

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

In the Matter of)	
)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions)	GN Docket No. 12-268
)	
Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software)	ET Docket No. 13-26
)	
Office of Engineering and Technology Seeks To Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television And Wireless Services)	ET Docket No. 14-14

**REPLY TO OPPOSITION AND REPLY OF CTIA – THE WIRELESS ASSOCIATION®
TO PETITIONS FOR RECONSIDERATION**

The National Association of Broadcasters (NAB)¹ hereby replies to the Opposition and Reply to Petitions for Reconsideration submitted by CTIA – The Wireless Association® (CTIA) in the above-captioned proceedings.² CTIA supports Sprint’s and NAB’s petitions recommending the Commission use F(50,10) location and time statistics when calculating the potential interference to LTE operations from television stations in

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 Opposition and Reply of CTIA – The Wireless Association® to Petitions for Reconsideration, GN Docket No. 12-268, ET Docket No. 13-26, ET Docket No. 14-14 (filed Feb. 26, 2015) (CTIA Reply).

the 600 MHz band.³ Although CTIA formally opposes NAB's petition seeking reconsideration of the methodology the Commission adopted for predicting inter-service interference (ISIX), CTIA's support for use of the F(50,10) statistical propagation model is based on the same reasoning that requires the Commission to reconsider the ISIX methodology. Moreover, CTIA's lone reason for opposing NAB's proposed revisions to the ISIX methodology is misplaced and simply does not apply in this context. On reconsideration, the Commission should use the F(50,10) statistical model supported by both the wireless industry and broadcasters, revise its ISIX methodology, and adopt a cap on interference and population losses due to channel changes in repacking, which no party opposes.

I. CTIA IS CORRECT THAT THE COMMISSION SHOULD ADOPT THE F(50,10) MODEL IN ITS ISIX PREDICTIONS

In their petitions, Sprint and NAB argue that the FCC should abandon its unprecedented use of inappropriate field strength prediction characteristics that understate the potential for inter-service interference.⁴ CTIA supports these petitions, and NAB strongly agrees with both Sprint and CTIA that use of the F(50,10) model (rather than the F(50,50) model) will promote critical certainty for bidders in the forward auction.⁵ In particular, additional data submitted by Sprint demonstrate that the difference between predicted interference using F(50,10) and F(50,50) statistics is significant, particularly over greater distances. As NAB has repeatedly stressed, it serves no stakeholder to

³ Petition for Reconsideration of Sprint Corporation, GN Docket No. 12-268, ET Docket No. 13-26, ET Docket No. 14-14 (filed Jan. 22, 2015) (Sprint Petition); Petition for Reconsideration of the National Association of Broadcasters, GN Docket No. 12-268, ET Docket No. 13-26, ET Docket No. 14-14 (filed Jan. 22, 2015) (NAB Petition).

⁴ Sprint Petition at 7-11; NAB Petition at 8-9; CTIA Reply at 2-4.

⁵ Sprint Petition at 3; CTIA Reply at 2.

provide forward auction bidders with misleading information concerning their ultimate ability to use the spectrum on which they are expected to bid. The use of misleading, non-standard factors to make interference predictions increases complexity and uncertainty, undermines forward auction confidence and will depress bidding.

As discussed below, the ISIX methodology itself uses unrealistic assumptions concerning actual operations minimizing the geographic extent of likely interference; the use of F(50,50) predictions exacerbates the effect of these already conservative assumptions to such an extent that PEAs represented as unimpaired by the FCC may, in fact, be wholly impaired and unusable.⁶ Depressed bidding, in turn, will reduce potential payments to broadcasters, make it more challenging to close the auction and reduce potential recovery for the Treasury. These are among the reasons NAB originally opposed the unprecedented use of the F(50,50) measure almost one year ago.⁷

Significantly, no party opposed either Sprint or NAB in their request for reconsideration on this issue. While, as Sprint notes, some wireless operators earlier opposed use of the F(50,10) curves, none of those operators responded to Sprint's new analysis. Indeed, the only response to the NAB and Sprint petitions came in the form of CTIA's support. We urge the Commission to adopt use of the F(50, 10) statistical measure.

⁶ At the very least, such assumptions will result in some licenses going from "unimpaired" to actually being more than 50 percent impaired – the threshold at which the Commission proposes licenses should not be sold. Clearly, such results will not yield "fungible" channel blocks.

⁷ Comments of the National Association of Broadcasters, ABC Television Affiliates Association, FBC Television Affiliates Association, CBS Television Network Affiliates Association, NBC Television Affiliates, The Association of Public Television Stations, the Corporation for Public Broadcasting, and the Public Broadcasting Service, GN Docket No. 12-268, ET Docket No. 14-14 (filed March 18, 2014).

II. THE COMMISSION SHOULD RECONSIDER THE ISIX METHODOLOGY

While NAB appreciates CTIA's support of Sprint's and NAB's request to reconsider the use of F(50,50) curves, it is puzzling that CTIA opposes NAB's request for reconsideration of the ISIX methodology. The very same factors that merit changing course on the F(50,50) model also support abandoning the FCC's proposed ISIX methodology to predict impairments for the purpose of the forward auction. Indeed, one could cut and paste certain of CTIA's arguments and use them to support NAB's petition for reconsideration of the ISIX methodology.

For example, CTIA states that use of the F(50,10) measure "will better inform forward auction bidders regarding the limitations on their 600 MHz licenses, and will more adequately protect 600 MHz licensees,"⁸ that this statistical measure "is a more accurate reflection of the real-world usability of a spectrum block and the costs associated with addressing impairments,"⁹ and that the failure to use this metric "could undermine valuation efforts, engender uncertainty, and threaten bidder confidence regarding the licenses available at auction."¹⁰

Each of these quotes goes to the very heart of the very reasons NAB urges the Commission to reconsider its use of the ISIX methodology during the auction. As NAB has stated previously, the methodology the Commission adopted in the ISIX Order¹¹ to

⁸ CTIA Reply at 3.

⁹ *Id.* at 4.

¹⁰ *Id.*

¹¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software, Office of Engineering and Technology Seeks to Supplement the Incentive Auction Proceeding Record Regarding Potential Interference Between Broadcast Television and Wireless Services, Second Report and Order and Further*

predict inter-service interference for the purpose of determining license impairments in the forward auction will fail to predict those impairments with any useful degree of accuracy.

The ISIX methodology assumes operating parameters for wireless base stations that are significantly reduced from those authorized in the Commission's service rules and inconsistent with available facts concerning actual deployments. The ISIX methodology, for example, makes the *wholly fictional* assumption that wireless base stations are uniformly deployed every 10 kilometers *solely due to computational limitations*.¹² Further, as NAB noted in its petition, wireless carriers deploying in this band are likely to use the spectrum to enhance coverage, rather than for densification of their networks.¹³ As a result, carriers may use taller towers than the 30 meters assumed by the ISIX methodology, and greater power than the ERP of 720W or 120W/MHz the methodology assumes – particularly given that the proposed rules for wireless operations in the 600 MHz band would permit wireless base station facilities to operate at up to 305 meters with 1000W/MHz of transmit power. The ISIX methodology is thus arbitrary and capricious and runs the risk of drastically understating the potential for inter-service

Notice of Proposed Rulemaking, GN Docket No. 12-268, ET Docket No. 13-26, ET Docket No. 14-14, FCC 14-157 (rel. Oct. 17, 2014).

¹² 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, 29 FCC Rcd 712, 725 n. 12 (rel. Jan. 29, 2014) (adopting a hypothetical 10-kilometer spacing for base station transmitting sites because it “approaches a practical limit on computation.”)

¹³ NAB Petition at 9.

interference if carriers attempt to deploy licenses in accordance with the applicable service rules.

In short, use of the ISIX methodology in the forward auction “could undermine valuation efforts, engender uncertainty, and threaten bidder confidence regarding the licenses available at auction.”¹⁴ Use of fixed separation distances, or, alternatively, as NAB has recommended, adjustment of the ISIX methodology to better reflect deployments and operations permitted under the proposed rules, “will better inform forward auction bidders regarding the limitations on their 600 MHz licenses, and will more adequately protect 600 MHz licensees.”¹⁵ Such an approach “is a more accurate reflection of the real-world usability of a spectrum block and the costs associated with addressing impairments,” just as CTIA recognizes with regard to the FCC’s use of the F(50,50) statistical model.¹⁶

NAB is at a loss to understand CTIA’s opposition to any effort to improve the ISIX methodology, as those improvements would inure to the benefit of CTIA’s members as they bid in the auction. CTIA asserts that, while market variability “and by extension the need for the inter-service interference methodology – should be kept to a minimum, there are strong benefits to accommodating some minimal market variability.”¹⁷ While we agree that market variability should be kept to a minimum, CTIA’s statement is simply irrelevant to NAB’s petition. It is true that NAB continues to believe all stakeholders are best-served

¹⁴ *Id.*

¹⁵ CTIA Petition at 3.

¹⁶ *Id.* at 4.

¹⁷ *Id.* at 5.

by a nationwide band plan, but that is not pertinent to NAB's request for reconsideration of the ISIX methodology.

Whatever CTIA thought NAB was proposing, in reality NAB's proposal to use fixed separation distances, or to adjust the ISIX methodology to more accurately reflect real-world deployments, is *entirely consistent* with "accommodating some minimal market variability." NAB is only asking the Commission to provide wireless carriers in the forward auction with information more likely to be useful and not based on invented wireless deployments. This should not be a controversial proposition. Indeed, it is one CTIA's members should fully support.

III. NO PARTY OPPOSES NAB'S REQUEST FOR RECONSIDERATION OF THE COMMISSION'S REFUSAL TO ADOPT AN AGGREGATE CAP ON INTERFERENCE OR POPULATION LOSSES DUE TO CHANNEL CHANGES

In its petition, NAB noted that, prior to the adoption of the ISIX Order, we proposed three specific, workable approaches for incorporating a cap on aggregate interference and population losses due to new channel assignments in repacking.¹⁸ No party opposed NAB's petition for reconsideration on this issue. In the ISIX Order under reconsideration, the FCC did not respond specifically to any of these three approaches, instead providing only general justifications for failing to include caps on interference or population losses.¹⁹ The FCC's "cursory rejection" of "option[s]" that "serve precisely the agency's purported,"

¹⁸ NAB Petition at 2-3; see *also* Letter from Rick Kaplan, NAB, to Marlene H. Dortch, FCC, GN Docket No. 12-268, ET Docket No. 13-26; ET Docket No. 14-14, Attachment at 9-11 (filed Oct. 13, 2014).

¹⁹ ISIX Order at ¶¶ 14-22.

or in this case statutorily mandated, “goals suggests a lapse of rational decisionmaking.”²⁰

NAB continues to urge the Commission to take all reasonable steps to limit service losses stemming from the assignment of new channels during repacking. No party has contradicted NAB’s analysis showing that these losses may be significant. If the FCC is at all serious about protecting viewers following the auction, it should carefully examine NAB’s proposals. We would be eager to work with the Commission to the extent any of the proposals posed significant implementation challenges or threatened any material delay in the conduct of the auction. However, the FCC’s failure to adopt, or even seriously consider, NAB’s three specific options is arbitrary and capricious.

IV. CONCLUSION

Sprint and NAB both sought reconsideration of the Commission’s use of the F(50,50) statistical model in predicting inter-service interference. The only party that commented on this issue, CTIA, supports both NAB and Sprint. In short, the request is unopposed, has drawn cross-industry support, and is consistent with sound engineering practice. We strongly urge the Commission to adopt use of the F(50, 10) statistical measure.

The same reasons CTIA offers in support of NAB and Sprint’s requests for reconsideration on the use of the F(50,50) measure apply with at least equal weight to NAB’s petition for reconsideration concerning other aspects of the ISIX methodology. Yet,

²⁰ *Achernar Broadcasting Co. v. FCC*, 62 F.3d 1441, 1447 (D.C. Cir. 1995) (internal citations omitted); see also *Yakima Valley Cablevision, Inc. v. FCC*, 794 F.2d 737, 746, n. 36 (D.C. Cir. 1986) (failure of an agency to consider alternatives “has led uniformly to reversal.”)

CTIA opposes this request, even though its explanation for its opposition – the purported need to accommodate some market variability in the auction – is a non sequitur. The ISIX methodology can be replaced or revised as NAB recommends without sacrificing the flexibility to accommodate market variability, if such variability cannot be avoided.

Finally, NAB continues to urge the FCC to take seriously its obligation to protect viewers following repacking. The FCC's utter failure to take into account the impact of channel changes on station coverage is unexplained and inexplicable. Surely no party seriously disputes that the Commission is required to take all reasonable steps to protect over-the-air coverage following the auction. To date, the Commission simply has not done so. We urge the Commission to reverse course, and NAB is eager to work with staff to implement our proposed solutions in a manner consistent with the Commission's other goals in this proceeding.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I, Susan Baurenfeind, certify that on this 9th day of March, 2015, I have caused a true and correct copy of the foregoing Reply to Opposition to Petitions for Reconsideration to be served via first class mail, postage paid, upon:

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