

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Spectrum Task Force Invites Technical Input on	)	ET Docket No. 10-142
Approaches to Maximize Broadband Use of	)	
Fixed/Mobile Spectrum Allocations in the 2 GHz)	)	WT Docket No. 04-356
Range	)	
	)	WT Docket No. 07-195

**COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®**

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**COMMENTS OF CTIA – THE WIRELESS ASSOCIATION®**

**I. INTRODUCTION AND SUMMARY**

CTIA – The Wireless Association® (“CTIA”) respectfully submits these comments in response to the Commission’s Public Notice inviting technical input on approaches to encourage the growth of terrestrial mobile broadband services in the 2 GHz spectrum range.<sup>1</sup> The Commission has encouraged focus on bands allocated for Mobile Satellite Service (“MSS”) as well as bands designated for Advanced Wireless Service (“AWS”). CTIA has been an active participant in Commission proceedings regarding these bands and welcomes the opportunity to offer further comment on how this spectrum can most effectively enable the deployment of wireless broadband services. In these comments, CTIA applauds the Commission’s efforts to bring to market 2 GHz spectrum that would support innovative mobile broadband services, and offers guidance on how the Commission might make the most efficient use of this highly-valuable spectrum.

CTIA believes that the spectrum identified by the Commission in this proceeding is particularly well-suited for mobile broadband services and, as explained in these comments,

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<sup>1</sup> *Spectrum Task Force Invites Technical Input on Approaches to Maximize Broadband Use of Fixed/Mobile Spectrum Allocations in the 2 GHz Range*, Public Notice, ET Docket No. 10-142, WT Docket Nos. 04-356 and 07-195 (May 20, 2011) (“Public Notice”).

strongly supports the Commission's efforts to promote mobile services in these bands. CTIA and its members also strongly favor pairing the 2155 to 2180 MHz band with Federal spectrum at 1755 to 1780 MHz, and believe that the Commission should focus on this outcome as its top priority. CTIA believes that the Commission should consider all spectrum in the 1.6 to 2.3 GHz band in a comprehensive manner in order to ensure the most effective and efficient allocation of scarce mobile broadband resources. Adopting a holistic plan for spectrum between 1.6 and 2.3 GHz is preferable to the adoption of a band plan that: (1) encompasses only portions of the band; (2) precludes more productive band plans; and (3) creates the potential for harmful interference.

Under such a framework, the Commission might, for example, consider pairing MSS spectrum at 2180-2200 MHz with the 1780-1800 MHz band under review by NTIA. This approach would create additional pairings of contiguous spectrum for mobile broadband services, and would have the advantage of relying on duplexer spacing that is identical to existing AWS bands. Moreover, this pairing would utilize MSS spectrum without the potential interference concerns identified with a pairing of the existing MSS bands. Finally, CTIA supports the FCC's investigation of incentive auctions as a mechanism to reallocate the 2 GHz MSS band, and encourages the Commission to explore this and other options.

"The world is going mobile,"<sup>2</sup> and it is critical that the Commission identify and allocate additional spectrum for wireless broadband services. The Commission has repeatedly recognized this need, and CTIA has been a consistent advocate for both the incredible benefits of wireless broadband and the importance of making additional spectrum available. As Chairman

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<sup>2</sup> Remarks of FCC Chairman Julius Genachowski at the White House (April 6, 2011), available at [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2011/db0406/DOC-305593A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0406/DOC-305593A1.pdf).

Genachowski has stated “[e]very day we are not freeing up spectrum for mobile broadband is a day with real costs to our economy, our global competitiveness, and our future.”<sup>3</sup> Indeed, the Consumer Electronics Association (“CEA”) recently calculated the value of lost opportunity to the U.S. economy and American consumers, estimating that the U.S. economy and consumers lose approximately \$14,444 every minute that we delay responsibly managing our nation’s spectrum resources. CTIA agrees with the importance of this effort and looks forward to working with the Commission, NTIA, Congress and others to meet our nation’s spectrum needs.

## **II. CTIA SUPPORTS THE COMMISSION’S EFFORTS TO PROMOTE MOBILE BROADBAND SERVICES IN 2 GHZ SPECTRUM**

### **A. There is an Urgent Need for Additional Spectrum for Mobile Broadband Services.**

The Public Notice is another example of the Commission’s efforts to make more spectrum available for mobile broadband services, an effort which CTIA has strongly supported and which is necessary to facilitate the many innovations and benefits created by the wireless industry. Indeed, as recent Commission proceedings have demonstrated and as Chairman Genachowski has observed, “the benefits [of broadband] are more compelling by the day” and as such “unleashing more spectrum must be a national priority.”<sup>4</sup> As demonstrated in more detail herein, CTIA applauds the Commission, National Telecommunications and Information Administration (“NTIA”), and the Administration for making the identification and allocation of wireless broadband spectrum a key policy objective.

The current spectrum crunch is rooted in the tremendous growth of wireless broadband. Rysavy Research projects that smartphone data consumption will increase from approximately

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<sup>3</sup> Remarks of FCC Chairman Julius Genachowski at CTIA Wireless 2011 (March 22, 2011), *available at* [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-305309A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-305309A1.pdf) (Genachowski CTIA Remarks) at 10.

<sup>4</sup> Genachowski CTIA Remarks at 1.

0.3 gigabytes per month per user to almost 10 times this amount by 2016.<sup>5</sup> Cisco has forecast that mobile data traffic will grow at a compound annual growth rate of 92 percent from 2010 to 2015, reaching 6.3 exabytes per month by 2015.<sup>6</sup> These incredible statistics are borne out by the current experiences of America's wireless companies. The volume of data traffic on T-Mobile's network has doubled every seven months, with 4G device customers using more than 1 gigabyte of data per month on average.<sup>7</sup> Mobile data traffic on AT&T's network has grown by 8,000 percent over the past four years,<sup>8</sup> while Sprint has reported "exponential increases in the use of mobile data applications" and "the growing use of smartphones" on its network.<sup>9</sup> The average mobile data user on Clearwire's network consumes an estimated 7 GB per month.<sup>10</sup>

Based on projections of mobile data growth, the FCC has forecast that a spectrum deficit approaching 300 MHz is likely by 2014.<sup>11</sup> And, appropriately, the White House has directed NTIA and the FCC to make available an additional 500 MHz of spectrum for mobile broadband

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<sup>5</sup> Rysavy Research, *The Spectrum Imperative: Mobile Broadband Spectrum and its Impacts for U.S. Consumers and the Economy, an Engineering Analysis*, at 11-12 (March 16, 2011), available at [http://www.rysavy.com/Articles/2011\\_03\\_Spectrum\\_Effects.pdf](http://www.rysavy.com/Articles/2011_03_Spectrum_Effects.pdf).

<sup>6</sup> Telecommunications Industry Association, *Broadband Spectrum: The Engine for Innovation, Job Growth, and Advancement of Social Priorities* at 2 (March 2011) ("TIA White Paper"), available at [http://www.tiaonline.org/gov\\_affairs/issues/spectrum/documents/TIASpectrumWhitePaperFINAL.pdf](http://www.tiaonline.org/gov_affairs/issues/spectrum/documents/TIASpectrumWhitePaperFINAL.pdf).

<sup>7</sup> Comments of T-Mobile USA Inc., ET Docket No. 10-235, at 4 (Mar. 18, 2011).

<sup>8</sup> John Donovan, AT&T, "Driving Innovation and Investment in Our Network" (Mar. 2, 2011), at <http://www.attinnovationspace.com/2011/03/02/driving-innovation-and-investment-in-our-network/>.

<sup>9</sup> Press Release, Sprint Nextel, "Smartphones Drive Wireless Data Explosion" (Jan. 18, 2011), available at [http://newsroom.sprint.com/article\\_display.cfm?article\\_id=1771](http://newsroom.sprint.com/article_display.cfm?article_id=1771).

<sup>10</sup> *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*, Fifteenth Report, FCC 11-103, at ¶ 188 (June 27, 2011).

<sup>11</sup> FCC Staff Technical Paper, *Mobile Broadband: The Benefits of Additional Spectrum* at 26 (Oct. 2010) ("October 2010 Technical Paper").

over the next ten years.<sup>12</sup> NTIA has recently adopted a ten year plan and timetable for achieving this goal, and has identified 115 MHz of “fast-track” spectrum for reallocation from federal to commercial use. Meanwhile, the FCC initiated numerous proceedings aimed at making more spectrum available for wireless broadband use, and CTIA has been an active participant in these proceedings.

The White House has correctly declared that “[f]ew technological developments hold as much potential to enhance America's economic competitiveness, create jobs, and improve the quality of our lives as wireless high-speed access to the Internet.”<sup>13</sup> However, the looming spectrum crunch could thwart the continued benefits of mobile broadband. CTIA agrees with Chairman Genachowski that “[i]t’s critical that we move quickly – not only because of the benefits of action, but because of the costs of inaction.”<sup>14</sup> If action is not taken to address the impending spectrum deficit, the result could be higher prices for consumers, decreased quality of service, and a slowing down of innovation and investment in wireless.<sup>15</sup> And “[e]merging markets like mobile medicine, mobile payments, social-network based services, and machine-to-machine connectivity will see their growth stunted.”<sup>16</sup> Indeed, the Consumer Electronics Association (“CEA”) recently calculated the value of lost opportunity to the U.S. economy and American consumers. CEA’s “Spectrum Crunch Clock” tracks “the lost opportunity costs to the U.S. economy and consumers with every minute we delay responsibly managing our nation’s

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<sup>12</sup> *Id.*

<sup>13</sup> Presidential Memorandum: Unleashing the Wireless Broadband Revolution (June 28, 2010), *available at* <http://www.whitehouse.gov/the-press-office/presidential-memorandum-unleashing-wireless-broadband-revolution>.

<sup>14</sup> Genachowski CTIA Remarks at 8.

<sup>15</sup> *Id.* at 9.

<sup>16</sup> *Id.*

spectrum resources,” estimating that we have been losing \$14,444 per minute since the clock started ticking on March 16, 2010 – the date the National Broadband Plan was released.<sup>17</sup> Or, as Chairman Genachowski has stated “[e]very day we are not freeing up spectrum for mobile broadband is a day with real costs to our economy, our global competitiveness, and our future.”<sup>18</sup>

**B. The Spectrum Identified by the Commission is Particularly Well-Suited for Mobile Broadband.**

CTIA applauds the Commission for its focus on spectrum in the 2 GHz band. Indeed, CTIA has been an active participant in the Commission’s proceedings regarding wireless use of MSS and AWS-3 spectrum, as well as use of the PCS H and J Blocks.<sup>19</sup> CTIA continues to believe that the characteristics of these bands make them especially well-suited for mobile broadband services, and urges the Commission to undertake a comprehensive spectrum analysis that will put these bands to their best use.

CTIA has previously articulated the ideal characteristics that mobile broadband spectrum would possess. CTIA found that spectrum bands below 3 GHz are the most desirable for mobile broadband because of their propagation characteristics,<sup>20</sup> and that large contiguous blocks of

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<sup>17</sup> The Innovation Movement, Spectrum Crunch Clock, <http://www.innovation-movement.com/?/spectrum-crunch-clock> (last visited July 1, 2011).

<sup>18</sup> Genachowski CTIA Remarks at 10.

<sup>19</sup> See, e.g., Comments of CTIA – The Wireless Association®, ET Docket No. 10-142 (Sept. 15, 2010) (“CTIA MSS NPRM/NOI Comments”); Comments of CTIA – The Wireless Association®, WT Docket Nos. 07-195 and 04-356 (July 25, 2008) (“CTIA 2008 AWS Comments”).

<sup>20</sup> *Federal Operations in the 1755-1850 MHz Band: The Potential for Accommodating Third Generation Mobile Systems*, Interim Report, U.S. Department of Commerce at 7 (rel. Nov. 15, 2000) (“NTIA Interim Report”), available at <http://www.ntia.doc.gov/osmhome/reports/imt2000/imt2000.pdf> (explaining that the physical processes governing the propagation of radio waves in the frequency range below 3 GHz let them be efficiently transmitted and received by small user devices and give them the ability to support high data rates, making them ideal for mobile telecommunications uses). See also, e.g., Comments – NBP Public Notice # 6 of T-Mobile USA Inc., GN Docket No. 09-51, at 16 (Oct. 23, 2009) (“T-Mobile NBP PN #6 Comments”) (“The identified spectrum also should reside

spectrum best enable next-generation network standards.<sup>21</sup> Further, CTIA highlighted that international harmonization of spectrum will lower equipment costs and facilitate innovation.<sup>22</sup> Finally, CTIA has urged policymakers to identify spectrum that is adjacent to current spectrum allocations to the extent possible.<sup>23</sup> The spectrum bands identified by the Commission have all of these characteristics, and thus are ideally suited for mobile broadband use.

While the technical characteristics of spectrum play an important role in its suitability for mobile broadband, the Commission can also ensure the most productive use of these bands by continuing to adhere to its policies of exclusive-use licensing and flexible service rules. Under these policies, the Commission has fostered innovation and investment in wireless networks and promoted competition. In the National Broadband Plan, the Commission credited its existing exclusive, flexible-use bands as being the most intensively used spectrum and as serving as a

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below 3.7 GHz to ensure that it can be used economically to deliver mobile broadband services.”); Comments of Motorola, Inc., GN Docket No. 09-51, at 10 (Oct. 23, 2009) (“Motorola NBP PN #6 Comments”) (stating that “Motorola believes that mobile operations are best suited in bands below 4 GHz”).

<sup>21</sup> *Mobile Broadband Spectrum Demand*; Comments of 3G Americas—NBP Public Notice #6, GN Docket No. 09-51, at 8 (Oct. 23, 2009) (“[S]pectrum allocated for commercial mobile broadband should be as contiguous as possible. Current allocations are primarily based on 5 and 10 MHz blocks. Such allocations may have been appropriate for second, and even third, generation data services, but they are not sufficient to support advanced data services. Wider bandwidth allocations are better suited for future, data-intensive wireless broadband services.”).

<sup>22</sup> T-Mobile NBP PN #6 Comments at 16 (“The spectrum identified should be in blocks that are largely contiguous and globally harmonized to the extent possible, in order to permit greater efficiencies in the production of mobile devices and equipment, with corresponding savings for U.S. mobile users.”); Motorola NBP PN #6 Comments at 10 (“When possible, harmonization with global allocations should be a goal to drive equipment costs downward and to facilitate roaming on a regional and global basis. Harmonization will help drive investment in technologies and services and will result in lower costs due to economies of scale in the global market.”).

<sup>23</sup> Reply Comments of CTIA – The Wireless Association® on NBP Public Notice #6, Spectrum For Broadband, GN Docket No. 09-41, at 10 (Nov. 13, 2009).

“runway” for the launch of innovative services.<sup>24</sup> By following this approach with respect to 2 GHz spectrum, the Commission will provide the licensees in these bands with needed certainty that they can invest heavily in network deployment free of the threat that their services will be subject to harmful interference or that their spectrum rights will otherwise be threatened.

Embracing these policies will also enable the Commission to promote an environment where licensees feel free to modify their networks to meet technological changes and the ever-changing demands and needs of the dynamic mobile broadband ecosystem.

### **III. THE COMMISSION AND NTIA SHOULD PRIORITIZE THE ALLOCATION OF THE 1755-1780 MHZ BAND FOR MOBILE BROADBAND AND THE PAIRING OF THIS BAND WITH 2155-2180 MHZ BAND**

In the Public Notice, the Commission noted that it has sought comment on two bands identified by NTIA as possible pairing candidates with AWS-3 spectrum, asking to what extent possible 2 GHz bands plans are consistent with these options.<sup>25</sup> CTIA continues to believe that the Commission can best facilitate mobile broadband operations in the AWS-3 spectrum by pairing the 2155-2180 MHz band with federal spectrum at 1755-1780 MHz. CTIA urges the Commission to undertake further examination of this proposal and not adopt any band plan or service rules for this or adjacent spectrum that could undermine this pairing.

As CTIA recently observed in its Comments regarding the spectrum bands under consideration by NTIA, the 1755-1780 MHz band, much like the bands under consideration in

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<sup>24</sup> Federal Communications Commission, CONNECTING AMERICA: THE NATIONAL BROADBAND PLAN at 84 (2010) (“*National Broadband Plan*”) (“In the bands below 3.7 GHz, 547 megahertz is currently licensed as flexible use spectrum that can be used for mobile broadband. Of this amount, the Cellular and PCS bands compose 170 megahertz and represent the most intensively used spectrum today. The majority of the remaining 377 megahertz was auctioned or rebanded within the past six years and is just now coming online for mobile broadband deployment. This latter portion brought more than a three-fold total increase in total spectrum for mobile services and provides a ‘runway’ for the launch of next-generation mobile broadband services.”).

<sup>25</sup> Public Notice at 2-3.

this proceeding, is ideally suited for terrestrial mobile broadband service. In that proceeding, CTIA enumerated the many benefits of this pairing. First, because the 1710-1885 MHz band has been identified by the International Telecommunications Union (“ITU”) for commercial wireless uses,<sup>26</sup> selecting the 1755-1780 MHz band for mobile broadband will promote international harmonization, the benefits of which were noted above. This spectrum is also adjacent to the AWS-1 band, and the wireless industry’s experience with relocating federal incumbents in the AWS-1 band would ease the transition of this spectrum to commercial use. Additionally, this pairing would enable the same duplexer gap between base and mobile stations that is present in the existing AWS-1 spectrum.<sup>27</sup>

In the Commission’s recent proceeding regarding spectrum identified by NTIA for mobile broadband use, there was widespread record support for a pairing of the 1755-1780 and 2155-2180 MHz bands. Ericsson, for example, observed that this allocation “would provide 2x25 MHz of contiguous spectrum that can be allocated in the wider blocks necessary for the technologies, such as LTE, that will be used to provide mobile broadband” and that this pairing would “facilitate the expansion of an existing [AWS-1] ecosystem.”<sup>28</sup> T-Mobile similarly supported this pairing as one that would allow the spectrum to be deployed more effectively.<sup>29</sup> AT&T, meanwhile, supported this pairing as one that would result in more rapid deployments at lower costs, and one that would facilitate international roaming.<sup>30</sup>

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<sup>26</sup> Reply Comments of CTIA – The Wireless Association® On NBP Public Notice #6, Spectrum for Broadband, GN Docket No. 09-51, at 14 (Nov. 13, 2009).

<sup>27</sup> Comments of CTIA – The Wireless Association®, ET Docket No. 10-123, at 5 (June 28, 2010) (“CTIA 1675-1710 MHz Comments”). *See also* Brattle Group Paper at 14.

<sup>28</sup> Comments of Ericsson, ET Docket No. 10-123, at 19 (April 22, 2011).

<sup>29</sup> Comments of T-Mobile USA, Inc., ET Docket No. 10-123, at 8 (April 22, 2011).

<sup>30</sup> Comments of AT&T Inc., ET Docket No. 10-123, at 4 (April 22, 2011).

A recent study performed by The Brattle Group affirmed and quantified the significant benefits of pairing 2155 to 2180 MHz with the 1755 to 1780 MHz band.<sup>31</sup> In the study, the Brattle Group evaluated four potential options for the AWS-3 band, finding that a pairing of the AWS-3 spectrum at 2155-2175 MHz with 20 MHz from the 1755 MHz band would result in considerable efficiencies and a valuation of \$12 billion for the combined 40 MHz of spectrum.<sup>32</sup> If a 50 MHz pairing was created by adding the 2175-2180 MHz band to AWS-3 and pairing this band with the 2155-2180 MHz band, the Brattle Group calculated that its value would be approximately 25 percent greater.<sup>33</sup> Meanwhile, the other three options considered by the Brattle Group (pairing AWS-3 with the 1690-1710 MHz band, creating an asymmetric pairing between the AWS-3 band and the 1695-1710 MHz band, and leaving AWS-3 unpaired) would significantly diminish the value of the spectrum.<sup>34</sup>

CTIA therefore cautions the Commission against taking action on the AWS-3 spectrum that would preclude the pairing of this spectrum with the 1755 MHz band. Indeed, CTIA urges the Commission and NTIA to make this pairing a priority. Further, a prioritization of this pairing could inform the Commission's decision-making with regard to the other 2 GHz bands under consideration in this proceeding.

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<sup>31</sup> The Brattle Group, "The Economic Basis of Spectrum Value: Pairing AWS-3 with the 1755 MHz Band is More Valuable than Pairing it with Frequencies from the 1690 MHz Band" at 12 (Apr. 11, 2011), attached to Letter from Coleman Bazelon, The Brattle Group to Marlene H. Dortch, FCC, ET Docket No. 10-123 (Apr. 11, 2011) ("Brattle Group Paper").

<sup>32</sup> *Id.* at 14.

<sup>33</sup> *Id.* at 11.

<sup>34</sup> *Id.* at 22.

#### **IV. CTIA ENCOURAGES THE COMMISSION TO TAKE A HOLISTIC APPROACH TO THE ALLOCATION OF SPECTRUM FOR MOBILE BROADBAND**

CTIA strongly supports the Commission's recent efforts to maximize the use of 2 GHz spectrum for mobile broadband services. In the Public Notice, the Commission has sought comment on spectrum bands between 1995 and 2200 MHz. In related and ongoing proceedings, the Commission has also requested comment on deployment of several other bands of spectrum, including the 1675-1710 MHz<sup>35</sup> and 1755-1850 MHz bands.<sup>36</sup> CTIA submits that the examination of these spectrum bands raises a number of important and complex technical questions, and that the bands under consideration in these various proceedings must be considered in the context of other neighboring spectrum. CTIA therefore encourages the Commission to take a holistic approach to examination of these bands, rather than examine individual bands – or small groups of bands – in isolation.

CTIA applauds the Commission for its investigation of the 2 GHz bands for reallocation for mobile broadband services. MSS spectrum in general and the 2 GHz MSS spectrum in particular is ideally suited for mobile broadband services. Indeed, CTIA has previously highlighted the positive characteristics of MSS spectrum, noting that its adjacency to Personal Communications Service ("PCS") and AWS spectrum allocations make it especially desirable for terrestrial mobile broadband services.<sup>37</sup> Further, this spectrum is available in the large contiguous blocks highlighted above as best supporting next-generation technologies.

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<sup>35</sup> *Office of Engineering and Technology Requests Information on use of 1675-1710 MHz Band*, Public Notice, DA 10-1035 (June 4, 2010).

<sup>36</sup> *Spectrum Task Force Requests Information on Frequency Bands Identified by NTIA as Potential Broadband Spectrum*, Public Notice, ET Docket No. 10-123 (Mar. 8, 2011) ("NTIA Spectrum Bands PN").

<sup>37</sup> CTIA MSS NPRM/NOI Comments at 9.

While the 2 GHz band's proximity to other mobile broadband spectrum allocations makes this spectrum particularly desirable for mobile broadband, this fact also raises important technical considerations that must inform any new band plans or service rules. For example, the proximity of uplink transmissions in the 2000-2020 MHz MSS spectrum to the G Block and Broadband PCS spectrum at 1930-1990 MHz raises the significant potential for harmful interference to PCS operations. This interference would be further exacerbated if the H Block was allocated for uplink transmissions.

In the Public Notice, the Commission has put forth three proposed band plans consisting of spectrum in the MSS and AWS H and J Blocks.<sup>38</sup> The industry, however, is studying possible band plans with the goal of optimizing all potential spectrum from 1675-2200 MHz. CTIA similarly encourages the Commission to develop a band plan that would put all of the spectrum from 1675 to 2200 MHz to its highest and best use. Thus, CTIA believes the Commission should investigate alternatives to the three proposed band plans. For example, CTIA encourages the Commission to investigate pairing of the MSS spectrum at 2180-2200 with the 1780-1800 MHz band under review by NTIA. The Commission recently sought comment on the use of this band,<sup>39</sup> which is one that NTIA identified as being suitable for accommodating wireless broadband services.<sup>40</sup> This approach would create additional pairings of contiguous spectrum for mobile broadband services, and would have the advantage of relying on duplexer spacing that is identical to existing AWS bands. Moreover, this pairing would utilize MSS spectrum without the potential interference concerns identified with a pairing of the existing MSS bands. This

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<sup>38</sup> Public Notice at 6.

<sup>39</sup> NTIA Spectrum Bands PN at 1.

<sup>40</sup> National Telecommunications and Information Administration, PLAN AND TIMETABLE TO MAKE AVAILABLE 500 MEGAHERTZ OF SPECTRUM FOR WIRELESS BROADBAND at 7 (October 2010), *available at* [http://www.ntia.doc.gov/reports/2010/TenYearPlan\\_11152010.pdf](http://www.ntia.doc.gov/reports/2010/TenYearPlan_11152010.pdf).

approach would enable the Commission to explore usage of the lower MSS spectrum at 2000-2020 MHz that would not put at risk existing services in the PCS bands.

The example proffered above is one possible alternate proposal that the Commission can and should explore through a holistic evaluation of spectrum between 1.6 and 2.3 GHz. CTIA continues to work with its members, including wireless providers and manufacturers, to study and reach consensus on an overarching band plan that will: (1) allow for the most effective and efficient use of all mobile broadband spectrum; (2) protect existing and future uses of adjacent spectrum from harmful interference; and (3) mitigate the need for extensive guard bands. CTIA hopes to work with the FCC and NTIA to establish an overall spectrum band plan framework that meets all these goals.

#### **V. CTIA SUPPORTS THE USE OF INCENTIVE AUCTIONS FOR 2 GHZ MSS SPECTRUM.**

In the Public Notice, the Commission noted its earlier call for comment on whether incentive auctions would be an appropriate mechanism for transitioning the 2 GHz MSS bands to mobile broadband services, and noted that it “seek[s] additional perspectives on this possible approach for voluntary conversion of the 2 GHz MSS band from Part 25 to Part 27 service.”<sup>41</sup> CTIA has been a consistent advocate of the proposals of the White House and FCC to establish incentive auctions, and supports the Commission’s proposal to investigate their use in the context of the 2 GHz MSS band.

Based on the overwhelming support for reallocation of MSS spectrum, CTIA encourages the Commission to explore alternatives – such as incentive auctions – that would enable the reallocation of this spectrum. Indeed, the record developed in response to the Commission’s *2010 MSS Flexibility NPRM and NOI* contained substantial support for the use of incentive

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<sup>41</sup> Public Notice at 3-4.

auctions as a means of facilitating the transition of the 2 GHz (and other MSS bands) spectrum from satellite to terrestrial use.<sup>42</sup> As CTIA has observed both in the context of MSS spectrum and in other proceedings, incentive auctions will allow the marketplace to help determine the most rational use of scarce spectrum resources.<sup>43</sup> In the case of 2 GHz MSS spectrum, incentive auctions could permit the reallocation of as much as 40 MHz of new, mobile broadband service spectrum, an outcome that would facilitate the continued deployment of advanced mobile broadband services and help achieve the Commission's broadband policy goals.

Finally, and as described in CTIA's 2010 MSS Flexibility NPRM and NOI Comments, the Commission should also consider other mechanisms, including appropriate leasing proposals, for bringing the 2 GHz MSS spectrum to market. CTIA notes, however, that any methodology for reclaiming spectrum from incumbents requires a balancing of the public interest issues associated with the process.

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<sup>42</sup> Comments of T-Mobile USA, Inc., ET Docket No. 10-142, at 9 (Sept. 15, 2010) ("Given the potential benefits of incentive auctions as an additional tool in the Commission's toolbox, the Commission should not delay in pursuing such option."); Comments of AT&T Inc., ET Docket No. 10-142, at 12 (Sept. 15, 2010) ("The potential value to be realized from an incentive auction of 2 GHz spectrum with full terrestrial rights is substantial."); Comments of Verizon Wireless, ET Docket No. 10-142, at 7-8 (Sept. 15, 2010) ("In particular, Verizon Wireless strongly supports the implementation of voluntary incentive auctions and encourages the Commission to work closely with Congress to adopt and implement legislation authorizing this type of auction."); Comments of the Telecommunications Industry Association, ET Docket No. 10-142, at 6 (Sept. 15, 2010) ("Providing the Commission with the authority to conduct voluntary incentive auctions in the MSS bands will create an option for current MSS licensees to make market-based decisions that will maximize the use of spectrum.").

<sup>43</sup> CTIA MSS NPRM/NOI Comments at 13 ("CTIA has long supported spectrum policies that encourage putting spectrum to its highest and best use, and believes the Commission should consider mechanisms that could promote this outcome. Should Congress provide the Commission authority for incentive auctions, CTIA would support use of this mechanism for repurposing MSS spectrum for terrestrial mobile broadband services."); Reply Comments of CTIA – The Wireless Association®, ET Docket No. 10-235, at 8 (April 25, 2011) ("CTIA agrees with the High Tech Spectrum Coalition that voluntary incentive auctions are 'a critical tool' to fairly and effectively reallocate spectrum.").

## VI. CONCLUSION.

CTIA and its members applaud the Commission's efforts to bring to market 2 GHz spectrum that would support innovative mobile broadband services. CTIA continues to believe that the Commission should prioritize the pairing of the 2155-2180 MHz spectrum with spectrum at 1755-1780 MHz. In addition, CTIA believes that the wireless ecosystem would be best served by a holistic examination of the various spectrum bands under evaluation by the Commission and NTIA and hopes to work with them to establish an overall spectrum band plan framework that best promotes the development of innovative mobile broadband services.

Respectfully submitted,

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