Oral Argument Not Yet Scheduled

No. 14-1154 (consolidated with Nos. 14-1179 and 14-1218)

IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT

NATIONAL ASSOCIATION OF BROADCASTERS, *et al.*,

Petitioners

v.

FEDERAL COMMUNICATIONS COMMISSION and
UNITED STATES OF AMERICA,

Respondents

On Petitions For Review Of Orders Of
The Federal Communications Commission

BRIEF FOR AMICUS CURIAE TELECOMMUNICATIONS INDUSTRY ASSOCIATION SUPPORTING RESPONDENTS AND AFFIRMANCE OF THE ORDERS BELOW

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CERTIFICATE AS TO PARTIES, RULINGS, AND RELATED CASES

Parties and Amici: The parties in these consolidated cases (No. 14-1154, 14-1179, and 14-1218) are Petitioners the National Association of Broadcasters ("NAB") and Sinclair Broadcast Group, Inc. ("Sinclair"); Respondents the Federal Communications Commission ("FCC" or "Commission") and the United States of America; and Intervenors CTIA – The Wireless Association, the Competitive Carriers Association, and the Consumer Electronics Association.

There are no *amici* currently participating in these cases. In a motion accompanying this brief, the Telecommunications Industry Association ("TIA") requests leave to participate as *amicus curiae*.

Rulings Under Review:

(1) Report and Order, *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, 29 FCC Rcd. 6,567 (2014) [JA __]

(2) Declaratory Ruling, *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, 29 FCC Rcd. 12,240 (2014) [JA __]

Related Cases: Three cases (listed above) have been consolidated in this Court. TIA is not aware of any other related cases pending before this Court or any other Court.

CORPORATE DISCLOSURE STATEMENT

Pursuant to Federal Rule of Appellate Procedure 26.1 and this Court's Rule 26.1, the Telecommunications Industry Association ("TIA") states as follows:

TIA is a nonprofit, incorporated association of manufacturers and suppliers of information communications technology ("ICT") products and services. It has no parent company, and has not issued any shares or debt securities to the public; thus no publicly held company owns ten percent or more of its stock. As a continuing association of numerous organizations operated for the purpose of promoting the interests of its membership, TIA is a trade association for purposes of D.C. Circuit Rule 26.1.

CERTIFICATE REGARDING AUTHORSHIP

Pursuant to Federal Rule of Appellate Procedure 29(c)(5), TIA certifies that no party's counsel authored this brief, in whole or in part; that no party or party's counsel contributed money that was intended to fund preparing or submitting the brief; and that no person other than TIA contributed money that was intended to fund preparing or submitting the brief.

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GLOSSARY

ANSI	American National Standards Institute
APA	Administrative Procedure Act
AWS	Advanced Wireless Services
Commission or FCC	Federal Communications Commission
DTV	digital television
ESSA	Environmental Sciences Services Administration
ICT	Information and Communications Technology
NAB	National Association of Broadcasters
NTSC	National Television System Committee and the former analog television system
MHz	megahertz – a measurement of frequency equivalent to one million cycles per second
NTIA	National Telecommunications and Information Administration
OET	Office of Engineering and Technology
OET-69	FCC Office of Engineering and Technology Bulletin No. 69 [JA __]
Order	*In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, 29 FCC Rcd 6567 (2014) [JA __].

SHF	super-high frequency – a designated part of the radio spectrum
Spectrum Act	Middle Class Tax Relief and Job Creation Act of 2012, Title VI, Pub. L. 112-96, 126 Stat. 156, 201 (Feb. 22, 2012)
TIA	Telecommunications Industry Association
UHF	ultra-high frequency – a designated part of the radio spectrum
VHF	very-high frequency – a designated part of the radio spectrum

INTEREST OF *AMICUS CURIAE*

The Telecommunications Industry Association ("TIA") is the leading trade association representing the manufacturers and suppliers of information communications technology ("ICT") products and services. TIA member companies develop, manufacture, and supply antennas, wireless devices such as cell phones and tablets, routers, data switches, cabling, and other products to individual consumers, communications service providers, corporations, and governments. TIA member companies have expertise regarding radio propagation modeling, including how such models are used by regulators, spectrum licensees, and other stakeholders. TIA member companies are also leading developers of commercial software and hardware.

TIA and its members work regularly with various agencies, most notably the Federal Communications Commission ("FCC") and its Office of Engineering and Technology ("OET"), on issues regarding rules and standards for ICT equipment. TIA itself is also a standards-development organization accredited by the American National Standards Institute ("ANSI"), an organization that oversees the development of voluntary consensus standards for products and services.

TIA is concerned that the relief sought by Petitioners would substantially delay or disrupt the FCC's plans to conduct the voluntary incentive auction, since the ability to instantly evaluate potential repacking of television stations as the

number of stations to be repacked declines is a critical part of conducting a successful auction. Since demand for wireless broadband is growing rapidly and since ICT products and services will be used to deploy new wireless networks and services following the auction, consumers and TIA member companies would be harmed by any such delay or disruption. TIA is also concerned that Petitioners' arguments regarding the FCC's *TVStudy* software fail to appreciate the difference between the statutorily-mandated propagation model, as distinct from data inputs (such as population) and the software used to run that model. Finally, TIA believes that the process used to adopt the new software tool fully satisfies Administrative Procedure Act ("APA") requirements.

In an accompanying motion, TIA respectfully requests permission to file this brief with the Court.

ARGUMENT

I. Delaying the Incentive Auction Would Exacerbate the "Spectrum Crunch."

TIA respectfully urges the Court to resolve this matter expeditiously and to deny the Petitions for Review. The first-of-its-kind voluntary incentive auction of broadcast television spectrum represents the best near-term opportunity to deploy new, high-quality spectrum for commercial mobile broadband services. Because of this, the Commission has been working as rapidly as possible to implement the very complex task assigned to it by Congress, including adopting the main order

under review. Report and Order, *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, FCC 14-50, 79 Fed. Reg. 48,442 ("*Order*"). A lengthy appeal process, or a decision requiring the FCC to revise software to be used in the voluntary incentive auction, would delay the proposed 2016 auction start to the detriment of the telecommunications industry and the American public in the form of lower-quality mobile broadband service.

A. The Need for More Commercial Mobile Broadband Spectrum is Urgent.

Consumers and businesses are increasingly relying on wireless technologies, a fact that creates tremendous opportunities while posing immense challenges for ICT manufacturers and suppliers, commercial wireless service providers, and regulators that are trying to keep pace. In just seven short years, smart phones have become "such a pervasive and insistent part of daily life that the proverbial visitor from Mars might conclude they were an important feature of human anatomy." *Riley v. California*, 573 U.S. __, 134 S.Ct. 2473, 2484 (2014). More recently, since the introduction of Apple's first iPad in 2010, larger-screen "tablet" devices have created a massive demand for video content, while spurring increased use of two-way video communications.

Driven by this rapid surge in demand – and primarily by increased consumption of high-quality mobile video – wireless data traffic is increasing at an exponential rate. Global mobile data traffic increased by 81 percent in 2013 *year*

over year, and U.S. mobile data traffic alone is projected to increase 8-fold from 2013 to 2018, a compound annual growth rate of 50 percent. *See* Cisco, *Visual Networking Index (VNI)*.[1] Spectrum is the lifeblood needed to power this increase, but it is an extremely scarce resource with most easily-accessible bands already having been allocated. *See, e.g.*, Remarks of FCC Chairman Julius Genachowski, October 7, 2009, at 4, 6 ("Genachowski Remarks") (stating that "the biggest threat to the future of mobile in America is the looming spectrum crisis," and that "there are no easy pickings on the spectrum chart").[2]

As a consequence, pent-up commercial demand for mobile broadband spectrum has reached extraordinary levels. The Commission is currently conducting an auction of Advanced Wireless Services ("AWS") spectrum that has been reclaimed in part from federal government users – the first major spectrum auction since 2008, soon after the launch of the original iPhone. The results of the AWS auction are not yet known, but given the band design and license sizes,

[1] http://www.cisco.com/c/en/us/solutions/service-provider/visual-networking-index-vni/index.html (visited 12-18-2014)

[2] Available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-293891A1.pdf

industry analysts do not expect that all carriers desiring more spectrum will be satisfied.[3] Pent-up demand will remain.

The next major auction, set for early 2016, will transition 600 MHz band spectrum from television broadcasting to mobile use. This auction will allow broadcasters to volunteer to give up their spectrum and incentivizes them to do so by offering payment for the spectrum to be sold – hence the term voluntary incentive auction. To be successful, the FCC must match the demand for repackaged 600 MHz spectrum (from the mobile carriers) to the supply (from the broadcasters) while satisfying additional statutory requirements regarding the design of the auction. It is unclear how much spectrum will be cleared in the incentive auction, but at this time the FCC has not identified any additional significant blocks of spectrum that can be cleared for mobile use. Against this backdrop, demand continues to build – driven by the adoption of more powerful devices, larger screens, and faster network technology.

[3] Bidding opened in November 2014 on 65 megahertz of spectrum and continued as of December 22, 2014, with total bids already exceeding $44 billion, easily making it the largest spectrum auction in U.S. history and wildly exceeding all pre-auction predictions. *See* Reinhardt Krause, *Dish Network Stakes High in Spectrum Auction*, Investor's Business Daily website, Oct. 16, 2014 (listing analyst estimates of $15 billion, $17 billion, and $20 billion), http://news.investors.com/technology/101614-722169-dish-network-auction-strategy-eyed.htm?p=2

B. Delaying the Auction Would Harm the ICT Industry and Consumers.

The incentive auction represents the best near-term option to help alleviate the spectrum crunch. To be sure, efforts to identify federal government spectrum for possible transition to commercial use are ongoing, and new spectrum sharing technologies hold great promise, but these efforts typically take years to bear fruit. *See, e.g.*, Joint Statement of NTIA Administrator Lawrence E. Strickling and FCC Chairman Tom Wheeler, November 21, 2014 (noting that the AWS auction resulted from "[y]ears of hard effort");[4] Genachowski Remarks, *supra* pp. 4 & n. 2, at 6 ("it takes years to reallocate spectrum and put it to use"). Moreover, even if successful, those options do not yet hold the same potential for near-term deployment of faster and more reliable networks and devices as the 600 MHz spectrum band.

Recognizing this, Congress enacted the Spectrum Act[5] in 2012 and authorized the FCC to conduct a one-time voluntary incentive auction of over-the-air broadcast spectrum. The Commission has been working assiduously to implement the Spectrum Act, establishing a dedicated Incentive Auction Task Force and consulting both economists and auction specialists for guidance on this

[4] Available at http://www.ntia.doc.gov/press-release/2014/joint-statement-assistant-secretary-commerce-communications-and-information-and-n

[5] Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 125 Stat. 156 (2012)

new and unique undertaking. It has released a flurry of important rules and guidance documents – some now final, some still under consideration – addressing everything from auction mechanics to signal interference issues to the existence of wireless microphones operating in the band. *See* FCC, *Fact Sheet: Summary of Upcoming Proceedings Related to the Incentive Auction*, May 15, 2014[6]

As part of this process, the FCC recognized that its existing software tool to predict the service areas of television stations would not meet the demands of the voluntary incentive auction, since the Commission needs an instantaneous nationwide view of television license repacking for those TV licensees not relinquishing spectrum at each stage of the auction. The prior software will simply not support the requirements of the incentive auction, and if software needs to be redesigned as a result of this appeal, the work of the last two years will need to be scrapped.

This result will further delay the auction and produce harmful effects. First, the ICT industry would be directly affected by delays in construction, particularly since companies have been planning for build-out of the 600 MHz spectrum – towers, back-haul cabling and infrastructure, consumer devices, etc. – since the Spectrum Act was passed in 2012. Second, consumers would suffer direct harm in the form of reduced quality and reliability of wireless services, most particularly in

[6] Available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-327101A1.pdf

urban areas at greatest risk for congestion. In addition, in an era where "the phrase 'there's an app for that' is now part of the popular lexicon," *Riley*, 134 S.Ct. at 2490, consumers could be harmed by lost or delayed opportunities to use innovative products and services as part of their daily lives.

Against this backdrop, Petitioners respond that since the Spectrum Act gives the Commission until 2022 to conduct the auction, there is no "looming deadline" to conduct the auction, Br. at 28, and that the FCC should simply take more time to reach the same conclusion after first engaging in unspecified "good faith efforts" to achieve Petitioners' desired outcome, Br. at 48. The Commission, to its great credit, has instead recognized the marketplace urgency and moved with all deliberate speed to implement the auction, all while properly and appropriately addressing Petitioners' substantive arguments. After several years of intense work by the Commission and by the private sector in responding to a myriad of complex issues, the Court should give deference to the Commission's decision-making to prevent the harms that will arise from delaying the auction.

II. The Spectrum Act Requires Using the Longley-Rice Methodology, Not Particular Software.

The Spectrum Act's command that the Commission use "the methodology described in OET Bulletin 69," 47 U.S.C. § 1452(b)(2), simply mandates the use of Longley-Rice methodology, and imposes no further requirements on the Commission. Longley-Rice is one of several generally applicable models that

provide predictions regarding how radio signals behave under complex, real-world conditions. It is an algorithmic method based on mathematics and engineering principles, not a software program. Longley-Rice was clearly described by the Commission as a "methodology" when OET-69 was first issued in 1997, *see infra* § II-C.

A. Predicting Radio Signal Propagation is a Complex Task That Benefits From Computer Methods.

All electromagnetic waves – including visible light, infrared, and radio waves such as television broadcast signals – gradually "attenuate" or weaken in strength as the distance increases from the source or transmitter. In free space – that is, space unobstructed by terrain in any direction and unaffected by an atmosphere – the amount of attenuation and resulting signal strength at any particular distance from the transmitter can be readily computed from basic laws of physics. In the physical world, however, determining attenuation is more difficult. As described by National Telecommunications Information Administration ("NTIA") engineers, including one of the authors of the Longley-Rice method:

> Radio propagation in a terrestrial environment is an enigmatic phenomenon whose properties are difficult to predict. This is particularly true at VHF, UHF, and SHF [frequencies] where the clutter of hills, trees, and houses and the ever-changing atmosphere provide scattering obstacles …. The engineer who is called upon to design radio equipment and radio systems does not have available any precise way of knowing what the characteristics of the propagation channel will be nor, therefore, how it will affect operations. Instead, the engineer must be content with one or more models of radio

> propagation – *i.e.*, with techniques or rules of thumb that attempt to describe how the physical world affects the flow of electromagnetic energy.

G.A. Hufford, A.G. Longley, and W.A. Kissack, *A Guide to the Use of the ITS Irregular Terrain Model in the Area Prediction Mode*, NTIA Report 82-100 (1982), at 1 (emphasis in original) ("*1982 NTIA Guide*").[7]

There are many different models for radio propagation designed specifically for particular technologies, and intended for different applications. Some of these models "treat very specialized subjects such as, for example, microwave mobile data transfer in high-rise urban areas," while others such as Longley-Rice "try to be … generally applicable … and to represent, if not all, at least most, aspects of physical reality." *Id.* These models are constantly being improved, or even replaced as new models are announced from academia, specialized consultants, or the wireless industry – all with the "holy grail" of predicting how a particular radio signal will actually behave. *See, e.g.*, Bill Lane, *Tech Topic 17: Propagation Characterization*, FCC Public Safety and Homeland Security Bureau website (visited Dec. 21, 2014) (listing seven different models – Longley-Rice, Edwards-Durkin, Okumura, Hata, Cost-231, "Walfisch and Bertoni," and "Cost 231 and Ikegami").[8] However, developing accurate models remains a challenging task

[7] Available at http://www.ntia.doc.gov/files/ntia/publications/ntia_82-100_20121129145031_555510.pdf

[8] http://transition.fcc.gov/pshs/techtopics/techtopics17.html

because the propagation of any particular radio signal is influenced by many factors, including the radio frequency, transmitter antenna design, weather conditions, solar activity (i.e., "sunspots"), geographical terrain, and even the time of day (*i.e.*, atmospheric ionization).

Since Longley-Rice is designed for general applicability in predicting radio signal propagation over irregular terrain, the actual data to inform any particular use of the model must be supplied by the engineer conducting the particular calculation. Moreover, since it is impossible to exactly account for all the factors described above from the perspective of a receiver (*e.g.*, a television set), statistical methods can prove highly useful, and the Longley-Rice model is "avowedly statistical." *1982 NTIA Guide* at 2. In part for this reason, software is useful to perform the Longley-Rice calculations required to develop an area prediction for a particular broadcast signal.

B. The Longley-Rice Model Exists Independent of Any Particular Software Implementation.

The Longley-Rice model originates in 1965. *See* P.L. Rice, A.G. Longley *et al., Technical Note No. 101 – Transmission Loss Predictions for Tropospheric Communications Circuits*, National Bureau of Standards (emphasis added).[9] The report "presents comprehensive *methods* for predicting cumulative distributions of

[9] *Available at* http://www.cept.org/ForumFiles/STG/5402/657/Tech_Note_101pdf

transmission loss for a wide range of radio frequencies over any type of terrain and in several climatic regions." *Id.* at 1-1. Notably, the report uses the language of mathematics and electrical engineering equations but contains no computer code. Instead, "for most computations both a graphical method [i.e., pencil and paper] and *formulas* suitable for a digital computer are presented." *Id.* at ii (emphasis added). Even so, "many of the calculations are more readily adaptable to computer programming." *Id.*

Three years later, the authors described a "computer method" for implementing the model. *See* A.G. Longley and P.L. Rice, *Prediction of Tropospheric Radio Transmission Loss Over Irregular Terrain – A Computer Method*, ESSA Technical Report ERL 79-ITS 67 (1968).[10] Again written using mathematical and engineering terminology, this report included Fortran code in an annex, *id.* at 3-33 to 3-40, noting that the code was written for a *specific model of computer* and "may require slight modification for use with other computers," *id.* at 3-24 note. The formulas and accompanying software were improved over time, with updated versions of the model and implementing software being released. *See 1982 NTIA Guide* at 17 (enumerating versions released in the 1970s and providing a guide for users).

[10] *Available at* http://www.dtic.mil/cgi-bin/GetTRDoc?AD=AD0676874

The *1982 NTIA Guide* also helpfully describes some relevant terminology regarding the difference between a model and its implementing software:

> "A model is a technique or algorithm which describes the calculations required to produce the results. An implementation of a model is a representation as a subprogram or procedure in some specific computer language. An applications program is a complete computer program that uses the model implementation in some way. It usually accepts input data, processes them, passes them on to the model implementation, processes the results, and produces output in some form."

Id. at 2 (emphasis in original).

More recently, a description of the Longley-Rice *algorithm* that is independent of any programming language has been made available on an NTIA website, along with newer source code to implement the algorithm written in C++, a more modern and widely-used programming language than Fortran. *See* NTIA Institute for Telecommunication Sciences, *Irregular Terrain Model (ITM) (Longley-Rice) (20 MHz - 20GHz)*.[11] Possibly as a consequence, several other software implementations of Longley-Rice now exist, including free online tools. *See, e.g.*, Communications Research Centre of Canada, *Radio Coverage Prediction using Longley Rice*, http://lrcov.crc.ca/main/ (visited Dec. 21, 2014); John A. Magliacane, SPLAT!, http://www.qsl.net/kd2bd/splat.html (visited Dec. 21, 2014); Roger Coudé, *Radio Mobile – RF propagation simulation software*, documented at http://radiomobile.pe1mew.nl/ (visited Dec. 21, 2014).

[11] http://www.its.bldrdoc.gov/resources/radio-propagation-software/itm/itm.aspx

In sum, Longley-Rice originated in a set of mathematical and engineering methods developed without reference to any programming language. It exists today as an algorithm with several available software implementations.

C. OET-69 Provides Guidance on Using the Longley-Rice Methodology, But Is Not *Itself* A Methodology.

The Commission has used Longley-Rice in its various iterations for decades. Of relevance here, OET Bulletin 69 was first released on July 2, 1997,[12] and the accompanying Order from OET's Chief Engineer described it precisely:

> "OET Bulletin No. 69 provides guidance on the implementation and use of Longley-Rice methodology for evaluating DTV and NTSC coverage and interference."

See Order, *Advanced Television Systems and Their Impact on Existing Television Service*, DA 97-1377, 62 Fed. Reg. 37,145 (July 11, 1997), at ¶ 3 ("*1997 Order*");[13] *see also* OET-69 at 1 [JA __]. The Bulletin's issuance was foreshadowed by the Commission's addition, weeks earlier, of the following phrase to the Code of Federal Regulations in several places:

> "Guidance for evaluating coverage areas using the Longley-Rice methodology is provided in OET Bulletin No. 69."

See Sixth Report and Order, *Advanced Television Systems and Their Impact on Existing Television Service*, FCC 97-115, 62 Fed. Reg. 26,684 (May 14, 1997)

[12] The July 2, 1977 date referenced in the 2004 version of OET-69, *see* JA __, is erroneous.

[13] *Available at* https://apps.fcc.gov/edocs_public/attachmatch/DA-97-1377A1.pdf

(including the phrase above in 47 CFR §§ 73.622(e), 73.623(c)(2), 74.703(a), 74.705(e), and 74.707(e)). That is, when OET-69 was first issued, the Commission's description of it on the day of its release and in related rule text both referred to the "Longley-Rice methodology" and described OET-69 itself as providing "guidance" for how to "implement" and "us[e]" that methodology.

This alone resolves Petitioners' claims that the Spectrum Act somehow requires the use of archaic Fortran code, prohibits the Commission from using up-to-date census data or higher-resolution terrain data, or prevents it from adjusting other inputs based on new information. Consulting dictionaries is unnecessary when Congress has legislated against the backdrop of the Commission's prior and clear use of a term, and this Court need not search for broader constructions of statutes that dive so deeply into technical matters otherwise within an agency's area of expertise. The Spectrum Act simply requires the Commission to use "the methodology described in OET Bulletin 69," 47 U.S.C. § 1452(b)(2) – that is, Longley-Rice and not any other methodology, nor the rest of the Bulletin itself – and the Commission has done so.

III. The Commission Provided Sufficient Notice Regarding the *TVStudy* Software.

The public interest is served when the Commission disseminates details about auction processes and solicits the views of affected parties. In the instant case, the FCC did so in a Public Notice that appeared in the auction proceeding

docket and the Federal Register, provided a 45-day comment period, provided further regular updates to the software on its website, and utilized a publicly-accessible list-serve to broadcast further updates. The Commission cast a wide net in providing interested parties notice that it would update its software, obtained feedback on a released version of that software, made improved versions of the software publicly available, and even delivered notices of its actions to interested persons who could sign up for the list-serve to receive updates.

In doing so, it acted properly. To begin with, use of the Longley-Rice methodology itself is required by the Commission's rules and the Spectrum Act, *see supra* § II-C. However, a software program is not a model, methodology, or algorithm; rather, it is a means for implementing a prescribed model, methodology or algorithm. *See supra* § II-B. In that sense, the Commission's use of any particular software version is not a legislative act; it simply reflects the Commission's interpretation at any particular moment regarding how it will implement the required methodology. As such, software alterations that continue to implement a prescribed methodology – Longley-Rice – are covered by the APA exemption for "interpretative rules" and/or "rules of … procedure and practice." *See* 5 U.S.C. § 553(b)(A).

This analytical approach to software tools follows common sense. It is commonly understood that nearly all software programs are regularly updated.

Major operating system vendors such as Apple and Microsoft, or application vendors such as Adobe, routinely issue downloadable patches or upgrades to their software – often based on user feedback – that add new functionality, correct minor errors ("bugs"), or address security vulnerabilities. When agencies act as software developers, *see* Order ¶ 143 [JA __], they should not be straight-jacketed into a requirement that every new software version be subject to notice-and-comment requirements or be published in the Federal Register. That being said, the Commission has required OET to finalize the *TVStudy* software no later than the release of a final Public Notice regarding auction procedures, even as it may continue to update the software and correct minor errors in the interim. Order ¶ 145 [JA __]. This is not a situation in which the agency has removed itself from receiving feedback from key stakeholders.

Instead, OET's actions to update the software used to implement Bulletin OET-69 and to seek comment through a staff-level Public Notice were proper. OET obviously did not intend that a Public Notice announcing the development and use of the *TVStudy* software would bind itself to any particular software version, *i.e.*, prevent updates and patches. The software is available on a public website and update notifications are provided to a *public* list-serve, Order ¶ 143 n. 476, and the agency continues to release refinements based on input obtained through informal channels similar to those described above. It is not a "concealed

target" as Petitioners contend. Br. at 64. Instead, the Public Notice and OET's ongoing refinements allow for a "genuine interchange" among technical experts and interested stakeholders regarding the software implementation details – and certainly do not represent the agency playing "hunt the peanut with technical information, hiding or disguising the information that it employs." *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 236-37 (D.C. Cir. 2008). Petitioners' reliance on *Am. Radio Relay League*, Br. at 62-65, is particularly inapposite as that case involved the agency's redaction of obviously-relevant information from its response to a Freedom of Information Act request. 524 F.3d at 237.

Here, after NAB met with FCC staff to express "serious reservations," Petitioners Br. at 14, the Commission provided an exhaustive explanation – far more than necessary – for its sensible and necessary decision to update the archaic 30-year-old Fortran software. Order ¶¶ 127-147 [JA __]. Indeed, Petitioners concede that if the FCC concludes that the old software is unsuitable for the incentive auction *after* engaging in undefined, additional "good faith efforts" to fit an obviously square peg in a round hole, then the Commission may eventually "fix the bottleneck" with new code. Br. at 48. But the Commission has *already* explained that the unique nature of the incentive auction requires more rapid calculations than are possible with the old software. Respondents' Br. at 31 (citing Order ¶¶ 130-134). In these circumstances, holding the Commission's actions as

violating APA notice-and-comment requirements imposes a difficult, possibly unworkable, precedent for the use of software in conducting spectrum auctions.

CONCLUSION

For the foregoing reasons, the Court should deny the Petitions for Review.

Respectfully submitted,

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December 23, 2014

CERTIFICATE OF COMPLIANCE

Pursuant to the requirements of Fed. R. App. P. 32(a)(7)(B), I hereby certify that the accompanying Brief for *Amicus Curiae* Telecommunications Industry Association was prepared using a proportionally spaced 14 point typeface and contains 3,988 words as measured by the word count function of Microsoft Word 2010.

/s/ Dileep S. Srihari
Dileep S. Srihari

December 23, 2014

STATUTORY ADDENDUM

5 U.S.C. § 553. Rule making

* * * * *

(b) General notice of proposed rule making shall be published in the Federal Register, unless persons subject thereto are named and either personally served or otherwise have actual notice thereof in accordance with law. The notice shall include—

> **(1)** a statement of the time, place, and nature of public rule making proceedings;
>
> **(2)** reference to the legal authority under which the rule is proposed; and
>
> **(3)** either the terms or substance of the proposed rule or a description of the subjects and issues involved.

Except when notice or hearing is required by statute, this subsection does not apply—

> **(A)** to interpretative rules, general statements of policy, or rules of agency organization, procedure, or practice; or
>
> **(B)** when the agency for good cause finds (and incorporates the finding and a brief statement of reasons therefor in the rules issued) that notice and public procedure thereon are impracticable, unnecessary, or contrary to the public interest.

* * * * *

47 U.S.C. § 1452. Special requirements for incentive auction of broadcast TV spectrum

* * * * *

(b) Reorganization of broadcast TV spectrum

(1) In general

For purposes of making available spectrum to carry out the forward auction under subsection (c)(1), the Commission—

(A) shall evaluate the broadcast television spectrum (including spectrum made available through the reverse auction under subsection (a)(1)); and

(B) may, subject to international coordination along the border with Mexico and Canada—

(i) make such reassignments of television channels as the Commission considers appropriate; and

(ii) reallocate such portions of such spectrum as the Commission determines are available for reallocation.

(2) Factors for consideration

In making any reassignments or reallocations under paragraph (1)(B), the Commission shall make all reasonable efforts to preserve, as of February 22, 2012, the coverage area and population served of each broadcast television licensee, as determined using the methodology described in OET Bulletin 69 of the Office of Engineering and Technology of the Commission.

* * * * *

CERTIFICATE OF SERVICE

I, Dileep S. Srihari, hereby certify that on December 23, 2014, I electronically filed the foregoing Brief for *Amicus Curiae* Telecommunications Industry Association with the Clerk of the Court for the United States Court of Appeals for the D.C. Circuit using the appellate CM / ECF system. I also hereby certify that I caused 5 copies to be hand delivered to the Clerk's Office pursuant to Circuit Rule 31(b). Participants in the case who are registered CM / ECF users will be served by the CM/ECF system:

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