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March 18, 2013

Via Electronic Filing

Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: *ET Docket No. 13-26; GN Docket No. 12-268*

Dear Ms. Dortch:

The Consumer Electronics Association (“CEA”)¹ hereby responds to the National Association of Broadcasters’ (“NAB”) *ex parte* submissions² opposing the Office of Engineering and Technology’s (“OET”) use of updated software to implement OET Bulletin No. 69 (“OET-69” or the “Bulletin”).³ Contrary to NAB’s arguments, OET’s plan to use the new *TVStudy*

¹ CEA is the principal U.S. trade association of the consumer electronics and information technologies industries. CEA’s more than 2,000 member companies lead the consumer electronics industry in the development, manufacturing and distribution of audio, video, mobile electronics, communications, information technology, multimedia and accessory products, as well as related services, that are sold through consumer channels. Ranging from giant multi-national corporations to specialty niche companies, CEA members cumulatively generate more than \$209 billion in annual factory sales and employ tens of thousands of people.

² Letter from Rick Kaplan, Exec. V.P. of Strategic Planning, National Association of Broadcasters, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 13-26; GN Docket No. 12-268 (filed Feb. 8, 2013) (describing a meeting with FCC staffers from the Office of the Chairman, the Office of Engineering and Technology, the Incentive Auctions Task Force, the Office of General Counsel, and the Wireless Telecommunications Bureau) (“NAB Ex Parte Notice”); Letter from Rick Kaplan, Exec. V.P. of Strategic Planning, National Association of Broadcasters, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 13-26; GN Docket No. 12-268 (filed Feb. 8, 2013) (describing a meeting with staffers from the Office of Commissioner Mignon Clyburn, and attaching the NAB Ex Parte Notice).

³ Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software, DA 13-138, Public Notice (rel. Feb. 4, 2013) (“Public Notice” or “Notice”); OET, FCC, *Longley-Rice Methodology for Evaluating TV Coverage and Interference*, OET Bulletin No. 69 (Feb. 6, 2004) (“OET-69”), available at http://transition.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet69/oet69.pdf.

software is consistent with the Commission's authority under the Spectrum Act⁴ and furthers the goals of the statute. The Spectrum Act requires the Commission, when repacking broadcasters in connection with the broadcast incentive auction, to make "all reasonable efforts to preserve, as of the date of enactment of this Act, the coverage area and population served of each broadcast television licensee, as determined using the *methodology described in OET Bulletin 69...*"⁵ The Public Notice proposes no changes to the methodology of OET-69; it merely describes and seeks public comment on updates and improvements to the tools that the Commission uses to implement that methodology. These changes are necessary and appropriate in light of current technology and demographic data. Nor do OET's questions as to how to treat cells where results are flagged as "dubious" change the methodology of OET-69. Indeed, a change in the treatment of flagged cells would be consistent with the Commission's practice in other, more recent, instances in which it used the Longley-Rice ("L-R") model to predict coverage. There is no reason for the Commission to ignore lessons learned over the nine years since software was last developed to implement OET-69. Interpreting the OET-69 requirement to mean that the Commission must freeze time and use now-obsolete tools and data to implement the Bulletin would not reflect the balance Congress struck in providing the Commission with flexibility in the repacking process and would not be sound decision-making.

NAB's policy approach seems to be to mischaracterize the Public Notice and to oppose any update to the tools used to more accurately and effectively implement OET-69. The Commission should not be swayed by NAB's refusal to acknowledge the flexibility that Congress afforded the Commission in the Spectrum Act in the repacking process or by NAB's attempt to delay the incentive auction process by seeking initiation of a separate rulemaking proceeding to address OET-69 implementation issues. Once the comment cycle on the *TVStudy* Public Notice concludes, OET should incorporate into its plans any constructive input regarding the use of the software. The Commission should then move expeditiously to adopt rules and conduct the incentive auction, as mandated by the Spectrum Act and the public interest.

I. THE PUBLIC NOTICE IS CONSISTENT WITH THE FCC'S AUTHORITY UNDER THE SPECTRUM ACT AND FURTHERS THE GOALS OF THE STATUTE

Contrary to NAB's claims, OET's plan to use the *TVStudy* software does not deviate from the Spectrum Act's directive to determine coverage area and population served by full power and Class A broadcast stations "using the methodology described in OET Bulletin 69."⁶ The Public Notice does not propose any changes to the methodology of OET-69, and, in fact, the use of more current and accurate data in the *TVStudy* software is consistent with the Commission's obligation to use "all reasonable efforts" to preserve broadcaster coverage and

⁴ Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, §§ 6401-14, 126 Stat. 156, 222-37 (2012) ("Spectrum Act").

⁵ *Id.* at § 6403(b)(2), 126 Stat. at 226 (emphasis added).

⁶ *Id.*

population served, as Congress intended.⁷ Without these updates, the Commission would be relying on outdated data and tools, which would undermine the goals of the Spectrum Act.

A. *THE PUBLIC NOTICE DOES NOT PROPOSE TO MODIFY THE METHODOLOGY DESCRIBED IN OET-69*

NAB erroneously characterizes the Public Notice as “recommend[ing] a number of material changes to OET-69,”⁸ yet the Public Notice does not propose even a single change to the methodology of OET-69. Instead, the Public Notice proposes changes to the software implementing OET-69, as well as changes to some of the assumptions used to implement OET-69 but not specified in the Bulletin itself. For example, the *TVStudy* software will use updated census figures⁹ and more accurate coordinates¹⁰ where OET-69 requires population and location information. The software will use actual, versus assumed, antenna electrical down-tilt information where OET-69 calls for the angle of electrical down-tilt¹¹ and will use more accurate terrain data¹² where OET-69 requires that data to predict coverage. The software also will correct an error in the previous implementing software by calculating depression angles using height above mean sea level, which likely will result in increased predicted coverage areas for certain broadcast stations such as those atop tall mountains.¹³ These changes, even if fully adopted, would still result in the Commission “using the methodology described” in OET-69.¹⁴

As the Public Notice clearly explains,

OET-69 defines certain parameter values for programmers to use when developing the software to implement OET-69’s methodology OET-69 does

⁷ *Id.*

⁸ NAB Ex Parte Notice at 1. *See also id.* at 2 (the Commission is “making substantive alterations to OET-69,” and “overhaul[ing] OET-69”).

⁹ The *TVStudy* software will use 2010 census data, as opposed to the 1990 census data which was, at the time OET-69 was originally implemented, the most current census data available. Public Notice at 3-4. Indeed, it would be *unreasonable* to use 1990 census data to calculate the population served by each broadcast television licensee as of the passage of the Spectrum Act in 2012, since the population of the United States has increased by approximately 24 percent between 1990 and 2010, and the distribution of population also has changed. *Id.*

¹⁰ The *TVStudy* software will use coordinate information that is not rounded or truncated and thus will provide full precision location data. This will increase location accuracy by three orders of precision. *Id.* at 5.

¹¹ Instead of using an assumed number, as in prior iterations of software used to implement OET-69, the *TVStudy* software will use actual data from the FCC’s broadcast licensing database. *Id.* at 4.

¹² The software will use a one-arcsecond terrain database, which has replaced the old three-arcsecond terrain database originally in use when OET-69 implementing software was last developed. *Id.* at 4.

¹³ *Id.* at 5.

¹⁴ NAB asserts in its recent *ex partes* that Section 6403 bars any changes to OET-69, arguing that “Congress plainly intended the Commission to apply OET-69 as it existed at the time of the legislation’s enactment.” NAB Ex Parte Notice at 2 (emphasis in original). Assuming this is the case, the Public Notice is fully consistent with OET-69 as it existed at the passage of the Spectrum Act.

not, however, specify all of the parameters and methods required when developing software to implement OET-69's methodology.... In developing the *TVStudy* software, we have identified various parameter choices consistent with but not specified in OET-69 that we believe are necessary for improved accuracy in our modeling and analysis.¹⁵

Of course, the changes proposed in the Public Notice will and should affect the outcome of the Commission's interference analysis – largely by improving its accuracy.¹⁶ Under the plan set forth in the Public Notice, however, the Commission will still be “using the methodology described in” OET-69 in a manner fully consistent with the Spectrum Act.

B. THE OET-69 IMPLEMENTATION IS PART OF “ALL REASONABLE EFFORTS” TO PRESERVE COVERAGE AS REQUIRED BY SECTION 6403

Congress afforded the Commission flexibility in its repacking analysis by specifying that the Commission must use “all reasonable efforts” to preserve coverage area and population served by repacked stations but not mandating precise replication.¹⁷ The Spectrum Act places important parameters around the Commission's actions, but leaves many implementation decisions to the agency. Interpreting the OET-69 requirement to mean that the Commission must freeze time (for more than 10 years) and use now-obsolete tools and data to implement the Bulletin would not reflect the balance Congress struck in providing the Commission with flexibility in the repacking process; nor does it reflect sound decision-making.

In fact, using the old software implementing OET-69 to analyze interference would be unreasonable and likely impossible. The previous implementation of OET-69 is based “on source code and data from the 1990s and earlier” – ancient in software terms – and cannot provide the interference analysis required.¹⁸ As the Public Notice explains, “identifying specific populations presently subject to interference so that new interference is not created ... requires maintaining a database of interference status at the cell level. The present software implementing OET-69 does not support creation of such a database.”¹⁹ In addition, the Public Notice explains that the previously used three-arcsecond terrain database is “no longer being revised, maintained, or supported by the U.S. Geological Survey.”²⁰

OET intends the *TVStudy* software to remedy such deficiencies and employ a reasonable approach to determining interference, coverage area, and population served. For example, the

¹⁵ Public Notice at 2-3.

¹⁶ *Id.* at 2 (“The choices made in implementing the methodology of OET-69 can produce different results, and such differences can affect a station's coverage area and population served.”).

¹⁷ See CEA Reply Comments, GN Docket No. 12-268, at Section III.B (filed Mar. 12, 2013).

¹⁸ Public Notice at 1.

¹⁹ *Id.* at 3.

²⁰ *Id.* at 4.

TVStudy software generates and uses a global calculation grid that would allow the Commission to directly compare, cell by cell, the interference characteristics of various potential channel allotments and/or stations.²¹ These changes are necessary in order to perform the repacking interference analysis required by the Spectrum Act.²² In addition, the *TVStudy* software seeks to implement OET-69 with far greater accuracy by using updated and improved data as described above. The proposal also cures incomplete or erroneous data, in order to ensure a more accurate interference analysis.²³ These modifications will better enable the Commission to “compute estimates of the coverage area and population served of each broadcast television licensee consistent with the provisions of the Spectrum Act.”²⁴

C. *A CHANGE IN TREATMENT OF FLAGGED CELLS IS PERMITTED BY THE SPECTRUM ACT*

As an initial matter, regardless of which approach the FCC ultimately adopts for the treatment of cells “flagged” by the L-R algorithm as “dubious or unreliable,”²⁵ it will not be a “change in methodology” as NAB asserts.²⁶ Like the parameters and data sets discussed above, the treatment of flagged cells is implementation detail that is not specified in OET-69. While the previous software developed to apply OET-69 in the context of changes to the table of allotments treated flagged cells as served, that treatment is not required by (or even discussed in) OET-69. As a result, OET’s request for comment on how flagged cells should be treated in the context of the incentive auction, and any change in such treatment that may be adopted, is not a change to the “methodology described in” OET-69 and is not inconsistent with the Spectrum Act’s mandate to use the methodology described in OET-69.²⁷

²¹ *Id.* at 5.

²² *Id.* at 2, n.3 (“The *TVStudy* software will allow us to produce television station service and interference data that, under the proposals in the Incentive Auction NPRM, will serve as an input to the algorithms that will be used to select operating channels.”).

²³ *Id.* at 4.

²⁴ *Id.* at 3. There are other benefits to the new software. Unlike the old implementation, the *TV Study* software can be downloaded and installed on modern machines, and it takes advantage of the many advances in user interface design since the previous software was developed. These advances will enable potential auction participants – including broadcasters – to gain a clearer picture of the repacking process, as they can try out different scenarios for themselves.

²⁵ The past software implementation of OET-69 treated such cells as having coverage, an assumption which the Public Notice called “not unreasonable” in light of the results of other propagation models. *Id.* at 6. The Public Notice asks if this is the appropriate approach to implement OET-69 for the purposes of incentive auction, or if other approaches might better estimate the coverage and population served of such cells.

²⁶ NAB Ex Parte Notice at 3.

²⁷ NAB argues that the Commission has previously described a change to the treatment of flagged cells as a change in the OET-69 methodology. *Id.* at 3 n.3 (citing *Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, 16 FCC Rcd 5946, 5972 (2001) (“*DTV Conversion Order*”). In the case cited by NAB, however, the Commission appears to have been using the word “methodology” generically to refer to the entire interference calculation process; indeed, OET-69 is not even mentioned in the Commission’s discussion of the change being considered in that case. In contrast, the Spectrum Act’s use of the word “methodology” is qualified by

Moreover, the Commission has the discretion to treat flagged cells differently based upon the underlying purpose of the coverage analysis. OET has used L-R analysis for a number of purposes and has treated flagged cells differently depending on the policy goals at hand. For example, in the out-of-date implementation of OET-69, which OET uses primarily to evaluate proposed changes to the DTV Table of Allotments, flagged cells are assumed to be covered by the broadcast signal. There, the Commission explained that treating flagged cells as having coverage fits with the Commission's standing presumption that service is available within the Grade B contour of a station.²⁸ That approach makes sense in that context because Table of Allotment decisions weigh the interests of broadcasters, and this simplifying assumption with regard to flagged cells would not, on average, advantage one broadcaster over another. In other cases, OET has treated flagged cells differently.²⁹ For example, OET Bulletin Nos. 72 and 73, which use the L-R model to estimate the intensity of digital television signals at specific locations to comply with the Satellite Home Viewer Improvement Act of 1999 ("SHVIA") and the Satellite Television Extension and Localism Act of 2010 ("STELA"), treat flagged cells as if they were not flagged at all, and rely on the calculated field strength within those cells to determine coverage.³⁰ This difference in implementation software programs is due to different objectives of OET-72 and OET-73. For example, when using the L-R analysis for SHVIA purposes, if a household is deemed served by a station it becomes ineligible to receive satellite carriage of certain other stations. In that situation, assuming coverage of flagged cells (as the previously implementation software program for OET-69 did) could eliminate access to service for some consumers. Therefore, by treating flagged cells differently than it did in the implementing software for OET-69, the Commission could better achieve its objectives.

In the incentive auction context, the Spectrum Act emphasizes the need to clear spectrum, provided "all reasonable efforts" are taken to preserve service area. OET has therefore properly sought input on the appropriate way to handle flagged cells in the incentive auction analysis.³¹ If

the phrase "described in OET Bulletin 69." Spectrum Act § 6403(b)(2), 126 Stat. at 226. As noted above, OET-69 does not prescribe, or even address, how the Commission should treat flagged cells.

²⁸ *DTV Conversion Order*, 16 FCC Rcd at 5972 n. 121.

²⁹ FCC, *The ILLR Computer Program*, OET Bulletin No. 72, at 3 (July 2, 2002) ("OET-72"), available at http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet72/oet72.pdf ("The parameters to be used in a computer implementation of the ILLR model for SHVIA purposes are mostly the same as were used for DTV purposes, with only a few exceptions, stemming from their somewhat different objectives."); OET, FCC, *The ILLR Computer Program for Predicting Digital Television Signal Strengths at Individual Locations*, FCC/OET-73, at 5 (Nov. 23, 2010) ("OET-73"), available at http://www.fcc.gov/Bureaus/Engineering_Technology/Documents/bulletins/oet73/oet73.pdf.

³⁰ Public Notice at 5-6; OET-72 at 3; OET-73 at 5.

³¹ NAB asserts that "one of the same changes proposed in the Public Notice – regarding 'flagged cells' – has been addressed twice previously by the Commission and rejected both times." NAB Ex Parte Notice at 3. The determination made in those cases does not dictate the outcome here. In fact, the cases NAB cites demonstrate exactly the point we are making – that the determination as to how to implement OET-69 regarding the treatment of flagged cells is situational and depends on the policy goals being addressed. See *DTV Conversion Order*, 16 FCC Rcd at 5972 ("We recognize that this is a very complicated analysis. We have found it necessary to balance ideas

the FCC concludes that a different approach to flagged cells is more appropriate in the context of repacking, there is no reason it cannot make such a change to the implementing software while continuing to use the methodology of OET-69.

II. THE COMMISSION SHOULD CONTINUE TO MOVE FORWARD WITH RULES AND CONDUCTING THE INCENTIVE AUCTION

The Commission has a substantial amount of work before it to implement the Spectrum Act in general and its incentive auction authority in particular. It should not be delayed by arguments that are inconsistent with the balanced approach reflected in the Spectrum Act – a statute whose terms were intensely negotiated and resulted in this careful balance – by the very same parties that now seek to change its terms.

The Commission also should not be swayed by attempts to delay progress on the incentive auction by calling for a separate rulemaking proceeding with respect to the *TVStudy* software. OET has released the *TVStudy* software far enough in advance of the auction, and has provided ample time for interested parties to test the software in order to enable those parties to provide constructive input regarding the software's performance. Contrary to NAB's assertions, the Public Notice provides additional clarity to broadcasters regarding the repacking process, because they can now determine the coverage areas the Commission will use in its repacking analysis.³² There is no need for any additional regulatory hurdles to accomplish the FCC's goals.

Once the comment cycle on the *TVStudy* Public Notice concludes, OET should incorporate any constructive input regarding the use of the *TVStudy* software and move forward. That process should not delay the Commission's adoption of rules to conduct the incentive auction, as mandated by the Spectrum Act and the public interest.

* * * * *

and recommendations for refining the program with the disruption and uncertainty that would occur when a change is made. In the case of each of these proposals, we believe that the disruption of altering the program would be more severe than warranted by the possible improvement in the accuracy of the analysis results provided by the program.”); *Advanced Television Systems and Their Impact upon the Existing Television Broadcast Service*, 13 FCC Rcd 7418, 7489 (1998) (“With regard to the petitioners’ concerns regarding the treatment of out-of-range calculations, we believe that the assumption of service is appropriate where the Longley-Rice propagation model indicates that service calculations are unreliable. We note that we generally assume service is available within the Grade B contour and since only cells within the Grade B contour are investigated, a presumption of service would appear to be reasonable in such cases.”). With the Public Notice, OET is appropriately engaging in the fact gathering required to make a similar determination regarding the treatment of flagged cells in the context of the incentive auction analysis.

³² NAB asserts that OET's proposed changes will create uncertainty for broadcasters prior to the incentive auction because they will not know what it is they have to auction and that such changes therefore should not be implemented at this time. As the broadcast incentive auction is likely 18 months off, and the *TV Study* software has already been available for weeks, this claim must be summarily rejected.

Marlene H. Dortch

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This letter is submitted pursuant to Section 1.1206(b)(2) of the Commission's rules. Please do not hesitate to contact the undersigned with any questions.

Respectfully submitted,

/s/ Julie M. Kearney

Julie M. Kearney

Vice President, Regulatory Affairs

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