation characteristics of lower frequency spectrum, *i.e.*, spectrum below 1 GHz, allow for better coverage across larger geographic areas and inside buildings.”⁴³ These characteristics have a direct bearing on the cost of deployment and has affected where and when carriers with only higher-frequency spectrum can economically deploy service.⁴⁴

The two largest holders of this spectrum, AT&T and Verizon, readily acknowledge the great advantages of spectrum below 1 GHz. Verizon, for instance, has bluntly stated that “[a]ll spectrum is not created equal for all carriers.”⁴⁵ As Verizon's Chief Financial officer has elaborated, “the propagation of [700 MHz] spectrum into buildings is very high, so you don't need as much cell splitting or build out that you would need from other types of spectrum.”⁴⁶

Verizon Wireless's Senior Vice President and Chief Technology Officer has echoed these

Utility Sector, December 8, 2010; *see also Fifteenth Report* ¶¶ 290, 292; *AT&T/Qualcomm Order* ¶¶ 31, 49; John Stone and Matthew Yukelson, *Wireless Spectrum: Invisible Real Estate*, Near Earth, LLC (February 2008), p. 5.

⁴² *See, e.g., AT&T-Qualcomm Order* ¶ 49.

⁴³ *NPRM* ¶ 35.

⁴⁴ *See United States v. Verizon Communications Inc. and ALLTEL Corp.*, Competitive Impact Statement, Case No. 08-cv-1878, at 5-6 (filed Oct. 30, 2008), *available at* <http://www.justice.gov/atr/cases/f238900/238947.pdf> (“because of the characteristics of PCS spectrum, providers holding this type of spectrum generally have found it less attractive to build out in rural areas”)

⁴⁵ *Remarks of Fran Shammo, Chief Financial Officer, Verizon Communications*, May 23, 2012, *available at* <http://barclays-r1.alldigital.net/viewer/webcast/GTMTC/249>

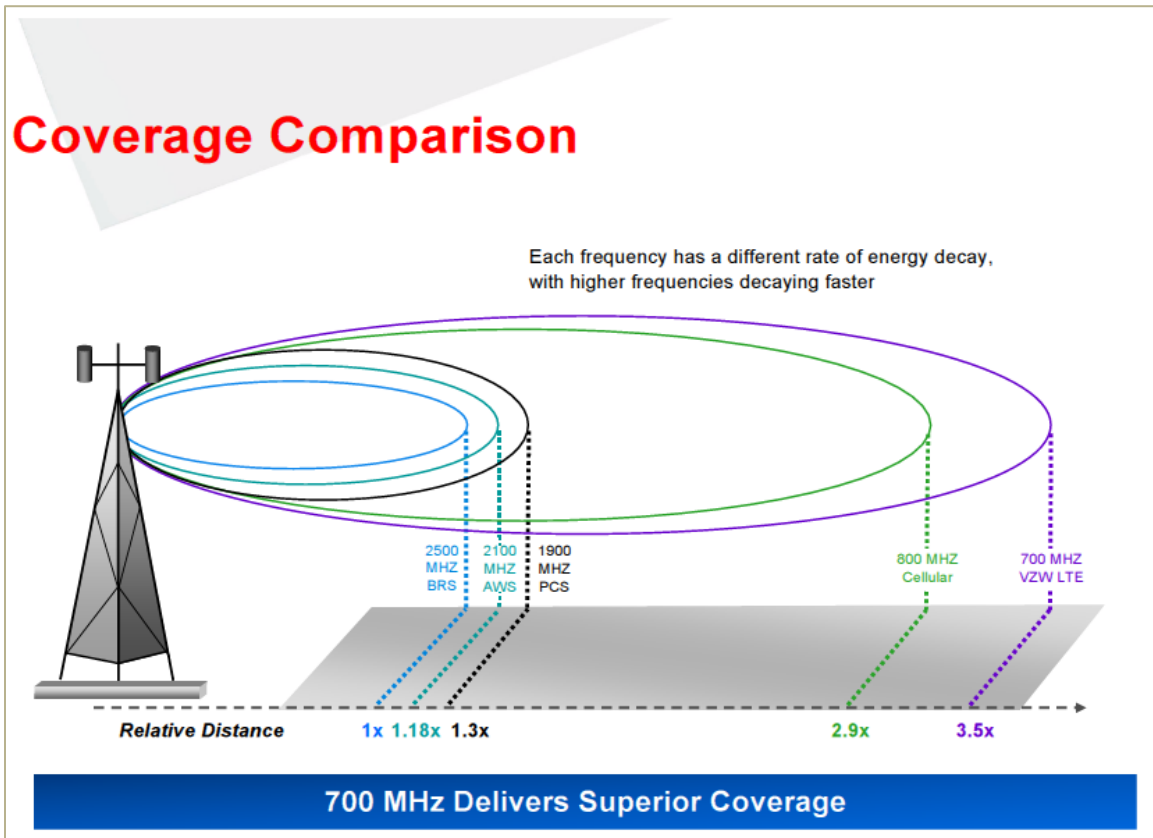
⁴⁶ *Id.*

sentiments, explaining that Verizon Wireless has a “Spectrum Advantage” because lower frequencies have “better in-building penetration” and “increased coverage.”⁴⁷ So too has AT&T recognized the importance of spectrum below 1 GHz. In its bid to acquire T-Mobile, AT&T contended “that a significant benefit to T-Mobile customers would be their newly acquired access to AT&T’s spectrum below 1 GHz, enabling those customers to receive both extended rural coverage and ‘superior in-building and in-home service.’”⁴⁸ But perhaps the best description is the one from Verizon’s Chief Technology Officer Tony Melone that shows the advantages of below 1 GHz spectrum:⁴⁹

⁴⁷ *Presentation of Tony Melone, Senior Vice President and Chief Technology Officer, Verizon Wireless*, Wells Fargo Securities Technology, Media & Telecom Conference, dated Nov. 10, 2010, at p. 12-13.

⁴⁸ *AT&T/Qualcomm Order* ¶ 49.

⁴⁹ *Presentation of Tony Melone, Senior Vice President and Chief Technology Officer, Verizon Wireless*, Wells Fargo Securities Technology, Media & Telecom Conference, dated Nov. 10, 2010, at p. 13.



The diagram Verizon’s CTO offered to investors in 2010 may in fact undersell the relative efficiency of lower frequency spectrum. A more representative picture would show how many more base stations are required at higher-frequency spectrum to cover the same distance in all directions as the 700 MHz spectrum: a ratio estimated at up to three to one, depending on the frequency.⁵⁰

⁵⁰Mikael Ricknas, *Update: Verizon to Roll out LTE in Two US Cities This Year*, InfoWorld (Feb. 18, 2009) (citing Verizon Executive Vice President and Chief Technology officer as indicating that for every base station at 700 MHz, three or four are needed at 2.6 GHz) available at <http://xrl.us/bn3q54>; Peter Rysavy, *Low Versus High Radio Spectrum*, HighTech Forum (Mar. 5, 2012) (explaining that “1900 MHz takes somewhere between 2 to 4 times as many sites as 850 MHz” depending on “multiple factors such as path loss, the link budget, cell tower height, and the geometry of the area being covered”); Letter from the Brattle Group to the Honorable Joe Barton et al. at 8 n.11 (May 18, 2005) (“[A]n analysis by Intel found that the 2.5 GHz band would require four to five times as many base stations as the 700 MHz band to achieve equal coverage.”).

Higher frequency spectrum has value too, of course. Because high-frequency signals travel shorter distances than low-frequency signals, carriers can use higher-frequency spectrum to enhance network capacity.⁵¹ Increased capacity is partially a byproduct of its higher rate of decay: higher frequency spectrum requires many times more base stations necessary to achieve minimal coverage over a geographic area, and deploying more base stations produces greater frequency reuse, which, in turn, increases network capacity.

The merits of high-frequency spectrum only go so far, however. Operators with lower frequency spectrum can replicate most, if not all, of the capacity benefits of higher-frequency spectrum simply by using lower power, re-pointing antennas, and making other minor adjustments to standard operating procedures. The adjustments allow low-frequency spectrum to achieve much the same capacity benefits of the higher-frequency spectrum.⁵² But while low-frequency spectrum can achieve many of the capacity benefits of high-frequency spectrum with technical adjustments to the system, no number of lawful technical adjustments can coax high-frequency spectrum to provide the wide-area, building-penetrating coverage of low-frequency spectrum.

Unlike licensees of high-frequency spectrum, moreover, holders of low-frequency spectrum have a resource better suited to how networks actually mature over time. When a carrier first deploys any new spectrum band, the network is empty. Maximizing profit generally means providing a coverage area to encourage customers to use the new network infrastructure for their voice and data traffic. As customers migrate to the new infrastructure, capacity demands increase and begin to approach the limits of the initial coverage build. Low-frequency spectrum allows carriers to capture the benefits of wide-area coverage with the least amount of

⁵¹ See, e.g., *NPRM* at ¶ 35.

⁵² See, e.g., J.M. Vanderau, R.J. Matheson, and E.J. Haakinson, *A Technological Rationale to Use Higher Wireless Frequencies*, U.S. Dep't of Commerce (Feb. 1998) available at <http://www.f8kgl.com/IMG/pdf/98-349.pdf>.

network investment because low-frequency spectrum travels farther and penetrates building better than higher frequency spectrum. Because carriers can make technical adjustments to low-frequency transmissions that limit the signal's reach, carriers with low-frequency spectrum have some measure of flexibility to add base stations to the coverage build, which increase frequency reuse and increases capacity for customers. Unlike carriers with high-frequency spectrum, carriers with low-frequency spectrum do not have to build a dense and costly coverage network from day one.⁵³ Instead, carriers with low-frequency spectrum can limit their economic overhead, deploy a thin coverage network when traffic is low and then increase capacity on an incremental and planned basis as customer traffic approaches the limit of the initial coverage build.⁵⁴

The intrinsic physical differences of spectrum above and below 1 GHz – and the concomitant economic benefits – are reflected in prices paid for spectrum in different bands. Many factors from device ecosystem, to the potential for harmful interference, to interoperability affect spectrum. Nonetheless, few can dispute that, regardless of the particular characteristics of a band, higher frequency spectrum routinely trades at a fraction of the price of lower frequency spectrum in auctions and private sector transactions. AT&T, for instance, paid eighteen times as much per unit (MHz-POP) for its low-frequency 700 MHz band spectrum in 2007 auction (\$3.15

⁵³ *Fifteenth Report* ¶ 293 (“A licensee that exclusively or primarily holds spectrum in a higher frequency range generally must construct more cell sites (at additional cost) than a licensee with primary holdings at a lower frequency in order to provide equivalent service coverage, particularly in rural areas.”).

⁵⁴ In a perfectly competitive market, differences in a company's demand for spectrum should depend on how the company combines spectrum with other inputs, such as base station infrastructure, to yield a given output of mobile voice and data services. In theory, a firm with substantial spectrum resources has simply opted to rely on spectrum in lieu of base station infrastructure to provide the level of voice and data services the market demands. In practice, however, the market for spectrum resources is not perfectly competitive and spectrum and base station infrastructure are especially imperfect substitutes for one another. Base station zoning and siting delays, equipment costs, backhaul expenses (where the incumbent LECs also dominate the market) and other real-world factors place a premium on low-frequency spectrum and impose a cost on high-frequency spectrum that, unless remedied, has and will continue to function as a strong impediment to robust competition in the wireless market. *See, e.g.*, Comments of PCIA—The Wireless Infrastructure Association and The DAS Forum, WT Dkt. 08-165 (Sept. 29, 2008); Reply Comments of PCIA—The Wireless Infrastructure Association and The DAS Forum, WT Dkt. 08-165 (Oct. 14, 2008).

per MHz-POP) than it received for selling its high-frequency 2.5 GHz band spectrum that same year (\$0.17 per MHz-POP).⁵⁵ Likewise, on the secondary market, AT&T paid more than six times as much (\$1.06 per MHz Pop) for Aloha Partners' Lower 700 MHz spectrum in 2007,⁵⁶ and five times as much (\$0.87 per MHz Pop) for Qualcomm's Lower 700 MHz spectrum in 2011.⁵⁷ Investment analyst J.P. Morgan's valuations reflect these disparities:⁵⁸

Band	Relative Value (per MHz-POP)
Cellular	\$1.70
700 MHz	\$1.37
PCS	\$0.76
AWS	\$0.76
MMDS	\$0.25
2.5 GHz	\$0.19

The Commission's analysis of an input as critical to the wireless industry as spectrum should recognize the profound physical and economic differences between spectrum above and below 1 GHz. The Commission can do so by adopting a spectrum screen for holdings under 1 GHz in addition to an overall spectrum screen.

In adopting an under 1 GHz screen, it is critical for the Commission to do so before it conducts the reverse incentive auction.⁵⁹ The incentive auction promises to nearly double the amount of under 1 GHz spectrum. And because the Commission is only authorized to conduct

⁵⁵ See Opposition to Petitions to Deny and Reply to Comments of Intel Corp., WT Docket No. 08-94. at 4 (Aug. 4, 2008); *Verizon Nearly Lost Bid for National C-Block License*, Comm. Daily (Mar. 25, 2008).

⁵⁶ See Jamie Townsend, *Whether it Wins or Loses Block E, Qualcomm Suffers*, Seeking Alpha, (Feb. 22, 2008) available at: <http://seekingalpha.com/article/65656-whether-it-wins-or-loses-block-e-qualcomm-suffers>.

⁵⁷ See Today's News, *AT&T to Buy 700 MHz Spectrum from Qualcomm*, Comm. Daily, (Dec. 21, 2010).

⁵⁸ J.P. Morgan, *Spectrum Valuation Overview – Carrier by Carrier Base-Case Spectrum Value Across Wireless Industry*, Telecom Services and Towers, North American Equity Research, (Nov. 30, 2011).

⁵⁹ Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, *Notice of Proposed Rulemaking*, Docket No. 12-268, FCC 12-118 (rel. Oct. 2, 2012).

the incentive auction of broadcast spectrum one time,⁶⁰ this may be the last significant opportunity to pick up substantial under 1 GHz holdings for many years to come, if not forever. If the Commission were to ultimately decide to adopt an under 1 GHz screen, but does so after it conducts the auction, the under 1 GHz screen will do little good to remedy the anticompetitive situation. In the *Notice*, the Commission explained that it would “continue to apply its current case-by-case approach to evaluate mobile spectrum holdings during its consideration of secondary market transactions and initial spectrum licensing after auctions” during the pendency of the rulemaking.⁶¹ Moreover, the Commission indicated that it did not “anticipate revisiting licensees’ current spectrum holdings under any revised policy” but instead “would anticipate grandfathering those holdings.”⁶² As already explained, AT&T and Verizon hold 73% of the spectrum under 1 GHz.⁶³ Based on their market position, they can only be expected to aggregate more under 1 GHz spectrum. Hence, if the Commission does not address the issue of the 1 GHz screen prior to the incentive auction, it will have effectively decided that there should be no under 1 GHz screen. It would be irresponsible not to directly address the issue before the auction.

V. THE COMMISSION SHOULD CONTINUE TO ADMINISTER THE SPECTRUM SCREEN ON A CASE-BY-CASE BASIS

The Commission currently examines the competitive effect of spectrum acquisitions occurring via transactions involving the transfer, assignment, or lease of Commission spectrum

⁶⁰ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96 § .6403(e) (Feb. 22, 2012).

⁶¹ *NPRM* ¶ 16 n.59.

⁶² *NPRM* ¶ 49.

⁶³ *AT&T/Qualcomm Order* ¶ 48.

licenses. In its examination, the Commission employs a case-by-case review of the acquisition.⁶⁴ The Commission should continue this practice.

The Commission's examination of spectrum acquisitions applies a two-part screen to identify markets where an acquisition necessitates further competitive analysis. First, the Commission considers changes in market concentration that would occur as a result of the transaction. This change is measured by comparing the pre and post-acquisition Herfindahl-Hirschman Index ("HHI"). Second, the Commission examines the amount of spectrum that is "suitable and available on a market-by-market basis for the provision of mobile telephony/broadband service."⁶⁵ And in those markets highlighted by one or both of the two-part screen, the Commission conducts a market-by-market review to determine whether the spectrum acquisition would increase the likelihood or ability of the acquiring entity to behave in an anti-competitive manner in those markets. Finally, the Commission considers other variables that "are important in predicting the incentives and ability of service providers to successfully reduce competition . . . and transaction-specific public interest benefits that may mitigate or outweigh any harms arising from the transaction."⁶⁶

The Commission should continue its current practice of examining the competitive effect of spectrum acquisitions on a case-by-case basis. A case-by-case analysis that examines spectrum holdings at both the local and national levels, identifies the relevant product market, has a rebuttable presumption of anti-competitive spectrum aggregation and concentration when the screen is exceeded, and employs an updated spectrum screen that takes into account both the

⁶⁴ Policies Regarding Mobile Spectrum Holdings, *Notice of Proposed Rulemaking*, WT Docket No. 12-269, FCC 12-119 ¶ 8 (rel. Sept. 28, 2012).

⁶⁵ *NPRM* ¶ 8.

⁶⁶ *Id.*

quality and quantity of spectrum will allow the Commission to prevent anti-competitive behavior and best serve the public interest.

A. The Commission Should Implement the Spectrum Screen at Both the Local and National Levels

As the Commission correctly notes, “[d]efining the relevant geographic market is important in accurately assessing the competitive effects that may result from a potential transaction.”⁶⁷ Under its case-by-case analysis, the Commission has stated that it uses the local geographic market size to determine any potential competitive harms arising from spectrum concentration occurring as a result of an acquisition.⁶⁸ The Commission also considers whether a spectrum acquisition has potential nationwide competitive effects, particularly when the proposed acquisition would see a mobile carrier gain spectrum throughout the country.⁶⁹

The Commission should continue assessing the potential competitive effects of spectrum acquisitions on both a local and national level. The Commission should employ this analysis regardless of the method of acquisition, whether occurring via transfer, consent, lease, or winning auction bid. As the Commission correctly explains its *Verizon Wireless-SpectrumCo Order*, analyzing the effects on competition in local markets enhances the competitive evaluation because consumers live, work, and shop locally.⁷⁰ Consumers often want to “touch and feel” phones and user equipment in the store. The consumer demand for a hands-on buying experience has only increased with the proliferation of larger and more complex devices such as the Apple iPad, HTC EVO 4G, and the Samsung Note. Moreover, local stores continue to

⁶⁷ *Id.* ¶ 30.

⁶⁸ *Id.* (citing Application of AT&T Inc. and Qualcomm Incorporated For Consent to Assign Licenses and Authorizations, *Order*, WT Docket No. 11-18, 26 FCC Rcd 17589, 17604 ¶ 34 (2011) (“*AT&T-Qualcomm Order*”).

⁶⁹ *Id.* ¶ 31 (citing Applications of Cellco Partnership *d/b/a* Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses, *et al.*, *Memorandum Opinion and Order and Declaratory Ruling*, WT Docket No. 12-4, 27 FCC Rcd 10698, 10719 ¶ 58 (2012) (“*Verizon Wireless-SpectrumCo Order*”).

⁷⁰ See *Verizon Wireless-SpectrumCo Order*, 27 FCC Rcd at 10719 ¶ 58.

proliferate throughout the country, which suggests that customers consider the local market relevant and important to their purchasing and servicing decisions. Consumers typically purchase goods and services, including mobile services, in a geographic area relatively close to home. In analyzing potential harms arising from spectrum concentration local geographic markets, the Commission has typically used Cellular Market Areas (CMAs).⁷¹ Therefore, the Commission should analyze spectrum acquisitions on a CMA-basis in order to evaluate local anti-competitive harms.⁷²

The Commission should also continue to analyze the potential anti-competitive effects of spectrum acquisitions at the national level. The aggregated harm at the local level can have significant bearing on the nationwide market.⁷³ Further, while there are local markets for retail mobile services, actual prices and service plan offerings are set at the national level. The Commission has also properly noted that advertising is directed at a national audience, and mobile equipment and devices are developed and deployed on a national scale.⁷⁴ The national market considerations for the mobile industry have not changed.

B. The Commission Should Define the Relevant Product Market as Including Mobile Voice and Broadband Services

The Commission should continue to define the relevant product market in its analysis of potential anti-competitive effects of spectrum acquisitions as a combined mobile voice and broadband services product market “comprised of mobile voice and data services, including mobile voice and data services provided over advanced broadband wireless networks.”⁷⁵ Mobile

⁷¹ *NPRM* ¶ 30 (citing 47 C.F.R. § 22.909; *AT&T-Qualcomm Order*, 26 FCC Rcd at 17603 ¶ 32 n.96).

⁷² *See, e.g., AT&T-Verizon Wireless Order* ¶ 46.

⁷³ *NPRM* ¶ 31 (citing *AT&T-Qualcomm Order*, 26 FCC Rcd 17603-05, ¶¶ 32, 34; *Verizon Wireless-SpectrumCo Order*, 27 FCC Rcd 10719 ¶ 58.).

⁷⁴ *Id.* (citing *AT&T-Qualcomm Order*, 26 FCC Rcd 17605, ¶ 35; *Verizon Wireless-SpectrumCo Order*, 27 FCC Rcd 10718 ¶ 57).

⁷⁵ *Id.* ¶ 24 (citing *AT&T-Qualcomm Order*, 26 FCC Rcd at 17602-03 ¶¶ 32-33; *Verizon Wireless-SpectrumCo Order*, 27 FCC Rcd 10717 ¶ 53; AT&T Inc. and CellCo Partnership *d/b/a* Verizon Wireless Seek FCC Consent to

broadband data services is a rapidly changing market and defining the product market too narrowly by limiting the product market to only telephony or data risks preventing pro-competitive transactions that parties might enter.⁷⁶ Thus, while the Commission should remain vigilant to changes in the marketplace that might lead to a reevaluation of the relevant product market, the substantial and dynamic evolution of mobile services currently cautions against an overly narrow interpretation of the relevant product market.

C. Applicants Should be Required to Produce a Market Analysis to Rebut the Presumption of Anticompetitive Spectrum Aggregation or Concentration

When an entity proposes to acquire spectrum that will cause it to exceed of the spectrum screen, whether below 1 GHz or the overall screen and whether at the county/CMA level or the national level, the Commission should apply a rebuttable presumption of anti-competitive spectrum concentration. Under the *Horizontal Merger Guidelines* promulgated by the Department of Justice and the Federal Trade Commission (“*DOJ/FTC Horizontal Merger Guidelines*”), mergers that create highly concentrated markets “will be presumed likely to enhance market power,” and “[t]he presumption may be rebutted by persuasive evidence showing that the merger is unlikely to enhance market power.”⁷⁷ The Commission follows these

Assign or Transfer Control of Licenses and Authorizations and Modify a Spectrum Leasing Arrangement, *Memorandum Opinion and Order*, WT Docket No. 09-104, 25 FCC Rcd 8704, 8721 ¶35 (2010); 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*, WT Docket No. 08-246, 24 FCC Rcd 13915, 13932 ¶ 37 (2009)).

⁷⁶ See e.g. Applications of Cellco Partnership *d/b/a* Verizon Wireless and Atlantic Holdings LLC For Consent to Transfer Control of Licenses, Authorizations, and Spectrum Manager and *De Facto* Transfer Leasing Arrangements and Petition for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act, *Memorandum Opinion and Order and Declaratory Ruling*, WT Docket No. 08-95, File Nos. 0003463892, *et al.*, ITC-T/C-20080613-00270, *et al.*, File No. ISP-PDR-20080613-00012, FCC 08-258 ¶ 45 (rel. Nov. 10, 2008).

⁷⁷ Horizontal Merger Guidelines, U.S. Department of Justice and the Federal Trade Commission, § 5.3 (Aug. 19, 2010).

guidelines and has concluded that high levels of spectrum concentration arising from an acquisition “are a strong indicator of harm to competition.”⁷⁸

Spectrum acquisitions, whether through transfer, consent, lease, or auction, can lead to enhanced market power and harm competition in the mobile voice and broadband markets. As discussed above, spectrum acquisitions that create highly concentrated markets will be likely to enhance market power and high levels of spectrum concentration are likely to harm competition. The Commission should adopt a rebuttable presumption that spectrum acquisitions that cause an entity to exceed the Commission’s spectrum screens are anti-competitive.

D. The Commission Should Leave Open the Possibility of Band Specific Spectrum Limits for Any Particular Proposed Auction

Although the Commission should generally apply a case-by-case analysis for spectrum holdings, both overall and below 1 GHz, it should leave open the option of imposing aggregation limits for specific bands in specific auctions. As the Commission continues to work to free new spectrum, and as the market continues to develop new technology, certain spectrum may come up on the auction block that is too important or too valuable to leave in the hands of any one or two market participants. A band specific rule would ensure wider market participation. Other countries, such as Canada, have adopted band specific limits for new auctions on the basis of market distorting spectrum concentration in an attempt to ensure access for multiple participants to prime spectrum.⁷⁹ These determinations are necessarily made on a case-by-case basis, but the Commission should remain open to band-specific limits in future auctions when the circumstances present themselves.

⁷⁸ See Application of AT&T Inc. and Deutsche Telekom AG For Consent to Assign or Transfer Control of Licenses and Authorizations, *Staff Analysis and Findings*, WT Docket No. 11-65, 26 FCC Rcd 16188, 16197 ¶¶ 19 (2011) (“*AT&T-T-Mobile Staff Analysis and Findings*”).

⁷⁹ See Industry Canada, *Policy and Technical Framework: Mobile Broadband Services (MBS) – 700 MHz Band & Broadband Radio Service (BRS) – 2500 MHz Band* (2012) available at <http://xrl.us/bn2tzt> (restricting the three largest carriers to one-quarter of the 700 MHz spectrum on the block in the upcoming auction).

VI. THE COMMISSION SHOULD ADOPT PRO-COMPETITIVE REMEDIES APPLICABLE TO ENTITIES THAT EXCEED THE SPECTRUM SCREEN

The Commission should continue its practice of adopting pro-competitive remedies when a transaction triggers the spectrum screen. The Commission has been successful in requiring companies to divest a comparable amount of spectrum when an acquisition triggers the spectrum screen. Importantly, however, the Commission should ensure that such divestitures actually promote competition and do not simply transfer spectrum from one of the Twin Bells to the other. The spectrum divestiture must also ensure that “the spectrum to be divested . . . is immediately ‘useable’ by another licensee, perhaps for a particular technology.”⁸⁰

The Commission should continue to require divestiture of comparable amounts of spectrum when carriers exceed the spectrum screen. In requiring this, the Commission must look at not only who is required to divest the spectrum but also who are the probable buyers. As Commissioner Pai has lamented, “[g]overnment-managed divestitures can let valuable spectrum languish for years.”⁸¹ The Commission must ensure that does not happen by requiring divestiture of spectrum that others can use. To ensure competitive use of divested spectrum, the Commission should examine the propagation characteristics of the spectrum and available technology that allows other carriers to use the spectrum as well as any regulatory impediments or interference issues. The Commission should also consult with market participants about whether they could use the spectrum effectively. And it should consider alternative divestiture approaches, such as the “clustered approach” it refers to in the *Notice*, which “would require divestitures of population centers to allow a prospective purchaser to offer a viable service and to

⁸⁰ *NPRM* ¶ 45.

⁸¹ *Verizon Wireless-SpectrumCo Order*, FCC 12-95, Statement of Commissioner Ajit Pai, approving in part and concurring in part, at 1.

minimize or prevent piecemeal divestiture.”⁸² These are exactly the types of actions the Commission “can adopt to facilitate spectrum being divested expeditiously to licensees that will put it to use quickly and efficiently.”⁸³

VII. ATTRIBUTION RULES SHOULD RECOGNIZE NON-ATTRIBUTABLE INTERESTS HIGHER THAN 10% IN APPROPRIATE CIRCUMSTANCES AND SHOULD REFLECT EVOLVING LEASING AND SHARING ARRANGEMENTS

Under the current spectrum screen, the Commission attributes spectrum to any company that holds a greater than ten percent interest in a license-holding company.⁸⁴ While the Commission has imposed ownership disclosure requirements for wireless licensees for holdings of more than ten percent⁸⁵ and has conjectured about the potential for diminished competition between companies with common ownership of more than ten percent in a shared subsidiary, the Commission has never fully explained the rationale behind a ten percent limit for spectrum attribution purposes. The Commission should consider relaxing this requirement, as it has in other circumstances.

In other contexts, the Commission has viewed ownership limits of twenty percent, twenty-five percent, or an even greater percentage as a threshold that indicates control. As the *Notice* explains, the CMRS cap and the Cellular cap looked at ownership interests of 20% or greater.⁸⁶ Similarly, in the direct foreign ownership context, the Commission looks at ownership interests of 20%.⁸⁷ And in the indirect foreign ownership context—where a foreign company

⁸² *NPRM* ¶ 44 (citing *Verizon Wireless-ALLTEL Order* ¶ 160).

⁸³ *NPRM* ¶ 44 (citing *Verizon Wireless-SpectrumCo Order*, FCC 12-95, Statement of Commissioner Ajit Pai, approving in part and concurring in part, at 1).

⁸⁴ *Applications for the Assignment of License from Denali PCS, LLC to Alaska DigitTel, LLC*, Memorandum Opinion and Order, 21 FCC Rcd 14863, ¶ 45 (2006) (“all spectrum in which the merged entity would have a 10 percent or greater interest is attributed to that entity”).

⁸⁵ *See, e.g.*, 47 C.F.R. §§ 1.919(a) (requiring licensees to disclose ownership information); 1.2112(a) (requiring applicants seeking to participate in competitive bidding to disclose ownership information for ownership interests of 10% or greater).

⁸⁶ *NPRM* ¶ 41.

⁸⁷ 47 U.S.C. § 310(b)(3).

owns a U.S. company that owns a company with a license—the relevant ownership interest is 25%.⁸⁸ In fact, in analyzing both direct and indirect foreign ownership, the Commission has determined that it should use its forbearance authority to determine the appropriate level of ownership.⁸⁹ The Commission has explained that relaxing the rules “provide[s] common carrier licensees and their potential owners with greater flexibility in how they choose to structure foreign investment in a licensee” while allowing the FCC to protect “national security and law enforcement interests.”⁹⁰

A similar flexibility may likewise be appropriate in mobile holdings attribution context. Certain ownership arrangements above 10% may not indicate any actual control. By allowing more flexible attribution rules, the Commission could encourage more investment from other carriers, an important source of financing. The Commission has already recognized its “flexibility to examine equity and non-equity ownership and other interests that do not meet the ten percent equity interest threshold.”⁹¹ It should likewise recognize its ability to depart above the ten percent threshold and consider raising the attribution threshold.

Whatever the proper level of equity and voting interests, the Commission should not allow its spectrum screen to frustrate new business models, such as wholesale operations, and new innovations, such as network sharing. In the *Notice*, the Commission recognized that long term commercial leases give both lessors and lessees important control over the spectrum and proposed to make such arrangements attributable.⁹² Rather than fall into the same one-size-fits-

⁸⁸ *Id.* § 310(b)(4)

⁸⁹ *See Review of Foreign Ownership Policies for Common Carrier and Aeronautical Radio Licensees under Section 310(b)(4) of the Communications Act of 1934, as Amended*, First Report & Order, IB Docket No. 11-133 (rel. Aug. 17, 2012).

⁹⁰ *Id.* ¶ 2.

⁹¹ *NPRM* ¶ 41.

⁹² *NPRM*, Appendix A; *see, e.g., Applications of Midwest Wireless Holdings, L.L.C. and ALLTEL Communications, Inc., for Consent to Transfer Control of Licenses and Authorizations, File Nos. 0002391997, et al. and Application of Great Western Cellular Partners, L.L.C. and ALLTEL Communications, Inc., for Consent to Transfer Control of*

all pitfall as the current spectrum screen, the Commission should analyze the specific facts of the business arrangement in deciding whether or not to attribute spectrum to the parent company whenever spectrum capacity is sold on a wholesale basis or shared. When deciding whether or not to attribute spectrum in the context of a sharing or wholesale arrangement, the Commission should consider how much capacity the license holder uses, who decides which providers can use the shared spectrum, and under what terms and conditions the capacity is offered. Open platform arrangements offered on a competitively neutral basis warrant less regulatory scrutiny than closed systems available through preferential or exclusive contracts. This type of context-based analysis toward attribution in the wholesale and sharing context could promote competition- and efficiency-enhancing arrangements while continuing to prevent the excessive concentration of capacity through other means that could frustrate effective competition and harm consumers.

VIII. CONCLUSION

The Commission can and should promote competition in the wireless market by enhancing the analytical tools it uses to prevent excessive concentration of spectrum resources in the dominant providers of wireless voice and data services. First, refining the current spectrum screen to more accurately reflect the spectrum used and useful for mobile voice and data services will enhance the current screen's ability to serve as a diagnostic tool for potentially anti-competitive spectrum acquisitions. Second, supplementing a refined all-inclusive screen with an additional spectrum screen focused exclusively on the most valuable and useful spectrum

License, Memorandum Opinion and Order, 21 FCC Rcd 11526, ¶ 88 n.223 (2006); *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 and Petitions for Declaratory Ruling that the Transaction is Consistent with Section 310(b)(4) of the Communications Act*, Memorandum Opinion and Order and Declaratory Ruling, 23 FCC Rcd 12463, at Appendix B n.499 (2008); *Application of SprintCom, Inc. and Alaska DigiTel, L.L.C. for Long-Term De Facto Transfer Spectrum Leasing Arrangement*, Memorandum Opinion and Order, 24 FCC Rcd 435, ¶ 14 n.54 (2009).

holdings below 1 GHz will limit the opportunities for incorrectly identifying competitive concerns where none exist or wrongly passing on transactions that warrant additional scrutiny. Third, updating the attribution rules to better reflect evolving leasing and spectrum-sharing arrangements will promote competition while protecting against excessive concentration. With each of these measures, the Commission needs to act expeditiously to prevent spectrum concentration and should adopt affirmative measures to help restore effective competition in the commercial mobile markets prior to the next commercial mobile services spectrum auction.

Respectfully submitted,

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