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

FCC Seeks Comment on Recommendations Approved by the Advisory Committee for the 2015 World Radiocommunication Conference	))))	IB Docket No. 04-286

COMMENTS OF THE
NATIONAL ASSOCIATION OF BROADCASTERS, ABC TELEVISION AFFILIATES ASSOCIATION, CBS TELEVISION NETWORK AFFILIATES ASSOCIATION, FBC TELEVISION AFFILIATES ASSOCIATION, NBC TELEVISION AFFILIATES, THE WALT DISNEY COMPANY, 21ST CENTURY FOX, INC., NBCUNIVERSAL MEDIA, LLC, CBS CORPORATION, AND UNIVISION TELEVISION GROUP INC.

The National Association of Broadcasters ("NAB")[1], ABC Television Affiliates Association, CBS Television Network Affiliates Association, FBC Television Affiliates Association, NBC Television Affiliates[2], The Walt Disney Company, 21st Century Fox, Inc., NBCUniversal Media, LLC, CBS Corporation, and Univision Television Group Inc. (collectively, the "Broadcast Parties") submit these comments in response to the January 28, 2014 Public Notice seeking comment on draft recommendations of the Advisory Committee for the 2015 World Radiocommunication Conference (WRC).[3] In particular, the Broadcast Parties urge the Commission to reject the draft recommendation set forth

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[1] The National Association of Broadcasters is a nonprofit trade association that advocates on behalf of free local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

[2] Each of the ABC Television Affiliates Association, CBS Television Network Affiliates Association, FBC Television Affiliates Association, and NBC Television Affiliates is a non-profit trade association whose members consist of local television broadcast stations throughout the county that are affiliated with its respective broadcast television network.

[3] *FCC Seeks Comment on Recommendations Approved by the Advisory Committee for the 2015 World Radiocommunication Conferenence*, Public Notice, IB Docket No. 04-286, DA 14-88 (rel. Jan. 28, 2014) ("*Public Notice*").

as Attachment B in document WAC/066 (the "Wireless Proposal.")[4] The Wireless Proposal is premature, ignores fundamental physical rules of propagation and interference, and will open the door to potential harmful interference between broadcasters and wireless carriers in bordering countries. Instead, the Commission should adopt the draft recommendation set forth as Attachment A in document WAC/066 (the "Broadcast Proposal")[5] which preserves common sense requirements for coordination and acknowledges the potential for interference between wireless and broadcast operations.

Discussion

The question before the Commission in evaluating the draft recommendations is a straightforward matter of physics, propagation and radio science. Approving the Wireless Proposal would entail ignoring scientific evidence before the Commission, and approval would also suggest that every administration has the flexibility to deploy whichever service it deems appropriate without regard to the potential effects on existing services, including those in neighboring countries.

By way of background, the 470-698 MHz frequency range is currently allocated to the broadcasting service on a primary basis, and has been for decades. Current allocations in the UHF band to mobile service recognize the potential interference between broadcast and mobile operations and require that any administration wishing to implement a mobile service do so only subject to the explicit agreement of affected

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[4] *See id.*, Attachment 1 at 28-32.

[5] *See id.*, Attachment 1 at 18-27.

administrations obtained under Article 9.21.[6] Thus, any administration wishing to deploy mobile services in this band must coordinate with its neighbors to ensure the protection of incumbent operations.

The Wireless Proposal recommends allocating this entire frequency range to mobile services on a co-primary basis with broadcasting, and the deletion of the requirement for an express agreement prior to deployment. The Wireless Proposal offers only two justifications for changing this allocation: (1) to provide administrations with greater "flexibility" for implementing the services they desire; and (2) to "globally harmonize" allocations to mobile service in the 470-698 MHz band.

Neither of these justifications withstands scrutiny. Administrations already have "flexibility" to deploy different services as long as their deployments do not affect operations in neighboring countries. Regardless of any changes to allocations, however, administrations simply will not have unlimited flexibility in deploying new services if they wish to minimize interference to neighboring incumbent operations. Radio transmissions do not stop at a border. It is misleading to suggest otherwise.

The fact that allowing high powered broadcast and mobile broadband operations in the same band creates the potential for harmful interference between services should be beyond dispute. Studies submitted to the ITU-R Joint Task Group 4-5-6-7 to date indicate that sharing in the UHF band between International Mobile Telecommunications ("IMT") and digital terrestrial broadcasting may not be practical due to the large distance and frequency separations required. These studies indicate that co-channel sharing

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[6] This footnote allocation to the mobile service in the UHF band includes the United States and a limited number of Region 2 countries.

between IMT base stations and a DTV receiver may require separation distances of approximately 100 km for co-channel operation and 20 km for adjacent channel operation. Comments submitted last year in the FCC's Incentive Auction proceeding indicate that sharing between high power TV transmitters and mobile broadband base station receivers require even greater separation distances, with most commenters suggesting separation distances of between 200-500 km.[7] Significantly smaller separation distances were noted in document WAC/058, addressing the 1435-1525 MHz band where a similar threat of potential interference between incumbent aeronautical flight test and mobile operations resulted in the conclusion that the 1435-1525 MHz band should not be allocated for IMT.

Currently, in the pending incentive auction proceeding, the Office of Engineering and Technology ("OET") is seeking comment on the potential for interference between broadcast television and wireless services.[8] This potential interference is only further complicated by the fact that wireless and broadcast TV operations will operate with different channel bandwidths.

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[7] *See*, *e.g.,* Comments of Qualcomm Incorporated on Public Notice to Supplement the Record on the 600 MHz Band Plan, GN Docket No. 12-268, 14 (June 14, 2013) ("Based on Qualcomm's calculations, the distances are approximately 500 km (or 310 miles) for TV to mobile uplink and as compared to approximately 100 km for TV to mobile downlink."); Comments of AT&T, Inc., GN Docket No. 12-268, 5 (June 14, 2013) ("In short, the analysis suggests that separation distances between TV transmitters and wireless base station receivers would generally need to be in the range of more than 200 kilometers in order to avoid harmful co-channel interference to mobile base station receivers."); Comments of Verizon and Verizon Wireless, GN Docket No. 12-268, 8 (June 14, 2013) ("Absent natural barriers between markets, such as mountains that mitigate co-channel interference, geographic separation zones of 200-400 km would likely be required to mitigate interference from broadcaster transmitters into wireless base stations."); Letter from Rick Kaplan, NAB to Marlene H. Dortch, Secretary, FCC (July 10, 2013) (separation distance required to mitigate interference between a TV transmitter and a base station receiver is between 225 and 375 km).

[8] *See Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television and Wireless Services,* Public Notice, ET Docket No. 14-14, GN Docket No. 12-268, DA 14-98 (Jan. 29, 2014).

Clearly, there is no real question that broadcast television operations and wireless operations in close geographic and frequency proximity have significant potential to interfere with one another – yet the Wireless Proposal ignores this potential interference and does not even acknowledge that it proposes to remove the coordination requirement. The Wireless Proposal trumpets the virtues of "flexibility" while ignoring very real practical limitations on actual deployment that are imposed by the need to coordinate with existing incumbent operations.

With respect to global harmonization, given that broadcasters will continue to broadcast in the band, there is simply no advantage to globally harmonizing the band as a whole. If IMT operations are not going to be available in the U.S. broadcast band, why would it be advantageous to synchronize with others that might choose to make such operations primary in the band?

To the extent that "global harmonization" is important, the Broadcaster Proposal provides for such harmonization above 694/698 MHz, in the 694/698 MHz to 890 MHz band. This will provide wireless mobile interests with almost 200 MHz of spectrum allocated for globally harmonized mobile use on a primary basis, while recognizing that coordination of new uses for the band should be subject to Article 9.21 coordination agreements.

The Broadcast Parties recognize that some broadcast spectrum in the 470-698 MHz band will be reallocated and reassigned as a result of the incentive auction.[9]

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[9] In fact, NAB, CBS and Fox presented a paper to the Informal Working Group 2 (IWG-2) that would have explained to the rest of the world the Incentive Auction concept and how it was being used in the reassignment and reallocation process being pursued in the United States. NAB, CBS and Fox then attempted to join with other parties to develop at second compromise paper that outlined the technical and practical issues of sharing between broadcasting and wireless. Both of these efforts failed to achieve consensus.

However, the amount of spectrum to be reallocated and reassigned to wireless broadband services will be determined by the incentive auction and certainly will *not* include the *entire* UHF broadcast band.[10] After the incentive auction is held, the Broadcast Parties have no objection to reallocating whatever spectrum is reclaimed by the Commission for mobile use. This is in fact consistent with the Commission's 2012 determination to decide allocation matters in the context of the incentive auction proceeding.[11] In that decision, the Commission specifically elected not to act on any of the proposed allocation changes and indicated that it would undertake a broader rulemaking to implement the provisions of the Spectrum Act,[12] stating that "we believe it will be more efficient to address new allocations in that rulemaking." [13]

At the very least, the question of whether to change the current broadcaster allocation requires further study. For example, as reported to the WAC, the European Conference of Post and Telecommunications Administrations (CEPT) has suggested that any further consideration of the 470-694 MHz band take into account additional sharing and compatibility studies.[14] Comments received in response to OET's recent Public Notice concerning interference between broadcast television and wireless services will also provide meaningful information on interference distances and the compatibility of broadcast and wireless services. Until this work is completed, and objective and

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[10] Attachment B proposes changes to the International Table of Frequency Allocations from 470-890 or across a total of 420 MHz.

[11] *Innovation in the Broadcast Television Bands: Allocations, Channel Sharing and Improvements to VHF*, Report and Order, 27 FCC Rcd 4616 (2012).

[12] Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, 126 Stat. 156 (Feb. 22, 2012) (codified at 47 U.S.C. § 1451).

[13] *Innovation in Broadcast Television Bands*, Report and Order at ¶ 10.

[14] *See* Report from 3rd CEPT WRC-15 Conference Preparatory Group (CPG) Meeting, 23-26 September 2013, Document WAC/056.

interference criteria grounded in sound science are established, the Broadcast Parties recommend that there should be no change in the allocations for the UHF band from 470 to 698 MHz, and that IWG-2 be instructed to address the concerns identified in the Broadcaster Proposal and develop a consensus position.

The Broadcast Proposal sets forth additional reasons why the Wireless Proposal must be rejected, including:

- The proposal mischaracterizes the state of the broadcast television service in the United States;
- The proposal ignores the current activities to develop next generation television systems that may operate in this UHF band;
- The proposal ignores the role of broadcasters as "first informers" in times of emergencies and the recent recognition of the importance of broadcasting by the ITU; and
- The proposal ignores the positive economic impact broadcast content and production has on U.S. exports.[15]

These arguments are discussed in greater detail in the Broadcast Proposal and, in the interest of brevity, are not repeated here.

Conclusion

The Wireless Proposal is premature and would potentially allow administrations to approve the deployment of wireless operations without taking necessary steps to reach express agreements with their neighbors to reduce the possibility of interference with incumbent services. It reflects a scientifically unsound approach that ignores current open proceedings intended to gather further information concerning required separation distances between broadcast television and wireless operations in a headlong rush by

[15] *Public Notice*, Attachment 1 at 19-22.

the wireless industry to mark the entire UHF band as its territory. Rather than ignore the undisputed potential for significant interference, the Commission should develop additional information, and proceed only when it has reached a determination concerning the appropriate interference criteria for broadcast and wireless operations in spectral proximity. The Commission should reject the Wireless Proposal, and instead recommend the adoption of the Broadcast Proposal.

Respectfully submitted,

NATIONAL ASSOCIATION OF BROADCASTERS
ABC TELEVISION AFFILIATES ASSOCIATION
CBS TELEVISION NETWORK AFFILIATES ASSOCIATION
FBC TELEVISION AFFILIATES ASSOCIATION
NBC TELEVISION AFFILIATES
THE WALT DISNEY COMPANY
21st CENTURY FOX, INC.
NBCUNIVERSAL MEDIA, LLC
CBS CORPORATION
UNIVISION TELEVISION GROUP INC.

/s/
Jennifer A. Johnson
Gerard J. Waldron

COVINGTON & BURLING LLP
1201 Pennsylvania Ave., N.W.
Washington, D.C. 20004
(202) 662-6000

Counsel for CBS Television Network Affiliates Association and NBC Television Affiliates

Rick Kaplan
Patrick McFadden

NATIONAL ASSOCIATION OF BROADCASTERS
1771 N Street, N.W.
Washington, D.C. 20036
(202 429-5430

/s/
Wade H. Hargrove

BROOKS, PIERCE, MCLENDON,
HUMPHREY & LEONARD, L.L.P.
Wells Fargo Capitol Center, Suite 1600
150 Fayetteville Street 27601
(919) 839-0300

Counsel for ABC Television Affiliates Association

/s/
John R. Feore

COOLEY LLP
1299 Pennsylvania Avenue, NW
Suite 700
Washington, DC 20004-2400
(202) 842-7800

Counsel for FBC Television Affiliates Association

/s/
Susan L. Fox
Vice President, Government Relations

THE WALT DISNEY COMPANY
425 Third Street, S.W., Suite 1100
Washington, D.C. 20024
(202) 222-4700

/s/
Maureen O'Connell
Senior Vice President
Jared S. Sher
Vice President

21ST CENTURY FOX, INC.
400 N. Capitol St., NW
Washington, DC 20001
(202) 824-6502

/s/
Margaret L. Tobey
Vice President, Regulatory Affairs

NBCUNIVERSAL MEDIA, LLC
300 New Jersey Avenue, N.W.
Washington, DC 20001

/s/
Anne Lucey
Senior Vice President for Regulatory Policy

CBS CORPORATION
601 Pennsylvania Avenue, N.W.
Suite 540
Washington, D.C. 20004-2601
(202) 457-4618

/s/
Christopher Wood

UNIVISION TELEVISION GROUP INC.
5999 Center Drive
Los Angeles, CA 90045
(310) 348-3696

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