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Federal Communications Commission
Office of the Secretary

Before the
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554

In re Applications of	)	
Cellco Partnership d/b/a Verizon Wireless and	)	WT Docket No. 12-4
SpectrumCo. LLA and	)	ULS File No. 0004566825
Cox TMI Wireless, LLC	)	ULS File No. 0004996680
For Consent to Assign Wireless Licenses	)	

PETITION TO DENY OF FREE PRESS

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EXECUTIVE SUMMARY

In these applications before the Federal Communications Commission, Verizon Wireless seeks to acquire from SpectrumCo. (a Comcast majority-owned venture with TimeWarner Cable and Bright House Networks) and Cox Wireless, the last nationwide block of highly valuable mobile broadband spectrum that will be available for the foreseeable future. This transfer will result in Verizon controlling well more than a third of all mobile broadband spectrum measured by value, and will give Verizon and AT&T a combined 60 percent value share of this critical input for mobile competition. Not only will these transactions doom the wireless market to permanent duopoly status, but their associated joint cartelization agreements will further tilt the wireline market towards a cable monopoly, forever ending any hope of wireless-wireline or cable-telco competition. The Commission should conclude that these multifaceted competition-killing transactions do not serve the public interest.

First, the merger raises serious antitrust concerns in the spectrum input market. The Commission is well aware of the competitive problems in the broader wireless market, having just thoroughly reviewed these issues in its evaluation of the AT&T-T-Mobile merger. But contrary to Verizon's assertion that these spectrum transfers will not cause any competitive harm, they would permanently ensure Verizon's and AT&T's duopoly status, as these two vertically integrated providers would control more than 60 percent of all spectrum measured by value. Verizon would have the Commission rely on an antiquated spectrum screen that fails to account for the value of individual blocks of spectrum. But in this petition we present a new value-conscious spectrum concentration analysis that demonstrates the spectrum input market is already "moderately concentrated" by Department of Justice standards, and that these transactions increase that competition to a level that raises "significant competitive concerns."

Second, these transactions severely weaken future prospects for wireless competition. Verizon's assertion that these transactions will not harm competition is based on a narrow view of the wireless market, a view that ignores the importance of spectrum to competition, ignores the increasing erosion of meaningful competition at the hands of the Verizon-AT&T duopoly, and ignores the significance of cable MSOs to the competitive landscape. The cable operators, with their ability to offer bundles of voice, video and data are uniquely positioned to compete with the vertically integrated twin Bell wireless providers. With these transactions the market is not just losing potential facilities-based providers, it is losing potential competitors that have the unique ability to offer quad-play services.

Third, these transactions do not ensure fallow spectrum is put to its most immediate and optimal use, and the granting of these applications would reward spectrum hoarding and encourage inefficient network investment. Verizon states clearly that is "has sufficient spectrum to meet its immediate needs, and generally to meet increased demands in many areas until 2015..." Verizon failed to offer any benefit-cost analysis as to why hoarding this valuable nationwide spectrum for multiple years is more beneficial to the public interest than Verizon simply investing in other less-costly and less harmful methods for increasing capacity locally where it is needed. Verizon currently sits on substantial beachfront spectrum that is apparently has no plans to use, as do other holders of AWS and 700MHz spectrum. Approving these license transfers simply rewards both Verizon and SpectrumCo./Cox's spectrum hoarding, and is not a rational public policy path for the Commission to pursue if it truly believes were are in the midst of a "spectrum crunch."

Fourth, these license transfers are tied to anticompetitive cartelization agreements that will harm competition and are likely in violation of Department of

Justice antitrust guidelines. With these transactions, the nation's largest wireless provider (who is also the nation's largest provider of fiber wireline service) is openly striking perpetual cartelization deals with its supposed cable competitors, deals that ensure these companies will not ever compete with each other. These joint operating and marketing agreements -- cable's cover charge for Verizon getting the opportunity to purchase this spectrum -- are filled with numerous anti-competitive arrangements and likely violate antitrust laws, as indicated in the Department of Justice (DOJ) and Federal Trade Commission's *Competitor Collaboration Guidelines* and *Intellectual Property Guidelines*.

Fifth, these transactions kill any lingering hope for wireless-wireline competition. These transactions and associated cartelization agreements completely destroy any potential for "third-pipe" competition to the cable-telco broadband duopoly. To the extent that the Commission has had *any* broadband competition policy, that policy was encouraging wireless-wireline competition. But over the past several years, the cable-telco broadband duopoly has itself become more tilted towards the cable providers, as the twin Bells abandoned wireline investments in favor of the lucrative wireless market. Thus, it appears the wireline duopoly is its final descent into a cable modem monopoly, something the FCC considered a possibility in the National Broadband Plan.

Verizon certainly wants this valuable spectrum, but it has failed to offer any evidence that it needs it, or that granting it and AT&T duopoly control over the frequencies best suited for mobile broadband services serves the public interest. If the Commission is at all serious about its statutory mission to promote competition and preserve the public interest, then it must deny these applications.

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I. Introduction

The central purpose of the Telecommunications Act of 1996 was to usher in a new era of competition -- competition between incumbents and new entrants as well as competition between incumbent monopoly Bell companies and incumbent monopoly cable companies. And for a brief period, it looked like Congress' vision of the future would become a reality. But the Bell and cable incumbents quickly capitalized on their political power to ensure that the Bell monopoly in telecom services and the cable monopoly in wireline TV services were traded in for a Bell-cable duopoly in all services. Along the way the incumbent phone and cable companies also made sure to beat down the vibrantly competitive wireless and ISP markets into duopoly.

Now with the applications in this proceeding we have come full circle. Instead of phone and cable companies competing with each other, we see them joining forces to sell each other's services. The hope for competition like that envisioned in the 1996 Act, such as Bell and cable companies competing in geographic markets outside of their incumbent territories, now seems quaint.

For the past decade consumers have begrudgingly lived with a broadband duopoly, ever longing for the salvation of the mythical "third-pipe" competition that both the Commission and industry promised would soon arrive. Now with this transaction consumers are being told that the "good days" of the broadband duopoly are over, and will soon give way to monopoly. And on top of that, consumers will have to live with the wireless duopoly that this transaction cements.

Verizon and its partners in this new cartel (Comcast, TimeWarner Cable, Cox and Bright House Networks, collectively referred to herein as "Applicants") insist that the transactions before the Commission are nothing more than minor, routine spectrum sales, ones that are absolutely necessary to avoid future wireless blackouts brought on by data-hungry users. But as the Commission learned in the AT&T-T-Mobile transaction review, what applicants say before the agency in order to get what they want can be very different from the truth.

And the truth here, discussed below, is already clear, and will become indisputable if the Commission does its due diligence: this spectrum transfer and its associated cartel agreements are *not* in the public interest. While Verizon absolutely *wants* this spectrum, it in no way actually *needs* it, nor will it put this highly valuable resource to its most immediate and efficient use. Verizon already dominates the spectrum market, a fact they try to mask using the Commission's flawed spectrum screen, which fails to account for the value of spectrum holdings. Further, the joint operating and marketing agreements -- cable's cover charge for Verizon getting the opportunity to purchase this spectrum -- are not the pro-competitive arrangements that Applicants claim; they are filled with numerous anti-competitive arrangements and likely violate antitrust laws, as indicated in the Department of Justice (DOJ) and Federal Trade Commission's *Competitor Collaboration Guidelines.*[1]

In this petition we offer specific allegations of fact sufficient to make a *prima facie* showing that a grant of these applications would be inconsistent with the public interest, convenience and necessity.[2] If the Commission is at all serious about its statutory mission to promote competition and preserve the public interest, then it must deny these applications. The current anticompetitive broadband and wireless marketplace is no

[1] Federal Trade Commission and U.S. Department of Justice, Antitrust Guidelines for Collaborations Among Competitors (2000). (*Competitor Collaboration Guidelines*).

[2] 47 C.F.R. 1.939(d).

accident nor is it the consequence of the invisible hand; it is the result of numerous poor policy decisions -- some large, most small -- that over time have robbed Americans of the promise of the 1996 Act. It's long past time for the Commission to rectify these mistakes, and that starts with not making any new ones.

II. Statement of Interest

Free Press is a national nonpartisan organization working to reform the media and increase informed public participation in crucial media and telecommunications policy debates. Free Press has participated in numerous merger proceedings before the Federal Communications Commission.[3] In each, Free Press has advocated for policies that promote competition and serve in the public interest. As such, Free Press constitutes a "party in interest" within the meaning of Section 309(d) of the Communications Act of 1934, as amended, and has standing to participate in this proceeding.

III. Granting These Applications Would Not Serve The Public Interest

A. The Competitive Harm of These Transactions is Vastly Understated Because the Spectrum Screen Fails to Account for the Value of Spectrum

The burden of proof to demonstrate that this transaction serves the public interest is the Applicants,[4] and they have failed to meet that burden for numerous reasons.

[3] For example, Free Press filed petitions to deny and extensive comments in Applications of AT&T, Inc. and Deutsche Telekom AG For Consent to Assign or Transfer Control of Licenses and Authorizations, WT Docket No. 11-65; Applications of Comcast Corporation, General Electric Company and NBC Universal, Inc. For Consent to Assign Licenses and Transfer Control of Licensees, MB Docket No. 10-56; Consolidated Application for Authority To Transfer Control of XM Radio Inc. and Sirius Satellite Radio Inc., MB Docket No. 07-57; and AT&T Inc. and BellSouth Corporation, Application for Transfer of Control, WC Docket No. 06-74.

[4] See e.g. Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, 19 FCC Rcd 21522, para. 40 (2004) ("The Applicants bear the burden of proving, by a preponderance of the evidence, that the proposed

Applicants fail to acknowledge general problems with the mobile broadband market that prevent effective competition, problems that will be made worse by approval of these transactions. Applicants ignore Verizon's dominance of the wireless market and the duopoly control that it and AT&T have amassed over the past several years. Applicants ignore the value and superiority of Verizon spectrum portfolio and market position, along with AT&T's, relative to all other current and potential competitors, and ignore how these spectrum transfers raise barriers to competition. And Applicants ignore how these transactions increase Verizon's ability and incentive to leverage its market position, infrastructure, and business relationships to harm its competitors and end users.

At the core of Applicants' argument is their assertion that these spectrum license transfers will have no negative impact on competition because unlike the case of a horizontal merger, this transaction will not reduce the number of active competitors. But aside from Applicants ignoring the broader impacts to competition from four major spectrum holding cable MSOs exiting the market as potential competitors in favor of becoming Verizon Mobile Virtual Network Operators (MVNOs), the application undervalues Verizon's spectrum position relative to that of most of their remaining competitors. The failure to acknowledge and analyze spectrum value thus fails to adequately capture the true harm to the public interest harm that will come from approval of these transactions.

Spectrum is an essential input to wireless carriers, one that the Applicants characterize as scarce. When the Commission weighs whether or not this or any spectrum transfer is in the public interest, it must look at the market more broadly than the two

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transaction, on balance, serves the public interest.").

companies selling and buying spectrum; it must look at the current competitive state of the market and ask questions about the future prospects for competition and how they will be impacted by the specific transaction.

Applicants claim there is no need for thorough review of these transactions because they claim that if approved, Verizon's holdings will not (in most cases) exceed the Commission's current spectrum screen. However, that claim alone is not enough to meet Applicants' burden of proof, because a spectrum screen analysis by itself does not account for all the potential harms caused from permitting a dominant carrier with existing market power like Verizon to consolidate an even larger share of the public airwaves. But setting this broader concern aside, the Applicants' burden of proof is not met because they fail to acknowledge and address the one-dimensional inadequacies of the Commission's current spectrum screen.

The Commission's spectrum screen weighs all spectrum equally. While this simplistic approach might have made sense in 1994 or 2004 when the Commission was concerned with only Cellular, SMR and PCS spectrum, today such an approach is nonsensical and unworkable when dealing with additional bands like 700MHz, AWS-1 and BRS.[5] Each band in each local market has unique characteristics that result in no two identically sized blocks having identical value. Indeed, judging from recent spectrum

[5] The Commission first adopted a spectrum cap in 1994, which was modified to a spectrum screen in 2004. Both dealt with Cellular, SMR and PCS holdings. Since 2004 the screen has been periodically updated with the addition of new bands of varying size, wavelength and propagation characteristics, but the screen has not yet been modified to account for the inherent difference in value of these various bands. See Implementation of Sections 3(n) and 332 of the Communications Act, Third Report and Order, 9 FCC Rcd 7988 (1994). See also Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation For Consent to Transfer Control of Licenses and Authorizations, Memorandum Opinion and Order, 19 FCC Rcd 21522 (2004).

sales and other market data, the per MHz value of the 700MHz band is on the whole some five to twenty times more valuable than BRS/EBS spectrum, and more than twice as valuable as the AWS-1 band spectrum that is the subject of these applications.[6]

The failure of the spectrum screen to capture the value of spectrum holdings masks the changes in market power caused by any given license transfer. Spectrum licenses below 2GHz are more valuable relative to other holdings because broadband networks using that spectrum can be built more cheaply than those that rely on spectrum above 2GHz, a fact even more true for holdings below 1GHz. Thus, Applicants' stated near total compliance with that inadequate spectrum screen in transferring SpectrumCo. and Cox's licenses cannot function as a proxy for a public interest evaluation of the proposed transaction.[7]

Any analysis of an input market must take into account the value of those inputs in order to adequately examine market power. Simply counting the total MHz of available spectrum held by any carrier gives an inadequate portrait of market power, and

[6] For example, Verizon is selling Leap wireless 12MHz of 700MHz A-Block spectrum in Chicago (spectrum supposedly encumbered by nearby TV operations) for approximately $1.53 per MHz-pop. AT&T paid on average $2.87 per MHz-pop for paired 700MHz spectrum in Auction 73. SpectrumCo.'s AWS-1 spectrum in the instant proceeding is valued at $0.69 per MHz-pop while Cox's is valued at $0.56 per MHz-pop. These valuations greatly exceed the values recently paid for higher-band spectrum (like the $0.23 per MHz-pop paid by Echostar for the 20MHz of 2GHz licenses obtained from ICO Global's DBSD at bankruptcy auction), and far exceed the book valuation of Clearwire's BRS licenses and EBS leases ($0.12 per MHz-pop, based on Clearwire's reported booked spectrum valuation of $4.32 billion for an average spectrum depth of 125MHz across 280 million pops). See John Fletcher, "Clearwire as a Sum of its Spectrum," SNL Kagan, November 21, 2011.

[7] Applicants in the application to transfer Cox's AWS-1 holdings claim adherence to the screen in all markets, while the public interest statement for the transfer of SpectrumCo.'s holdings note the screen is exceeded in several markets. Applicants note however that "[w]here AWS-1 spectrum is not considered to be 'available' in a particular market, Verizon Wireless has excluded its current and proposed AWS-1 holdings from its pre- and post-transaction totals."

is a similar flawed approach to the "Diversity Index" analytical metric rejected by Third Circuit Court of Appeals in *Prometheus*.[8] The inadequacies of the spectrum screen are currently the subject of formal petitions before the Commission.[9] Thus the screen, which is a demonstrably poor tool for measuring market power and that is the subject of these unresolved petitions, should not play a major role in the Commission's public interest analysis of these transactions.

Any meaningful public interest analysis of spectrum holdings must account for the physical differences in spectrum and the impact of those differences on spectrum value, utility, and business impact. Carriers using sub-1 GHz spectrum are simply able to

[8] Prometheus Radio Project, et al. v. FCC 373 F.Supp 372(2004) (Prometheus). In the rules adopted pursuant to the Commission's 2002 Media Ownership rules review, the agency adopted a "Diversity Index" that counted the number of voices in a market to determine market concentration, ignoring the audience share held by each owner. This approach produced strange results where in some markets tiny outlets held the same or more weight as market giants (e.g. the TV station owned by Duchess County Community College was given the same weight in the analysis as the New York Times in the New York City media market). Upon reviewing the Diversity Index, the Third Circuit Court stated, "there is no dispute that the assignment of equal market shares generates absurd results." The same is true of the Commission's spectrum screen. When the Commission reviews horizontal mergers, it does account for market share by relying on an HHI-based analytical approach. But its evaluation of license transfers alone (or its evaluation of the license transfer aspect of horizontal mergers) using the spectrum screen does not adequately account for market share, as it simply counts the "number of voices" (i.e. the MHz held in a given market) and ignores as it did in the Diversity Index how "loud" those voices are (i.e. the screen ignores the underlying value of each band).

[9] Public interest groups filed a petition for reconsideration of the order's spectrum screen extension, see Petition for Reconsideration of the Public Interest Spectrum Coalition, Sprint Nextel Corporation and Clearwire Corporation Application for Consent to Transfer Control of Licenses and Authorizations, WT Docket No. 08-94 (filed Dec. 8, 2008). Separately, the Rural Telecommunications Group filed a petition requesting the FCC reinstate a modified version of its spectrum cap, see Rural Telecommunications Group, Inc. Petition for Rulemaking to Impose a Spectrum Aggregation Limit on All Commercial Terrestrial Wireless Spectrum Below 2.3 GHz, Petition for Rulemaking, RM-11498 (filed July 16, 2008). The Commission has yet to resolve either of these petitions, and consequently, applicants cannot simply rely on compliance with the screen as a proxy for a meaningful analysis of potential competitive harm.

build wireless data networks more quickly and efficiently, as data communications on sub-1 GHz spectrum can travel over great distances and through multiple walls without loss. Spectrum between 1 GHz and 2 GHz is also suited for mobile data use, but carriers utilizing these bands must build at greater density of towers (at relatively greater expense) because a strong signal attenuates more quickly.[10] Spectrum above 2 GHz is certainly suitable for mobile broadband networks, but is only cost-effective for urban areas, an important fact for the prospects of the competitive landscape, since the viability of any national carrier is dependent upon holding a non-insignificant amount of "beachfront" spectrum. As the Commission has repeatedly noted, coverage that requires a single cell site at 700 MHz would require nine cells at 2.4 GHz.[11]

The spectrum that is the subject of the instant transactions collectively forms a single nationwide 20MHz of airwaves well suited for mobile broadband deployment. There are no other similar blocks held by any carrier outside the four national providers, and though Congress recently granted the FCC the authority to free up and auction 600MHz band spectrum, this spectrum could be many years away from market (and history suggests that the largest carriers will use their fiscal might to ensure no competitor gains any significant portion of whatever spectrum is auction).[12] Because of this spectrum's unique value and the current market trends towards rigid duopoly, the

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[10] Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993; Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 09-66, Fifteenth Report, 26 FCC Rcd 9664, at para. 293 (rel. June 27, 2011) (Fifteenth Report).

[11] Id.

[12] This unfortunate historical reality and the current market and spectrum dominance of Verizon and AT&T certainly suggest that the Commission's statutory goals of promoting competition can only be met by reinstatement of a spectrum cap, based not only on the total MHz holdings, but on the value of those holdings.

Commission must not approve these without specifically and distinctly examining the *value* of spectrum held by Verizon.

Analysis of spectrum holdings below both 1 GHz and 2.3GHz reveals a significant imbalance in ownership. Currently, two companies, AT&T and Verizon Wireless, hold an extremely disproportionate percentage of spectrum below 1 GHz allocated for mobile broadband use. These companies together have nearly *80 percent* of broadband spectrum below 1 GHz, and half of such spectrum below 2.3 GHz (see Figure 1).[13] Granting these applications would further increase this imbalance, giving AT&T and Verizon a combined 56 percent share of sub-2.3 GHz spectrum, with Verizon alone controlling one-third of the spectrum best suited for nationwide wireless mobile broadband.

But the data in the preceding paragraph (shown in Figure 1) still represents a somewhat simplistic approach to examining the likely competitive impacts of any given spectrum transfer, as it still fails to fully account for the wide variation in the value of a given spectrum band in a given market. Spectrum valuations can vary within a specific spectrum band, and even within a spectrum block, as local markets have varying population density and customer demographics. Further, a specific carrier may place a higher valuation on any given block due to their own existing spectrum position, or their perceptions of their future position relative to competitors. And prices paid for specific blocks at auction may be heavily influenced by the geographic size of the block itself and the inflation (or deflation) caused by the presence of (or lack of) non-national carriers

[13] See Fifteenth Report, para. 299, reproduced and expanded upon infra Figure 1. This figure includes cellular and 700MHz spectrum but excludes SMR spectrum, 93 percent of which is held by Sprint. SMR spectrum, as the Commission notes "generally is not as suitable for broadband operations." See Fifteenth Report, para. 300.

bidding for these specific blocks.

Figure 1:
U.S. Wireless Market
Company Share of Each Spectrum Band's Total MHz-Pops

Carrier	Share of Each Band's Total MHz-Pops						
	700MHz	Cellular	Sub 1 GHz Broadband Spectrum	PCS	AWS	1GHz-2GHz Broadband Spectrum	Sub 2 GHz Broadband Spectrum
Verizon	43%	48%	45%	15%	15%	15%	26%
AT&T	24%	44%	33%	26%	8%	19%	24%
Sprint	0%	0%	0%	27%	0%	16%	10%
T-Mobile	0%	0%	0%	20%	27%	23%	15%
MetroPCS	1%	0%	0%	3%	9%	5%	3%
U.S. Cellular	3%	4%	3%	2%	2%	1%	2%
Leap Wireless	0%	0%	0%	2%	9%	4%	3%
Clearwire Corp.	0%	0%	0%	0%	0%	0%	0%
SpectrumCo.	0%	0%	0%	0%	21%	0%	5%
Cox	1%	0%	0%	0%	2%	1%	1%
Other	29%	4%	18%	6%	8%	6%	11%
Grand Total	100%	100%	100%	100%	100%	100%	100%

Source: Fifteenth Report; Free Press Analysis; does not reflect subsequent transactions

However, numerous data points suggest that in the aggregate, sub-1GHz spectrum is substantially more valuable than spectrum above this wavelength, and that spectrum above 2GHz is substantially less valuable than bands below this wavelength. For example, Verizon is selling Leap wireless 12MHz of 700MHz A-Block spectrum in Chicago (spectrum supposedly encumbered by nearby TV operations) for approximately \$1.53 per MHz-pop.[14] AT&T recently paid about \$0.83 per MHz-pop for Qualcomm's holdings, which mostly consist of the unpaired lower-700MHz spectrum. AT&T paid on average \$2.87 per MHz-pop for paired 700MHz spectrum in Auction 73.[15] Contrast these valuations with the approximately \$0.69 per MHz-pop value of SpectrumCo.'s AWS-1

[14] See Sarah Barry James, "Verizon Wireless, Leap agree to swap some spectrum," SNL Kagan, December 5, 2011.

[15] See Sharon Armbrust, "AT&T pricing for Qualcomm supports status quo for 700 MHz spectrum valuations," SNL Kagan, January 14, 2011.

spectrum in the instant proceeding, or the $0.56 per MHz-pop for Cox's AWS licenses. And these valuations greatly exceed the values recently paid for higher-band spectrum (like the $0.23 per MHz-pop paid by Echostar for the 20MHz of 2GHz licenses obtained from ICO Global's DBSD at bankruptcy auction)[16], and far exceed the book valuation of Clearwire's BRS licenses and EBS leases ($0.12 per MHz-pop, based on Clearwire's reported booked spectrum valuation of $4.32 billion for an average spectrum depth of 125MHz across 280 million pops).[17]

That the per-MHz-pop valuation of two licenses serving the same county can vary by more than 10 times illustrates the inherent benefit of lower wavelength spectrum, particularly the beachfront spectrum below 1 GHz. The Commission has a duty to scrap the existing spectrum screen and instead utilize analytical tools that manage to capture the value, using the inputs that determine value (chiefly wavelength, contiguous block size, block pairing, market density and demographics, and interference issues).

While we have not made such an attempt in this instant petition, we did construct market share data based on a simplistic weighing scheme based on recent valuations (both market and booked). This simplistic valuation gave all sub-1 GHz spectrum a unit weight, and then gave AWS-1 and PCS spectrum a discounted weight of 0.5, while BRS and EBS blocks received a discounted weight of 0.1. These weights are conservative estimates based on the recent valuations discussed above.

This approach produces the value-weighted market shares shown in the far right column of Figure 2. As we see, when no weights are applied it appears that Clearwire is

[16] See Sharon Armbrust, "US wireless network landscape in midst of major reconfiguration," SNL Kagan, June 20, 2011.

[17] See John Fletcher, "Clearwire as a Sum of its Spectrum," SNL Kagan, November 21, 2011.

the market spectrum leader (and indeed, they are if all that is considered is MHz-pop reach) – a result that is completely useless for market power analysis given the realities of Clearwire's subscriber base and spectrum valuation relative to companies like Verizon and AT&T. But when we value-weight the spectrum holdings, we see a result more similar to the simple count of share of sub-2 GHz MHz-pop shares, one where Verizon and AT&T control well more than half of the spectrum share. Using this approach, we observe that if these applications are approved, Verizon will control (at the national level) a full 35 percent of all value-weighted mobile broadband spectrum. Thus, contrary to Verizon's assertion that these transfers raise no spectrum concentration concerns, we see that if the Commission's spectrum screen were to consider value, then these applications would fail such a screen.

Figure 2:
U.S. Wireless Market
Value-Weighted Shares of Mobile Broadband Spectrum

Carrier	Share of Each Band's Total MHz-Pops							
	700MHz	Cellular	PCS	AWS	BRS	EBS	All Mobile Broadband Spectrum	All Mobile Broadband Spectrum (Value Weighted)*
Verizon	43%	48%	15%	15%	0%	0%	17%	29%
AT&T	24%	44%	26%	8%	0%	0%	16%	25%
Sprint	0%	0%	27%	0%	0%	0%	7%	7%
T-Mobile	0%	0%	20%	27%	0%	0%	10%	10%
MetroPCS	1%	0%	3%	9%	0%	0%	2%	2%
U.S. Cellular	3%	4%	2%	2%	0%	0%	1%	2%
Leap Wireless	0%	0%	2%	9%	0%	0%	2%	2%
Clearwire Corp.	0%	0%	0%	0%	86%	62%	25%	5%
SpectrumCo.	0%	0%	0%	21%	0%	0%	4%	4%
Cox	1%	0%	0%	2%	0%	0%	1%	1%
Other	29%	4%	6%	8%	14%	38%	16%	14%

Source: Fifteenth Report; Free Press Analysis; does not reflect subsequent transactions

*700MHz and cellular spectrum MHz-pops were weighted by a value of 1; PCS and AWS-1 were weighted by a value of 0.5; BRS and EBS were weighted by a value of 0.1. Weights chosen based on recent market valuations.

This weighting scheme is far from perfect because it is overly simplistic, conservative, and is at the national aggregate level, thus it *understates* the dominance of Verizon's spectrum position and the impact of these pending transactions on future wireless competition. However, such an approach does indicate a very interesting result that can help the Commission see the inherent competitive danger in allowing Verizon to acquire the $4 billion worth of AWS-1 spectrum. The data in the far right column of Figure 2 suggest that the Herfindahl-Hirschman Index value for the mobile broadband spectrum input market is approximately 1,650, a value the Department of Justice considers to indicate a "moderately concentrated market."[18] If Verizon is allowed to acquire SpectrumCo. and Cox's AWS-1 licenses, these data indicate that the HHI for the mobile broadband spectrum input market will increase by more than 350 points, to a post-acquisition level above 2,000. The DOJ considers that transactions "resulting in moderately concentrated markets that involve an increase in the HHI of more than 100 points potentially raise significant competitive concerns and often warrant scrutiny."[19]

Now such an increase should raise an alarm at the Commission, but when this data is considered along with other evidence of an already uncompetitive mobile market, it should give the Commission more than ample reason to conclude that these license transfers are not in the public interest. First and foremost, while the spectrum input market may currently be considered moderately concentrated by DOJ standards (a result that is likely worse if a more comprehensive valuation methodology is used), the overall wireless market is *highly* concentrated.[20] But, as we discuss further below, the HHI

[18] See Department of Justice and Federal Trade Commission, "Horizontal Merger Guidelines" 19 (2010) (*Horizontal Merger Guidelines*).

[19] *Id.*

[20] *See e.g.* United States and Plaintiff States v. AT&T Inc., T-Mobile USA, Inc. and Deutsche Telekom AG, *Complaint*, August 31 (2011), at para. 23-26 and Appendix B.

calculation of the input spectrum market discussed above overstates the level of existing and future competition because *most* of the remaining 700MHz and AWS-1 spectrum is held by spectrum squatters, who are not currently offering services, are not planning to offer services, and who will *never* build networks that serve customers. The remaining holdings are owned by small regional carriers who the DOJ and FCC have both determined do not provide any meaningful competitive discipline on the large national providers like Verizon and AT&T.

The spectrum screen is a simple old analytical tool for a world that no longer exists. It ignores the value of spectrum and serves to vastly understate the current market dominance in spectrum enjoyed by Verizon and AT&T. The Commission cannot rely on the existing screen to evaluate Verizon's acquisition of SpectrumCo. and Cox's AWS-1 spectrum if it is at all serious about investigating the public interest harms of these transactions. The Commission must, in this proceeding, utilize a modified screen that accounts for value and apply this new screen to each local market. If the Commission does so, it will see that nationwide and in most local markets that *as an initial matter* these transactions raise serious competitive concerns, contradicting Applicants' assertions that all is well. And when these transactions' failure of this modified spectrum screen is viewed alongside the other evidence discussed below, the Commission will have no choice but to reject these market power-enhancing deals.

B. The Transactions Weaken Future Prospects for Wireless Competition

Applicants' assertion that these transactions will not harm competition is based on a narrow view of the wireless market, a view that ignores the importance of spectrum to competition, ignores the increasing erosion of meaningful competition at the hands of the Verizon-AT&T duopoly, and ignores the significance of cable MSOs to the competitive landscape.

As discussed above, spectrum is an indispensable production input for any wireless provider. Applicants agree with this sentiment.[21] However, their view of the importance of spectrum to competition seems to only apply to Verizon, and ignores the needs of all carriers to have access to these resources. Verizon's self-interested view of the market is expected of course, but is meaningless to the Commission's public interest analysis.

Applicants assert that because Verizon "is not acquiring an operating business or any customers, or any assets other than the AWS licenses" that these transactions "will not diminish competition or consumer choice..."[22] But this is a terribly narrow view of the market and of the factors that enable competition. Verizon could go out today and attempt to acquire all of AT&T's, Sprint's and T-Mobile's spectrum, while these carriers remain in business as MVNOs on Verizon's network. No one could seriously argue that such a transaction would not diminish competition because it involved only spectrum and not customers, but that is the same case Applicants are making in their public interest statements.

While these transactions are not traditional horizontal mergers, they do raise serious competitive issues, because the transactions are similar in nature to vertical transactions where reduction in competition in input markets results in competitive harm in downstream markets. Consider a hypothetical example where Firms A, B, C, and D compete in a market, all using the same scarce production input from a vertical market. If

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[21] *See Application of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo. LLA*, Public Interest Statement, 6 (2011).

[22] *Id.* at 19.

Firm A is able to consolidate ownership in the input market, it will be able to leverage this control into the main product market. Such transactions raise serious competitive issues even if the owner of the production inputs do not compete in the main product market in part because they raise barriers to entry for new firms in the main product market (or raise barriers to effective competition for existing firms in the main product market).[23] This is a concern in the wireless market, where spectrum is both an indispensible input that is also scarce and prone to hoarding in order to harm effective competition.

Because spectrum is a critical input, the FCC and DOJ must (in part) analyze these transactions from the perspective of consolidation in the spectrum input market. As discussed in the previous section, such an analysis (and not reliance on a flawed spectrum screen) will show these transactions violate the DOJ's *Merger Guidelines*, raising both horizontal and vertical concerns.

Though the Commission is now actively avoiding characterizing the state of effective competition in the wireless market in its annual reports to Congress, the lessons of its and the DOJ's review of the AT&T-T-Mobile merger are undeniable. The market is essentially a duopoly, where any weakening of competition from the much smaller third and forth place carriers would increase harmful unilateral and coordinated effects. The data is clear (See Figure 3): Verizon and AT&T's spectrum holdings have nearly four time the value as T-Mobile and Sprint's combined.[24] Verizon and AT&T hold 80 percent of the population-weighted sub-1 GHz spectrum, and if these transactions are approved

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[23] U.S. Department of Justice Merger Guidelines, June 14, (1984) at 4.21 (*Non-Horizontal Merger Guidelines*).

[24] Company 10-K SEC filings.

the two companies will hold three-fifths of the value-weighted spectrum, again four times as much as Sprint and T-Mobile combined.[25] Verizon and AT&T control two-thirds of all wireless subscriptions and 70 percent of the more lucrative post-paid market where they are pulling away from the rest of the pack.[26] Verizon and AT&T's Average Revenue Per User (ARPU) are substantially higher than any other national carrier's. Verizon's wireless profit margins (EBITDA) are *substantially* higher than all other carriers except AT&T.[27] And Verizon and AT&T together control four-fifths of the entire wireless industry profits, the only two major carriers to control double-digit shares of the industry's total profits.[28] Over the past 3 years Verizon and AT&T's share of total industry profits has steadily increased while everyone else's declined (see Figure 4).

Figure 3:
U.S. Wireless Market – Key Financial Metrics

Carrier	Spectrum Book Value	Subscribers (2011)	Wireless Market Share	Wireless EBITDA Margin	Share of Wireless Industry EBITDA	Wireless ARPU (2011)	Wireless CapEx as % of Revenue (2011)
Verizon	$73,250,000,000	108,667,000	33%	48%	42%	$53.80	12.8%
AT&T	$51,374,000,000	103,247,000	31%	44%	37%	$51.02	18.6%
Sprint	$20,529,000,000	55,021,000	16%	18%	7%	$45.89	8.0%
T-Mobile^	$15,265,000,000	33,711,000	10%	31%	9%	$46.00	14.1%
MetroPCS	$2,538,600,000	9,346,659	3%	28%	2%	$40.80	22.2%
U.S. Cellular^	$1,470,550,000	5,932,000	2%	23%	1%	$58.09	16.5%
Leap Wireless	$1,940,824,000	5,934,000	2%	21%	1%	$42.09	14.7%

Source: Company SEC filings; SNL Kagan; Free Press Analysis

^ 4Q 2011 results not available; 3Q or YTD 2011 values used

These data clearly show a market dominated by Verizon and AT&T, where the only thing protecting consumers from even greater harm is the mild discipline imposed by Sprint and T-Mobile, the latter particularly acting as a maverick presence. But these

[25] *See supra* Figures 1 and 2.

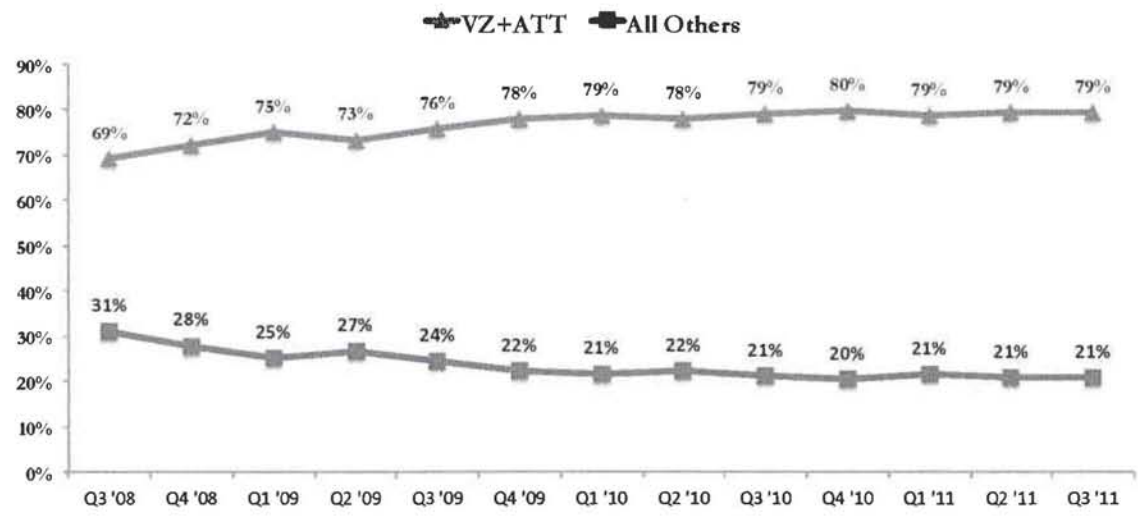
[26] *SNL Kagan Wireless Industry Benchmarks.*

[27] *SNL Kagan Wireless Financials 2008-2011.*

[28] *Id.*

worsening trends are no accident and are not the result of competition. It is no coincidence that the top two carriers also are legacy Bell monopolies, with substantial advantages from this history such as their ownership of the backhaul and special access inputs that their rivals rely upon. But they also enjoy market advantages due to their vastly superior spectrum holdings, built in part because the FCC gave them prime cellular spectrum when the mobile industry was in its infancy.[29] While these spectrum and backhaul advantages helped the twin Bells ensure their place atop the wireless market in the mobile voice era, they now will act to cement Verizon and AT&T's duopoly status as the market moves from voice to mobile data.

Figure 4:
Verizon and AT&T's Share of Industry Profits (EBITDA) 2008-2011[30]



These trends should generally worry the Commission, but they are particularly relevant to its public interest evaluations of these transactions. No matter how Verizon tries to spin it, the loss of the top cable MSOs (Comcast, TimeWarner Cable, Bright

[29] *Fifteenth Report* at para. 270.

[30] *SNL Kagan Wireless Financials 2008-2011.*

House Networks, and Cox)[31] as potential entrants into the mobile market is a loss of potential competition.[32] Though SpectrumCo. and Cox now assert that they view entering the market as facilities-based providers as a too risky endeavor, it remains clear that they perceive the ability to offer a quad-play (voice, broadband, television, and mobile) bundle as critical to their overall businesses.

It is apparent that SpectrumCo. and Cox would have been more than willing to sit on their AWS-1 holdings for many more years, as the spectrum would have continued to appreciate in value (and the ridiculous 2025 buildout deadline means they had plenty of time to weigh their options). But Verizon's willingness to allow the cable companies to become MVNOs on the Verizon Wireless network in exchange for the selling of the spectrum ensured the MSOs would be able to offer the quad-play bundle while reaping a financial windfall -- all without incurring the risk and financial burden of entering the market as facilities-based providers.

The competitive impact of losing the major cable MSOs as mobile providers (be it facilities-based or non-Bell MVNOs) cannot be understated. The market is not just losing a potential facilities-based provider; its even losing *independent* MVNOs that have the unique ability to offer quad-play services.[33] The cable MSO applicants have through the deal struck to sell these licenses gained an agreement with Verizon to act as MVNOs *in*

[31] Collectively these four MSOs have a 73 percent share of all cable television subscribers, 74 percent of all cable high-speed Internet subscribers and serve 72 percent of all U.S. homes passed by cable. *See SNL Kagan U.S. Multichannel Top Cable MSOs.*

[32] *Non-Horizontal Merger Guidelines*, at 4.1.

[33] Prior to the Joint Marketing Arrangments made as a part of the AWS-1 spectrum sale, Cox Wireless was an active Sprint MVNO, and Comcast and TimeWarner were resellers of Clearwire services.

perpetuity.[34] And the cable MSOs are not merely now operating as a normal MVNO by reselling Verizon Wireless services – they are actually selling Verizon Wireless branded services.[35]

That each partner in these joint ventures is actually selling their former competitor's own-branded services in arrangements that last *in perpetuity* demonstrates the irreversible harm of these transactions. Verizon already enjoys immense, perhaps insurmountable competitive advantages in spectrum, backhaul, and market scope through its status as a legacy ILEC. If the Commission approves these near-marriages of the leading MSOs that control three-quarters of the cable market with the top vertically integrated wireless carrier, it would raise the barriers to effective competition even higher than they already are for the non-Bell carriers. The damage to competition and the public interest by this cartelization will be substantial and likely irreversible absent a major regulatory intervention.

To make up for the loss of the cable MSOs as competitors to the twin Bell duopoly, the FCC would have to figure out how to facilitate competition elsewhere,

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[34] *See* remarks of Neil Smit, President & Chief Executive Officer, Comcast Cable Communications LLC, UBS Global Media & Communications Conference, December 5, 2011. "The wholesale side is the MVNO agreement, which is something that'll last into perpetuity… And the MVNO arrangement gives us access to the world-class network, LTE and however that develops over time. So 4G, 5G, 6G, we'll get the scale of Verizon's access to the devices in that. So it gives us both a short-term immediate impact, getting into market very quickly with the agency side of it, a innovation component and the long-term perpetuity for both the residential and commercial side of the business."

[35] *See* remarks of Michael J. Angelakis, Chief Financial Officer and Vice Chairman, Comcast Corp., UBS Global Media & Communications Conference, December 5, 2011. "Let me just add a little bit to it. What I think is really unique and I'm not sure it's been caught completely, is in prior discussions we might have had with other folks, it was always about sort of us bundling *their product within our service*. And this one is unique where the whole innovation side but there's also a real desire on the Verizon Wireless side where they'll take our services and they'll bundle with theirs and put it through their channels, which is different channel mix than we typically have." (emphasis added).