

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

In the Matter of )  
)  
Request for Licensing Freeze and Petition for ) RM-11626  
Rulemaking to Amend the Commission's DTV )  
Table of Allocations to Prohibit the Future )  
Licensing of Channel 51 Broadcast Stations and )  
to Promote Voluntary Agreements to Relocate )  
Broadcast Stations From Channel 51 )

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

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

**I. INTRODUCTION AND SUMMARY**

CTIA – The Wireless Association® (“CTIA”)<sup>1</sup> hereby files these reply comments in response to the Commission’s Public Notice seeking comment on the Petition for Rulemaking (“Petition”) filed by CTIA and the Rural Cellular Association (“RCA”).<sup>2</sup>

As CTIA and RCA demonstrated in the Petition, and as the record developed in opening comments has affirmed, the current interference environment between Channel 51 and the Lower 700 MHz A Block (“A Block”) has inhibited the deployment of wireless broadband services and will continue to disrupt build-out if action is not taken on this interference issue. Accordingly, CTIA urges the Commission to take prompt and favorable action on the Petition to: (1) implement immediate freezes on applications for new or modified TV broadcast facilities on Channel 51; (2) revise its rules to prohibit future licensing of TV broadcast stations on Channel

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<sup>1</sup> CTIA – The Wireless Association® is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the organization includes Commercial Mobile Radio Service (“CMRS”) providers and manufacturers, including cellular, Advanced Wireless Service, 700 MHz, broadband PCS, and ESMR, as well as providers and manufacturers of wireless data services and products.

<sup>2</sup> See Petition for Rulemaking and Request for Licensing Freezes by CTIA – The Wireless Association and Rural Cellular Association, RM-11626, at 1 (March 15, 2011) (“Petition for Rulemaking”).

51; and (3) accelerate the clearance of incumbent Channel 51 broadcasters in cases where A Block and Channel 51 licensees reach an agreement to voluntarily relocate the Channel 51 licensee to an alternate channel. This action will enable the rollout of highly beneficial mobile broadband services.

While some broadcast industry commenters express concerns over the Petition, it is important to dispel up front several misrepresentations. In particular:

- The Petition does *not* ask the FCC to force clearing of Channel 51 or to reallocate this channel for wireless broadband service.
- The Petition does *not* ask the FCC to convert Channel 51 into a guard band.
- The Petition does *not* represent a “spectrum grab.”

Rather, the Petition seeks to provide certainty to A Block licensees that the current interference environment will not change substantially due to new licensing on Channel 51. Further, grant of the Petition would not convert Channel 51 into a guard band. Existing Channel 51 licensees may remain in the band and would only relocate to a different channel pursuant to a voluntary agreement. And because the Petition merely seeks to expedite relocation in cases of voluntary relocation agreements, there is no forced “spectrum grab” at issue.

The Petition represents a narrowly tailored, minimally disruptive solution to the very real interference problem that will provide A Block licensees with the certainty needed to build out their systems and help to achieve the broadband policy objectives repeatedly espoused by the Commission. Indeed, instituting application freezes is a measured and well-established approach where the continued acceptance of applications would frustrate the purpose of a proposed rule change.

As further addressed herein, other objections to the CTIA/RCA Petition by the broadcast industry are without merit and/or misapprehend the Petition.

**II. THE PETITION REPRESENTS A NARROWLY TAILORED, MEASURED APPROACH TO ADDRESSING INTERFERENCE ISSUES INVOLVING CHANNEL 51.**

The Petition's supporters correctly note that CTIA/RCA's request "is focused and narrow in scope"<sup>3</sup> and CTIA submits that by granting the Petition, the Commission will provide needed certainty to A Block licensees that they can deploy wireless broadband services in their licensed spectrum.

CTIA and RCA designed the proposed relief to be minimally disruptive to existing Channel 51 licensees. However, several commenters in this proceeding have mischaracterized the Petition's request as one to force clearing of Channel 51 or to reallocate this channel for wireless broadband service.<sup>4</sup> This is simply not the case. Rather, CTIA seeks to provide certainty to A Block licensees that the interference picture currently faced will not be subject to change as a result of additional licensing on Channel 51. Further, some commenters have alleged that the Petition seeks to convert Channel 51 into a guard band and accused CTIA and RCA's proposal as being spectrally inefficient.<sup>5</sup> As stated above, grant of the Petition would not

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<sup>3</sup> Comments of King Street Wireless, L.P., RM-11626, at 1 (Apr. 27, 2011) ("King Street Comments").

<sup>4</sup> See, e.g., Comments of Central Wyoming College, RM-11626 (Apr. 27, 2011) (characterizing the Petition as a proposal to remove all television broadcast stations from Channel 51); Comments of Entravision Holdings, RM-11626, at 5 (Apr. 27, 2011) ("Entravision Comments") (stating that the Petition proposes further licensing of broadcast operations on Channel 51 and repurposing the spectrum for wireless use).

<sup>5</sup> See, e.g., Comments of the National Association of Broadcasters and the Association for Maximum Service Television, Inc., RM-11626, at 8 (Apr. 27, 2011) ("NAB/MSTV Comments") ("Creation of such an informal guard band by freezing Channel 51 television services also would be spectrally inefficient"); Comments of Chambers Communications Corp., RM-11626, at 1 (Apr. 27, 2011) ("Chambers Comments") (stating that the Petition asks broadcasters to "provide the buffer guard band" between broadcast television operations and mobile broadband spectrum).

convert Channel 51 into a guard band – existing Channel 51 licensees may remain in the band and a Channel 51 licensee need only relocate to a different channel if it decides that a voluntary relocation agreement is in its best interest. Indeed, and as stated further below, the Petition promotes efficient spectrum use by preserving existing licensed operations in Channel 51 while enabling the deployment of wireless broadband services in the A Block.

CTIA notes the expedited procedures requested by CTIA and RCA would be entirely voluntary and no Channel 51 licensee would be forced to give up its channel allotment. As such, the Petition does not represent a “spectrum grab.”<sup>6</sup> As AT&T observed in its comments, by granting the Petition the Commission “will in fact establish a ‘win-win’ mechanism for protecting A Block licensees while benefitting all parties involved and guaranteeing the most efficient use of spectrum.”<sup>7</sup>

Finally, the application freeze requested by CTIA and RCA in the Petition is necessary to stabilize the Channel 51 environment and promote an effective rulemaking process. If the Commission initiates a rulemaking to curtail further licensing on Channel 51, the application freezes proposed by CTIA and RCA create the necessary conditions to allow the rulemaking to be held in an “effective, efficient and meaningful manner.”<sup>8</sup> On several previous occasions, the Commission has instituted application freezes to facilitate its consideration of a reallocation of

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<sup>6</sup> Opposition to Petition for Rulemaking of R&F Broadcasting, Inc., RM-11626, at 2 (Apr. 27, 2011) (“R&F Broadcasting Comments”).

<sup>7</sup> Comments of AT&T Inc., RM-11626, at 6 (Apr. 27, 2011) (“AT&T Comments”).

<sup>8</sup> See, e.g., *Amendment of the Commission's Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 Bands, Implementation of Section 309(j) of the Communications Act -- Competitive Bidding, 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, Memorandum Opinion and Order, 12 FCC Rcd 2910, 2915 at ¶ 10 (1997) (“39 GHz Freeze Order”) (“[i]t is well established that the Commission may initiate a freeze without prior notice and hearing when the purpose is, as here, ‘the creation of conditions under which formal rulemaking proceedings can be held in an effective, efficient and meaningful manner.’”) (citing *Kessler v. FCC*, 326 F.2d 673, 679-81 (D.C. Cir. 1963)).

spectrum, a change in licensing services, or to otherwise prevent actions that could undermine the rulemaking at hand. The Commission has imposed immediate freezes where it contemplated no longer accepting applications of a certain type,<sup>9</sup> sought to undertake a comprehensive review of spectrum in particular bands,<sup>10</sup> acted to facilitate a channel election and repacking process in anticipation of the DTV transition,<sup>11</sup> and moved to preclude the filing of applications inconsistent with contemplated technical rules for a frequency band.<sup>12</sup> Indeed, the Commission recently instituted an application freeze in connection with another rulemaking proceeding to promote interference-free operation in the 700 MHz band. In 2010, the Commission proposed to clear the 700 MHz band of low power television (“LPTV”) broadcasters, which previously had been

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<sup>9</sup> *Amendment of Parts 1, 22, 24, 27, 74, 80, 90, 95, and 101 To Establish Uniform License Renewal, Discontinuance of Operation, and Geographic Partitioning and Spectrum Disaggregation Rules and Policies for Certain Wireless Radio Services*, Notice of Proposed Rulemaking, FCC 10-86, at ¶¶ 98-100 (May 20, 2010) (instituting a freeze on new applications that would be mutually exclusive with renewal applications upon issuing a Notice of Proposed Rulemaking that contemplated a future prohibition on such applications).

<sup>10</sup> *See, e.g., Implementation of Sections 3(n) and 332 of the Communications Act*, Third Report and Order, 9 FCC Rcd 7988, at ¶¶ 107-108 (1994) (suspending the acceptance of 800 MHz applications on the 280 SMR category channels because the Commission was proposing “fundamental changes” in the service areas and channel blocks for future licensees in the service); *Amendment of Parts 1, 21, 73, 74 and 101 of the Commission’s Rules to Facilitate the Provision of Fixed and Mobile Broadband Access, Educational, and Other Advanced Services in the 2150-2162 and 2500-2690 MHz Bands*, Notice of Proposed Rulemaking and Memorandum Opinion and Order, 18 FCC Rcd 6722, at ¶ 229 (2003) (“*ITFS/MMDS Order*”) (instituting a freeze on the filing of certain ITFS applications on the basis that the Commission was “undertaking a comprehensive review of [ITFS] services” in the instant proceeding).

<sup>11</sup> *Freeze on the Filing of Certain TV and DTV Requests for Allotment or Service Area Changes*, Public Notice, 19 FCC Rcd 14810 (2004) (“*DTV Freeze Notice*”) (imposing a freeze on the filing of certain analog and digital television requests for changes to existing TV service areas and channels).

<sup>12</sup> *Petition for Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, Order, 11 FCC Rcd 1156, at ¶ 2 (1995) (“The increasing number of applications constitutes a burden on the Commission’s scarce resources and may limit the impact of a Commission rulemaking in response to the petition because applications being filed and processed are not necessarily in conformance with application and technical requirements that may be developed for the 39 GHz bands if the rulemaking petition is granted. Consequently, we find that the public interest will be served by not accepting any further applications for licensing new 39 GHz frequency assignments, pending Commission action on the rulemaking petition.”)

allowed to operate in the band on a secondary basis.<sup>13</sup> In conjunction with the Commission's proposal, it announced an immediate freeze on certain LPTV applications, including applications for new or modified LPTV station applications in the 700 MHz band.<sup>14</sup> Similarly, in a Notice of Proposed Rulemaking where the Commission considered adopting a prohibition on secondary wireless microphone operation in the 700 MHz band, it imposed freezes on the filing of related applications, finding that continuing to accept such applications "would impair the objectives that we are proposing in this proceeding."<sup>15</sup>

The use of application freezes by the Commission in situations where the continued acceptance of particular applications would frustrate the purpose of a proposed rule change is therefore a well-established and reasonable approach. Such is clearly the case here – for the Commission to enable further licensing activity on Channel 51 while contemplating rule changes that would prohibit future licensing would frustrate the purpose of the Commission's rulemaking. Indeed, the Commission has found it appropriate in past proceedings to ensure "that new applications are not filed in anticipation of future limitations, thus defeating the administrative purpose of the action herein."<sup>16</sup> An application freeze "will prevent additional harm to broadband deployment pending the Commission's decision on how best to deal with this

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<sup>13</sup> *Amendment of Parts 73 and 74 of the Commission's Rules to Establish Rules for Digital Low Power Television, Television Translator, and Television Booster Stations and to Amend Rules for Digital Class A Television Stations*, Further Notice of Proposed Rulemaking and Memorandum Opinion and Order, FCC 10-172, at ¶ 21 (2010) ("*LPTV NPRM*").

<sup>14</sup> *Id.* at ¶¶ 26-28.

<sup>15</sup> *Revisions to Rules Authorizing the Operation of Low Power Auxiliary Stations in the 698-806 MHz Band, Public Interest Spectrum Coalition, Petition For Rulemaking Regarding Low Power Auxiliary Stations, Including Wireless Microphones, and the Digital Television Transition*, Notice of Proposed Rulemaking and Order, 23 FCC Rcd 13106, at ¶¶ 2, 12, 23-34 (2008).

<sup>16</sup> *LPTV NPRM* at ¶ 26.

issue in a comprehensive and efficient manner.”<sup>17</sup> Also, “by adopting the proposed freeze on the acceptance, processing and grant of applications, the FCC will preclude the risk of speculative applications.”<sup>18</sup> CTIA therefore again urges the Commission to adopt the proposed freeze and believes that this is a necessary step toward promoting an effective rulemaking.

### **III. ADOPTION OF THE PETITION’S PROPOSALS WILL PROMOTE THE COMMISSION’S POLICY GOALS OF EFFICIENT SPECTRUM USE AND DEPLOYMENT OF NEXT-GENERATION MOBILE BROADBAND SERVICES.**

By granting the relief requested in the Petition, the Commission will enable 700 MHz licensees to roll out mobile broadband services in their licensed spectrum. This will help to advance two of its key policy goals: deployment of next-generation mobile broadband services and efficient use of mobile broadband spectrum.

The FCC’s National Broadband Plan represents an important prioritization of accelerating broadband deployment, with a strong focus on mobile wireless broadband service. Indeed, as Chairman Genachowski recently stated, “there’s no questioning the incredible opportunity that mobile broadband presents – opportunity to spur economic growth, create jobs, enhance our global competitiveness, and improve our quality of life.”<sup>19</sup> And the Commission has found that “[i]t is essential to our nation’s economic future that the demand for a robust

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<sup>17</sup> Comments of Cellular South, Inc. In Support, RM-11626, at 3 (Apr. 27, 2011) (“Cellular South Comments”).

<sup>18</sup> Comments of Verizon Wireless, RM-11626, at 4 (Apr. 27, 2011) (“Verizon Wireless Comments”).

<sup>19</sup> Julius Genachowski, Chairman, Federal Communications Commission, Remarks on Spectrum As Prepared for Delivery at The White House, at 1 (Apr. 6, 2011) (“Genachowski White House Remarks”), *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).

mobile broadband infrastructure is met.”<sup>20</sup> Similarly, President Obama recently stated a goal of making next-generation wireless broadband coverage available to 98 percent of Americans within the next five years.<sup>21</sup>

However, while the National Broadband Plan identified mobile broadband as a “unique and powerful opportunity for the U.S.,” it also cited mobile broadband as a “strategic challenge.”<sup>22</sup> This is because “the growth of wireless broadband services will be constrained if significant spectrum is not made available to enable mobile network expansion and technology upgrades.”<sup>23</sup> There is a well-documented spectrum crunch that threatens to inhibit the innovation that has characterized the wireless industry. While broadcasters have attempted to argue that the spectrum crunch is unproven or that additional spectrum is not needed (including in the instant proceeding),<sup>24</sup> there is overwhelming evidence to the contrary. An FCC Technical Paper recently concluded that, even using conservative assumptions about market factors influencing spectrum need, an additional 275 MHz of spectrum will be required to meet mobile data demand

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<sup>20</sup> *Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Notice of Proposed Rulemaking, FCC 10-196, at ¶ 11 (2010) (“*TV Spectrum Innovation NPRM*”).

<sup>21</sup> President Barack Obama, 2011 State of the Union Address (Jan. 25, 2011), *available at* [http://abcnews.go.com/Politics/State\\_of\\_the\\_Union/state-of-the-union-2011-full-transcript/story?id=12759395](http://abcnews.go.com/Politics/State_of_the_Union/state-of-the-union-2011-full-transcript/story?id=12759395).

<sup>22</sup> Julius Genachowski, Chairman, Federal Communications Commission, Remarks As Prepared For Delivery at CTIA Wireless 2011, at 4 (March 22, 2011) (“Genachowski CTIA Remarks”), *available at* [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2011/db0322/DOC-305309A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0322/DOC-305309A1.pdf).

<sup>23</sup> *TV Spectrum Innovation NPRM* at ¶ 11.

<sup>24</sup> *See, e.g.*, Opposition of Media General, Inc. to Petition for Rulemaking and Request for Licensing Freezes, RM-11626, at 13 (Apr. 27, 2011) (footnote omitted) (“Media General Comments”) (“To the contrary, an expert study submitted earlier this week by the National Association of Broadcasters demonstrates that there is scant evidence supporting any alleged ‘spectrum crisis.’ This study shows that the fast pace of wireless innovation and developments will provide carriers with more than adequate options to address any capacity concerns that they may have.”).

in 2014.<sup>25</sup> Another study by Rysavy Research projected that “even an operator with 100 MHz of spectrum and 60 Mbps of aggregate sector capacity will not be able, absent additional spectrum, to meet the data demands of consumers in three to four years if consumers use the applications they desire.”<sup>26</sup> The study further found that additional spectrum will be necessary for carriers of all sizes to accommodate demand and to enable new entrants to compete in the wireless industry.<sup>27</sup> If the Commission does not make additional spectrum available for wireless broadband, there will be “a variety of significant adverse effects in terms of the functionality of the mobile Internet for consumers.”<sup>28</sup> And, notably, Rysavy Research’s projections of spectrum needs “already assume that newer technologies with higher spectral efficiency will be aggressively deployed.”<sup>29</sup> The Commission therefore has placed a high priority on making additional spectrum available for mobile broadband, and has undertaken numerous efforts aimed at meeting this objective.<sup>30</sup>

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<sup>25</sup> FCC Staff Technical Paper, *Mobile Broadband: The Benefits of Additional Spectrum* at 17 (Oct. 2010) (“Spectrum Summit Technical Paper”).

<sup>26</sup> Rysavy Research, *The Spectrum Imperative: Mobile Broadband Spectrum and its Impacts for U.S. Consumers and the Economy, An Engineering Analysis* at 14 (Mar. 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>27</sup> *Id.* at 16.

<sup>28</sup> *Id.* at 17.

<sup>29</sup> Rysavy Research, *Efficient Use of Spectrum* at 9 (May 4, 2011), attached to Letter from Christopher Guttman-McCabe, CTIA to Chairman Julius Genachowski et al, GN Docket No. 09-51 (May 5, 2011). *See also id.* at 23-24 (“The wireless industry has no choice but to be efficient. And even with efficient technologies and deployment, current spectrum allocations are likely to become severely challenged in the next three to five years.”).

<sup>30</sup> *See, e.g., id.* (stating that in addition to undertaking an examination of UHF spectrum for mobile broadband, the Commission has taken actions to make additional spectrum available for mobile broadband services in the MSS and WCS bands, and also noting that the Commission is working with the National Telecommunications and Information Administration to identify additional spectrum that may be made available for wireless broadband services).

In tandem with its policies of promoting next-generation mobile broadband deployment and making additional spectrum available for mobile broadband, the Commission has placed a high priority on efficient use of limited spectrum resources.<sup>31</sup> This is especially important as any new allocation of spectrum for mobile broadband will take place over a period of years – the availability of new spectrum will not be immediate. As such, it is essential that mobile broadband licensees be able to make intensive use of that spectrum already allocated and licensed – such as the A Block.

By moving forward with the proposals in the Petition, the Commission will promote these policy objectives by enabling wireless licensees to make productive use of their A Block spectrum. In light of its previously-articulated wireless broadband policies, it is critical that the Commission take action to ensure that wireless licensees are able to make full use of the spectrum already deployed and licensed to them. Indeed, the Commission’s commitment to broadband deployment is reflected in the aggressive build-out requirements in place for 700 MHz spectrum, including A Block spectrum. With build-out deadlines for this spectrum looming, it is essential that the Commission examine impediments to full and productive use of the A Block.<sup>32</sup>

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<sup>31</sup> See, e.g., *Promoting More Efficient Use of Spectrum Through Dynamic Spectrum Use Techniques*, Notice of Inquiry, 25 FCC Rcd 16632, at ¶ 16 (2010) (finding that “[w]ith data traffic on mobile wireless networks estimated to grow by a factor of thirty-five between 2009 and 2014, there is a critical need for increased efficiency in use of spectrum, as well as the need for additional spectrum.”).

<sup>32</sup> Cincinnati Bell Wireless, for example, “finds itself in a quandary as to how it will meet the June 2013 build-out requirement and comply with the Commission’s interference protection requirements,” noting that “[w]ithout a technical solution, in order to comply with the Commission’s interference protection requirement it is estimates that a wireless provider must maintain a 60-mile exclusion zone surrounding the channel 51 DTV transmitter. This exclusion zone precludes any operation within the Dayton BEA 50.” See Comments of Cincinnati Bell Wireless, LLC, RM-11626, at 3 (Apr. 27, 2010) (“CBW Comments”).

**IV. THE RECORD DEMONSTRATES THAT GRANT OF THE PROPOSALS IN THE PETITION FOR RULEMAKING ARE NECESSARY TO PROMOTE BROADBAND DEPLOYMENT IN THE A BLOCK.**

**A. Grant of the Relief Requested in the Petition Will Enable A Block Licensees to Roll Out Mobile Broadband Services in Their Licensed Spectrum.**

As Commissioner Baker correctly noted in her statement in the recent *TV Spectrum Innovation NPRM* proceeding, “[t]he presence of high-power [Channel 51] broadcast operations in many communities may foreclose the opportunity to build out a broadband offering in 700 MHz.”<sup>33</sup> She also added that “we need to address existing impediments to investment like the channel 51 issue in an equitable and expedited manner.”<sup>34</sup> CTIA agrees wholeheartedly with Commissioner Baker’s statements, and notes that the record developed in this proceeding makes clear that resolution of interference issues with Channel 51 is critical to the development and deployment of mobile broadband services in the A Block.

When the Commission created its rules and band plan for wireless operation in the A Block, it created an interference environment that is “completely unprecedented,” as “[n]ever before has licensed mobile spectrum been directly adjacent to high-powered broadcast sources.”<sup>35</sup> Because Channel 51 is directly adjacent to the portion of the A Block that is designed for Frequency Division Duplex base station reception, Channel 51 operations can cause significant interference to A Block base stations.<sup>36</sup> Indeed, in the course of developing its

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<sup>33</sup> *TV Spectrum Innovation NPRM* at Statement of Commissioner Meredith Attwell Baker.

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

<sup>35</sup> Letter from Joseph P. Marx, AT&T to Marlene H. Dortch, Secretary, Federal Communications Commission, RM-11592, at 5 (June 3, 2010) (“AT&T June 3 *Ex Parte* Letter”).

<sup>36</sup> *Id.* See also, e.g., Verizon Wireless Comments at 3 (“TV 51 operations will cause interference into A Block base station receivers that are attempting to communicate with consumer handsets and other wireless devices that are transmitting at relatively low power levels.”).

network, “Cellular South has been warned consistently by various manufacturers of 700 MHz base station and subscriber equipment that Lower Block A operation is susceptible to disruptive interference from adjacent channel TV operations on Channel 51.”<sup>37</sup> There is also “substantial potential interference from [A Block] devices to Channel 51 receivers” that require A Block providers “to implement protections that exceed the minimums required by the Commission’s rules to ensure a high quality customer experience.”<sup>38</sup> The Commission’s rules also “further complicate use of lower 700 MHz A Block Spectrum by placing significant constraints on A Block licensees” with respect to television broadcast operations on Channel 51.<sup>39</sup> And, because the Commission’s rules require that A Block licensees extend interference protections to both current and future Channel 51 licensees,<sup>40</sup> further uncertainty has been injected into an already complicated interference environment.

Reports by A Block licensees make clear that the existing interference environment between Channel 51 and the A Block has created significant uncertainty for these licensees and has inhibited their ability to deploy mobile broadband services in this band. Cincinnati Bell Wireless reports that its A Block deployment is “directly impacted” by a Channel 51 incumbent, and that “it appears that the technology does not yet exist to resolve the interference problems entirely.”<sup>41</sup> King Street Wireless is attempting to actively build out its A Block spectrum, but

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<sup>37</sup> Comments of Cellular South, Inc., RM-11592, at 7-8 (Mar. 31, 2010).

<sup>38</sup> AT&T June 3 *Ex Parte* Letter at 8.

<sup>39</sup> AT&T Comments at 3. *See also* 47 C.F.R. § 27.60.

<sup>40</sup> *Second Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, Report and Order, 19 FCC Rcd 18279, at ¶ 124 (2004) (“*Second Periodic Review Order*”) (“We will accord the same level of adjacent channel protection to both incumbent and future analog and digital broadcast facilities on channel 51”).

<sup>41</sup> CBW Comments at 2.

notes that “Channel 51 issues appear to be present” and that “[p]rompt action on [the CTIA/RCA Petition] is necessary in order to permit King Street to engage actively and effectively with Channel 51 licensees, and to facilitate service to the public over this spectrum.”<sup>42</sup> And A Block licensees in markets where there is no active Channel 51 station are correctly concerned that future Channel 51 operations may impair their ability to maximize the utility of their licensed spectrum.<sup>43</sup>

Significantly, Cellular South also has encountered Channel 51 interference issues in the course of its network planning, and has entered into agreements with two Channel 51 full power DTV licensees for relocation of their facilities to alternate channels.<sup>44</sup> Cellular South’s efforts demonstrate the real and cognizable interference threat posed by Channel 51 operations: A Block licensees would not have entered into voluntary relocation agreements unless interference was real and prevalent. Most recently, the Commission amended the DTV Table of Allotments to substitute Channel 23 for Channel 51 in Jackson, Mississippi, with Cellular South supporting the move on the basis that the incumbent’s operation on Channel 51 “creates a substantial likelihood of destructive interference” to Cellular South’s planned system in Jackson.<sup>45</sup>

Indeed, the recent Jackson, Mississippi proceeding demonstrates the real-world impact of interference from Channel 51 operations to A Block broadband services. An engineering

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<sup>42</sup> See Comments of King Street Wireless, L.P., RM-11626, at 5 (April 27, 2011) (“King Street TV 51 Comments”).

<sup>43</sup> Comments of Frontier Communications, RM-11626, at 2 (April 27, 2011) (“Frontier Comments”).

<sup>44</sup> Cellular South Comments at 2.

<sup>45</sup> *Amendment of Section 73.622(i), Post-Transition Table of DTV Allotments, Television Broadcast Stations (Jackson, Mississippi)*, Report and Order, MB Docket No. 11-8, RM-11618 (rel. March 21, 2011). Indeed, the fact that such relocations occur dispels the argument that there is a lack of alternative channels available for substitution.

analysis filed by the incumbent Channel 51 licensee examined two methods of interference from DTV operations on Channel 51 to an LTE base station in the A Block: (1) interference caused by the LTE base station receiver receiving some of the main television 51 signal, and (2) interference to base station reception caused by Channel 51 out of band emissions.<sup>46</sup> With respect to the first form of interference, the analysis accounted for the technical parameters of the Channel 51 station and certain assumed parameters of an LTE base station and, using a Longley-Rice model of interference, concluded there would be an area of 3.5 square kilometers that would receive interference should an LTE base station with the assumed parameters be located within that area.<sup>47</sup> As for out of band emissions, the engineering analysis examined a number of situations, including the effects of interference to LTE base station coverage at base stations five (5) and 30 kilometers away from the DTV facility.<sup>48</sup> The study concluded that the DTV interference would cause a reduction in coverage of 94.9% of the area and 94.7% of the population covered by the closer station, and that for the more distant base station the coverage area would be reduced by 42.9% and the population coverage reduced by 29.5%.<sup>49</sup> The study concluded that “[t]he full impact to the Lower A Block LTE system is dramatic given that the system will consist of many additional sites in multiple counties many of them experiencing extensive areas of interference from the [channel 51] DTV facility.”<sup>50</sup> It is clear, therefore, that

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<sup>46</sup> Charles F. Ellis, PE, *Analysis of Interference to LTE Cellular Base Stations From Adjacent Channel Digital Television System WWJX, Jackson, MS* at 2 (Dec. 24, 2010) (“Ellis Engineering Analysis”), attached to Supplement to Petition for Rulemaking of George S. Flinn, Jr., RM-11618 (Dec. 29, 2010). The engineering study was based on LTE system criteria developed by Alcatel-Lucent, which was also attached to the Supplement.

<sup>47</sup> Ellis Engineering Analysis at 4.

<sup>48</sup> *Id.* at 5.

<sup>49</sup> *Id.* at 5-6.

<sup>50</sup> *Id.* at 6.

the interference threat posed by Channel 51 broadcast operations to A Block broadband operations is real and significant – in fact, the engineering analysis submitted with regard to the Jackson, Mississippi station found that “[t]he interference will be so severe, over a very large area, that the successful deployment of the LTE system is unlikely.”<sup>51</sup>

**B. Developments Occurring Since Auction 73 Have Created Substantial Additional Uncertainty for A Block Licensees and Necessitate Action on the Channel 51 Interference Issue.**

Certain broadcast commenters in this proceeding have alleged that favorable action on the Petition would be inappropriate in light of the Commission’s decision to adopt Channel 51 interference protection requirements in 2004,<sup>52</sup> and the fact that the current band plan and interference rules were in place at the time of the 700 MHz auction.<sup>53</sup> While broadcasters argue that A Block licensees should have been aware of interference issues between Channels 51 and 52 prior to the auction, subsequent events have substantially complicated the picture and made action on the Channel 51 interference issue critical to mobile broadband deployment.

Since the close of the 700 MHz auction, there has been tremendous licensing activity on Channel 51; activity that alters the interference picture and that can force A Block licensees to re-evaluate or change their deployment strategies. At the time of the auction, “[l]icensees had no reasonable means of assessing who these Channel 51 licensees would be or where they may be located.”<sup>54</sup> As Vulcan Wireless and the Rural Telecommunications Group observed in their comments, these recent changes “now create a moving target with respect to the interference and

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<sup>51</sup> *Id.* at 1.

<sup>52</sup> *See, e.g.*, NAB/MSTV Comments at 5; Comments of LeSEA Broadcasting Corporation, RM-11626, at 3-4 (Apr. 27, 2011).

<sup>53</sup> *See, e.g., id.* at 6; R&F Broadcasting Comments at 2.

<sup>54</sup> King Street Wireless Comments at 2.

technical obstacles that make it impractical to do network deployment design.”<sup>55</sup> In fact, since Auction 73 ended, the Commission has received and begun to grant several hundred new Channel 51 applications and other change requests from incumbent Channel 51 broadcasters.<sup>56</sup> This creates significant challenges to A Block deployment – this additional licensing on Channel 51 “will exacerbate the interference issues” involving the band and will make it “even more difficult for A Block licensees to deploy expansive broadband wireless service to serve customers and meet the growing need for wireless broadband capability.”<sup>57</sup>

Further, at the time the Commission declined to adopt reciprocal interference protection for Channels 52 and 51, the interference environment between broadcast operations on Channel 51 and future wireless operations on Channel 52 was not fully known. It is clear now that there is a real interference problem at these channels that the Commission must address – A Block licensees would not be seeking to relocate Channel 51 broadcasters if this was not the case. And Commissioner Baker specifically cited the current Channel 51 situation as a “mistake[] of the past” and a pitfall to avoid going forward, stressing the need to address the Channel 51 interference issue.<sup>58</sup> In its recent *TV Spectrum Innovation NPRM* proceeding, the Commission acknowledged the potential for broadcast operations to cause interference to wireless broadband

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<sup>55</sup> Comments of Vulcan Wireless LLC and the Rural Telecommunications Group, Inc., RM-11626, at 6 (Apr. 27, 2011) (“Vulcan/RTG Comments”).

<sup>56</sup> *Id.* at 4. In their Comments, Vulcan Wireless and RTG found that the Commission has granted 22 new construction permits (and accepted 69 applications for permits), 15 new special temporary authority licenses and 12 extensions for STA, 3 new digital companion licenses, 51 digital flash cut conversion application, 79 licenses to operate (license to cover) and 99 other applications related to Channel 51 broadcast operations. *Id.* Vulcan and RTG stated that another 148 applications are accepted for filing and remain pending. *Id.*

<sup>57</sup> Verizon Wireless Comments at 3. *See also, e.g.,* Vulcan/RTG Comments at 6 (“A Block licensees cannot plan effectively for unknown future broadcast operations that either need to be protected or that they need to be protected from, and having to accommodate such operations makes A Block mobile broadband deployments unfairly cost-prohibitive.”).

<sup>58</sup> *TV Spectrum Innovation NPRM* at Statement of Commissioner Meredith Attwell Baker.

services above Channel 51 and stated its intent that its proposed actions not cause increased interference to these operations, thus demonstrating the Commission's commitment to preventing interference to these wireless services.<sup>59</sup>

Finally, as CTIA noted above and in numerous other proceedings, since at least 2008 there has been a tremendous explosion in mobile broadband use accompanied by a grave spectrum crunch. The Commission has made broadband deployment and maximizing the availability of mobile broadband spectrum key priorities. As Verizon Wireless observed, “[m]aximizing the use of the A Block which is already licensed and allocated for broadband services is consistent with the Commission’s and the Administration’s broadband goals.”<sup>60</sup>

In sum, broadcast industry arguments that this is a fully settled policy and legal issue are misplaced. The Commission must consider new information as part of this rulemaking process, including the rampant, speculative filings of TV 51 applications, explosive growth in mobile services and demand, and the reality of actual interference from TV operations to mobile broadband services.

**C. Other Broadcaster Arguments Against the CTIA/RCA Petition for Rulemaking are Without Merit.**

Commenters representing the broadcast industry have made a variety of arguments against the grant of the CTIA/RCA Petition, arguments which are without merit and/or fundamentally misunderstand the Petition’s objectives. First, as CTIA stated above, the Petition does not contemplate mandatory relocation of existing services or the creation of a guard band at Channel 51. As CTIA previously noted, the only circumstance under which Channel 51 would be entirely cleared is if all broadcasters on Channel 51 agree to voluntary relocation agreements

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<sup>59</sup> *Id.* at ¶ 15.

<sup>60</sup> Verizon Wireless Comments at 4.

– an action they would be under no obligation to take. Rather, the Petition seeks only to curtail *further* licensing on Channel 51 and to facilitate voluntary agreements for a broadcaster to change channels, as channel changes in this context would have particular public interest benefits.

Other commenters have argued that modification applications should not be covered by the application freeze.<sup>61</sup> As stated above, the constantly changing interference picture between Channel 51 and the A Block has frustrated broadband deployment and undermined productive use of wireless broadband spectrum. Just as the introduction of a new broadcast licensee on Channel 51 could adversely impact the interference environment, so too could modifications to Channel 51 broadcasting. Given the interference effects associated with operations on Channel 51, there should be no changes to existing Channel 51 operations. Indeed, such a finding would be consistent with the Commission’s stated objective that certain station modifications undertaken in connection with channel sharing not cause interference to wireless broadband services operating above Channel 51.<sup>62</sup>

Broadcasters further have argued that the wireless industry can seek relief through voluntary interference negotiations contemplated by the Commission’s rules, or requests for waiver of the Commission’s rules.<sup>63</sup> Neither is a practical solution to the current interference

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<sup>61</sup> See, e.g., Comments of WHLV-TV, Channel 51, Cocoa, Florida, RM-11626, at 4 (Apr. 27, 2011) (“Trinity Christian Center Comments”); Opposition of Block Communications, Inc. and Independence Television Company to Petition for Rulemaking, RM-11626, at 3-4 (Apr. 27, 2011).

<sup>62</sup> See *TV Spectrum Innovation NPRM* at ¶ 15 (stating that “we note that in some instances changes in the operation of television stations could raise the possibility of interference . . . to services operating on frequencies immediately above channel 51. It is our intent that any channel or other facilities change that might be requested as part of sharing agreements not result in increased interference to . . . operations of other services above channel 51”).

<sup>63</sup> See, e.g., Trinity Christian Center Comments at 6.

problem. For example, A Block licensees cannot negotiate with a Channel 51 licensee that does not yet exist, yet those A Block licensees are obligated to protect the Channel 51 licensee under the Commission's rules. Indeed, "A Block licensees will be appropriately cautious of entering into any agreement with a current Channel 51 licensee, only to have a new Channel 51 licensee later arrive at the scene and undermine all of the benefits of the hard-fought for settlement."<sup>64</sup> Similarly, A Block licensees cannot rely on seeking waivers of the Commission's rules in a constantly-changing interference environment.

The Commission also should reject arguments that the continued availability of Channel 51 for broadcast operations is necessary to ensure sufficient spectrum for broadcast operations.<sup>65</sup> Indeed, the Commission is currently contemplating a reallocation of up to 120 MHz of spectrum from broadcast operations to mobile uses, with Chairman Genachowski noting that "[e]ven if 120 MHz of the 294 MHz allocated for broadcasting were freed up as a result of an incentive auction, a healthy and robust broadcast system would remain."<sup>66</sup> Further, recent data demonstrate that television ownership is declining<sup>67</sup> and that the percentage of Americans

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<sup>64</sup> King Street Wireless Comments at 3.

<sup>65</sup> Comments of the National Translator Association, RM-11626, at 2 (Apr. 27, 2011) ("National Translator Association Comments") (arguing that translator systems are struggling with channel availability problems); Comments of Michael Mahan, RM-11626, at 1-2 (Apr. 27, 2011) (stating that grant of the Petition would increase the difficulties faced by LPTV and translator stations and white spaces devices to locate channels).

<sup>66</sup> See, e.g., *TV Spectrum Innovation NPRM*; Julius Genachowski, Chairman, Federal Communications Commission, Prepared Remarks at NAB Show 2011, at 7-8 (April 12, 2011), available at [http://www.fcc.gov/Daily\\_Releases/Daily\\_Business/2011/db0412/DOC-305708A1.pdf](http://www.fcc.gov/Daily_Releases/Daily_Business/2011/db0412/DOC-305708A1.pdf)

<sup>67</sup> Nielsen Wire, "Nielsen Estimates Number of U.S. Television Homes to be 114.7 Million" (May 3, 2011), available at [http://blog.nielsen.com/nielsenwire/media\\_entertainment/nielsen-estimates-number-of-u-s-television-homes-to-be-114-7-million/](http://blog.nielsen.com/nielsenwire/media_entertainment/nielsen-estimates-number-of-u-s-television-homes-to-be-114-7-million/) (noting decreases in both the number of households owning televisions and the percentage of U.S. homes with a television set).

accessing television programming over the air is steadily decreasing.<sup>68</sup> The Commission therefore should reject arguments that future licensing on Channel 51 needs to be preserved to ensure sufficient spectrum for broadcasters.

Finally, the Commission should reject arguments that the proposals made in the Petition not be extended to LPTV and/or TV translators<sup>69</sup> or that LPTV/translator operations would suffer harm if the Commission forecloses future licensing on Channel 51.<sup>70</sup> While operating at a lower power level than full-power broadcast stations, LPTV, TV translator, and Class A stations nonetheless are authorized to transmit at higher power levels than A Block operations, and “[i]n some cases, the interference effects from the far greater number of 125 Class A and LPTV stations can be more damaging than from full power stations.”<sup>71</sup> In fact, the engineering analysis described above concerning station WWJX assumed that the station would be broadcasting with an Effective Radiated Power of 20 kilowatts at an antenna height of 128 meters above ground.<sup>72</sup> Even at this power level, extensive harmful interference was predicted and required Cellular South to enter into a relocation agreement with the full power station.<sup>73</sup> LPTV stations, including Class A stations, are permitted to operate in the UHF spectrum (where Channel 51 resides) with powers as high as 15 kilowatts for digital TV operations and as high as 150

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<sup>68</sup> Federal Communications Commission, *Spectrum Analysis: Options for Broadcast Spectrum*, OBI Technical Paper No. 3, at 7 (June 2010) (finding that the percentage of households viewing television solely through over the air broadcasts has steadily declined over the past decade, from 24 percent in 1999 to 10 percent in 2010).

<sup>69</sup> Opposition to Petition for Rulemaking of DTV America Corp., Image Video Teleproductions, Inc., Indiana Wesleyan University, Las Americas Supermercado, Inc., and WatchTV, Inc., RM-11626 (Apr. 27, 2011) (“LPTV Parties Comments”).

<sup>70</sup> *Id.*, National Translator Association Comments.

<sup>71</sup> Vulcan/RTG Comments at 5.

<sup>72</sup> Ellis Engineering Analysis at 4.

<sup>73</sup> See Petition for Rulemaking of George S. Flinn, Jr., RM-11618, at 2 (Aug. 6, 2010).

kilowatts for analog stations.<sup>74</sup> Therefore, it should be clear that the interference effects of LPTV operations would be similar (for digital operations) or much greater (in the case of analog operations) as was seen in the Jackson, Mississippi case. In light of these interference risks and the fact that LPTV stations are prohibited from causing interference outside their assigned channels,<sup>75</sup> there is simply no good cause for the Commission to continue to permit licensing and modification of these stations on Channel 51. Moreover, as Class A LPTV stations have some level of interference protection and would likely be subject to voluntary relocation procedures (as is the case for full power Channel 51 operations), CTIA believes that the public interest mandates that further licensing of Class A LPTV Channel 51 operations should also be frozen. Therefore, because LPTV and Class A stations pose a significant threat of interference to Channel 51 licensees, the prohibition on future licensing and application freezes should be extended to these services as well.

## V. CONCLUSION

For the reasons stated above, CTIA submits that prompt favorable action on the CTIA/RCA Petition is a narrowly tailored means of addressing the interference concerns of A Block licensees while preserving existing licensed broadcast operations on Channel 51. CTIA

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<sup>74</sup> See 47 C.F.R. §§74.735(a)(2), 74.735(b)(2).

<sup>75</sup> See 47 C.F.R. § 74.703(c) (“It shall be the responsibility of the licensee of a low power TV, TV translator, or TV booster station to correct any condition of interference which results from the radiation of radio frequency energy outside its assigned channel.”).

urges the Commission promptly to establish application freezes and initiate a rulemaking that will address these important issues.

Respectfully submitted,

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