

**DISSENTING STATEMENT OF
COMMISSIONER AJIT PAI**

Re: *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*,
GN Docket No. 12-268.

When the Commission adopted its Notice of Proposed Rulemaking (NPRM) in this proceeding twenty months ago, I shared several principles that would guide my deliberations.¹ In particular, I said that we should keep the auction as simple as possible, be fair to all stakeholders, and remain faithful to the statute passed by Congress.

Unfortunately, this item strays from each of these principles. In both the reverse and forward auction, the Commission forsakes simplicity for unnecessary complexity, primarily for the purpose of manipulating the market to suit its chosen ends. The rules that we adopt are not fair to many important constituencies, including taxpayers, public safety officials, broadcasters, rural Americans, and those wireless carriers that have chosen to participate in past auctions. And the Commission at key junctures substitutes its own policy preferences for the direction provided by Congress in the Spectrum Act. For all of these reasons, I respectfully dissent.

I.

Let's start with simplicity. The world's first spectrum incentive auction was always going to be complicated. There are many pieces of the puzzle that have to fit together for this project to succeed, including a reverse auction, a forward auction, and a repacking plan. Doing any one of these things individually would be a significant undertaking for the Commission. Doing all of them in unison is a daunting proposition indeed. The Chairman has aptly compared this to solving a Rubik's Cube.

That's why I thought that it was important for the Commission to keep the incentive auction as simple as possible. We do not need to introduce unnecessary complexities that could lead to failure. But this item makes precisely that error.

A.

Take, for example, the reverse auction. Pursuant to this item, the Commission will be setting individualized prices for each participating broadcast station (keep in mind that there could be over a thousand such stations) through a process known as scoring. How, specifically, will the Commission value each broadcast station's spectrum? That is unclear, to say the least. At one point, the Commission tells us that the price "takes into account objective factors, such as location and potential for interference with other stations, that affect the availability of channels in the repacking process and, therefore, the value of a station's bid to voluntarily relinquish spectrum usage rights."² Later on, the item says that "[p]ossible factors include the number of stations that a station would interfere with and block from being assigned channels, the population the station covers, or a combination of such factors."³

The Commission's market manipulations don't stop there. It also decides to intervene in the middle of the reverse auction through something called a dynamic reserve price. Specifically, if the Commission concludes that a participating broadcast station's provisionally accepted bid is too high due to a lack of competition, the Commission will unilaterally lower the price offered to that station.

¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, 12557 (2012) (*NPRM*) (Statement of Commissioner Ajit Pai, Approving in Part and Concurring in Part).

² *Report and Order* at para. 450.

³ *Id.* at para. 451 (footnotes omitted).

How will the Commission determine when to impose a dynamic reserve price (or what that price will be)? The item leaves that question for another day. But the concept itself is guaranteed to generate considerable consternation, and implementation will be even more challenging. What happens if a bidder refuses to accept a lower price and chooses to exit the reverse auction? The Commission must find a channel placement for that station, creating more impaired spectrum in the forward auction and lowering the revenues it will generate.

It is not the Commission's place to impose a value on particular stations in the reverse auction. An auction should be a market-based mechanism where prices are set through competitive bidding, not centralized planning. We should let prices be set by supply and demand, not a complicated formula—no matter how distinguished the economists who crafted it might be. Market forces are the more likely route to success.

This is why we should adopt a simultaneous multiple round format for the reverse auction, a format with which the Commission is well-acquainted. Such a process would be simple—no scoring, no dynamic reserve pricing. Each participating broadcast station would make its own opening bid. Using those bids, the Commission would calculate the optimal way to meet the spectrum clearing target. Participants would be told which, if any, of their bids are provisionally winning. Losing bidders could then lower their asking prices. This process would repeat itself until no participating broadcast station is willing to lower its bid.

In addition to eschewing the complications of scoring and setting dynamic reserve prices, this proposal has several advantages compared to the Commission's complicated descending-clock format.⁴ Most importantly, it would encourage more participation by broadcasters in the reverse auction. Under my plan, broadcasters could name their own price in the opening round. Under the Commission's plan, by contrast, broadcasters may be deterred from entering the auction if they are dissatisfied with their Commission-set score.

My proposal has other advantages. For instance, under my plan, we could optimize the repacking of broadcast stations. Under the Commission's plan, optimization is impossible, and we will be reduced to checking only whether various repacking scenarios are feasible. Under my plan, participants could simultaneously place bids on different options, such as relinquishing spectrum and moving to VHF. The Commission has no plan for handling multiple bids. Under my plan, bids in the reverse auction could carry over from one stage to the next. The Commission hasn't decided how that would work. My plan would also minimize the cost of clearing each spectrum target, thus producing more net revenues and increasing the amount of spectrum that could be cleared. The Commission's plan will not.

B.

In the forward auction, there are yet more rules designed to manipulate the market. In my

⁴ Simple clock auctions (as adopted herein) are designed to efficiently allocate multiple copies of homogeneous goods among multiple bidders. See, e.g., Lawrence M. Ausubel, *An Efficient Ascending-Bid Auction for Multiple Objects*, 94 *American Economic Review* 1452 (Dec. 2004). By contrast, clock auctions of heterogeneous goods must include dynamic price vectors that can increase or decrease to be efficient. See Lawrence M. Ausubel, *An Efficient Dynamic Auction for Heterogeneous Commodities*, 96 *American Economic Review* 602 (June 2006). A simple clock auction cannot adequately account for the fact that each broadcaster offers a unique good—the value of which depends not only on that broadcaster's interference patterns and estimated repacking costs but also on the constantly-evolving bids, interference patterns, and estimated repacking costs of every other broadcaster in the country. Nor can the scoring and dynamic reserve prices adopted today remedy this underlying design flaw.

statement on the mobile spectrum aggregation item, I will set forth in detail why I believe that the bidding restrictions placed by the Commission on wireless carriers in the forward auction are unnecessary, will depress revenues, and will delay build-out to the detriment of consumers. Here, I will just focus on the issue of complexity.

My vision of the forward auction is as straightforward as eBay's. Let *anyone* bid on *any* block of spectrum and let the highest bidder win. This system has served the Commission well in past auctions, and I am confident that it would work here as well.

The Commission's vision is more difficult to explain. Bidding in the forward auction will start off on the right foot. But once bids reach a certain amount, a complex set of restrictions will kick in. Specifically, certain blocks of spectrum in a given Partial Economic Area (PEA) will be reserved for nationwide carriers with less than one-third of low-band spectrum in that PEA or non-nationwide carriers, while other blocks of spectrum will be open to all bidders. And that's not all. Should there be insufficient demand for so-called "reserved spectrum," then some or all of it could become unreserved once again.

This complicated scheme provides the Commission with at least three levers for manipulating the market in order to pick winners and losers. First, the Commission must choose at which point spectrum will be divided into reserved and unreserved blocks. Second, the Commission must decide how much spectrum will be placed in the reserved and unreserved spectrum buckets for each clearing target. Those seemingly arbitrary decisions are made in the mobile spectrum aggregation item. And third, the Commission must decide when formerly reserved spectrum will become unreserved due to a lack of demand.

This scheme does not reflect faith in the market. And I fear it will take us down a road the Commission has traveled before. In the 700 MHz auction, for example, the Commission drafted elegant and well-intentioned rules for the D-Block, designed to facilitate the construction of a nationwide, interoperable public-safety broadband network. And what did these complicated rules produce? Nothing other than a failed D-Block auction—and, ironically, a 2012 statutory mandate to conduct an incentive auction partly to fund construction of that same network.

II.

Turning from simplicity to fairness, I have indicated repeatedly that the Commission must treat all stakeholders in a just manner. Unfortunately, today's order also fails this critical test.

A.

Most importantly, this item is unfair to taxpayers and public safety officials. Congress charged the FCC with the twin goals of pushing new spectrum into the commercial marketplace and raising \$27.95 billion for two critical national priorities: public safety and deficit reduction. Regarding the former, a successful auction will deliver not just the \$7 billion in funding Congress specified for FirstNet but also the \$135 million it marked for state and local public safety officials, the \$300 million it identified for the research and development of wireless public safety communications, and the \$115 million it sought for the deployment of Next Generation 911.⁵

As for deficit reduction, our upcoming auctions, including the incentive auction, hold the promise of raising more than \$20 billion to help reduce our national debt.⁶ Just yesterday, Senators John Cornyn, Charles Schumer, John Thune, and Sherrod Brown called these funds a "critical return for the sale of a

⁵ See Spectrum Act § 6413(b)(2), (4), (6), & (7).

⁶ *Id.* § 6413(b)(5).

valuable taxpayer asset.”⁷ Indeed, Congress counted on us meeting this target when it passed the Spectrum Act, so much so that it already spent those funds. If we don’t meet it, the Commission will be responsible for increasing the budget deficit above the Congressional Budget Office’s current projections.

I am therefore disappointed that the Commission is not structuring the incentive auction to maximize net revenues. To be sure, the item does attempt to raise money for FirstNet, and in some ways this is an improvement over the proposal set forth in the NPRM. But what about deficit reduction? What about the deployment of Next Generation 911? What about wireless public safety communications research and development? The unmistakable message of today’s item is that these priorities don’t matter.

It would have been easy for us to establish auction rules that would have maximized net revenues. The incentive auction would contain a minimum of two stages, and the auction would continue until a stage raised less net revenues than the preceding stage. At that point, the outcome of the preceding stage would yield the final results of the auction. By contrast, the rules contained in this item will end the auction after any stage where we can cover necessary funds for FirstNet, pay broadcasters in the reverse auction, and deposit \$1.75 billion into the relocation fund.

My approach would have raised more money for the important national priorities contained in the Spectrum Act. In particular, it would have been better for FirstNet. Suppose, for example, that we head into this auction still needing to raise \$4 billion for FirstNet, but no stage of the auction is able to produce more than \$3 billion in net revenues. Under the Commission’s approach, the incentive auction would fail and produce no money for FirstNet. Under my approach, the auction would succeed and FirstNet would receive \$3 billion. As they say, a bird in the hand is worth two in the bush.

Maximizing net revenues is also the right call from an economic perspective. Spectrum should be directed to its highest value use. In some ways, that is what the concept of an incentive auction is all about. So if we must pay broadcasters \$500 million to clear a channel for which wireless carriers are prepared to pay \$1 billion, that’s not just a win for the taxpayers but also an efficient allocation of resources. However, once we reach the point where we are paying broadcasters \$1 billion to clear a channel for which wireless carriers are only prepared to pay \$500 million, that’s a loss to the taxpayers and an inefficient allocation of resources. But that’s precisely what could happen under the rules adopted by the Commission today.

B.

This order also treats unfairly those broadcasters that choose not to participate in the auction. Congress established a \$1.75 billion fund to reimburse the relocation expenses of broadcasters that choose to stay in business and will be required to relocate as a result of the incentive auction.⁸ And, in my view, the Commission should have adopted a \$1.75 billion budget for any repack.⁹ But the Commission declines to establish any limit on estimated repacking costs. As a result, the incentive auction may produce a repacking plan that will cost \$2 billion or \$3 billion to implement, with repacked broadcasters stuck footing much of the bill.

⁷ Letter from Hon. John Cornyn, et al. to Hon. Thomas Wheeler, Chairman, FCC (May 14, 2014).

⁸ See 47 U.S.C. § 309(j)(8)(G)(iii)(I). This fund will also reimburse multichannel video programming distributors for expenses incurred in order to continue carrying repacked broadcast television stations. See Spectrum Act § 6403(b)(4)(A)(ii).

⁹ Because it will not be possible beforehand to calculate precisely the cost of the repack, I would have adopted a \$1.75 billion budget for the estimated costs.

This outcome would be unfair. Broadcasters that do not participate in the incentive auction are not asking for special treatment. They are not asking to be among the many winners of a successful incentive auction. Whereas wireless carriers will obtain beachfront spectrum for mobile broadband and participating broadcasters may receive substantial amounts of money, non-participating broadcasters are simply asking to be held harmless rather than being made losers. This is a reasonable request, and we should have granted it.

Indeed, I believe that this was Congress's intent. Remember that Congress specifically provided that participation in the incentive auction would be voluntary.¹⁰ But if broadcasters that stay in business cannot recover their relocation costs, is the incentive auction truly voluntary? Think about the following scenario. I inform you that you aren't going to be allowed to stay in your house and give you a choice. Either you sell me your house or I'll seize it but give you a replica of your house for free on the lot next door. Now imagine that I present you with a different choice: Either you sell me your house or I'll seize it and give you a replica of your house on the lot next door so long as you kick in \$40,000 to help defray the construction costs. Under the second scenario, am I not coercing you into selling your house?

C.

I am also concerned that today's order is unfair to rural Americans. Those who live in rural areas often rely on translators for free, over-the-air television service. The incentive auction will require many of these translators to relocate, and some may disappear entirely because there will not be room for them once spectrum is reallocated and television stations are repacked.

There is nothing that the Commission could have done to avoid these consequences entirely. But we could have done more to mitigate their impact. Specifically, when the time comes for the Commission to find room for low-power television stations and translators after repacking, we proposed in the NPRM to give a preference to applicants providing a community with its only local, over-the-air television service.

I am disappointed that the Commission rejects taking even this modest step in today's item. The fair distribution of broadcast stations has been at the core of the Commission's policies for decades, both with respect to radio and television. That policy no more implicates First Amendment concerns than our longstanding preferences for radio stations providing a community with its first or second aural service.¹¹ But we turn our back on that policy today.¹² As a result, there is a greater risk that some Americans will be left without *any* over-the-air television service after the incentive auction. This is wrong. As is too often the case, rural America may be left behind.

D.

Additionally, I do not believe that the bidding restrictions we adopt today are fair to those carriers that have participated in past FCC auctions for low-band spectrum. The Commission today prevents

¹⁰ See Spectrum Act § 6403(a)(1).

¹¹ See, e.g., *Revision of FM Assignment Policies and Procedures*, BC Docket No. 80-130, Second Report and Order, 90 FCC 2d 88 (1982).

¹² To be sure, the item points out that the Commission's policies promoting the fair distribution of broadcast stations have not traditionally applied to low power television stations and translators. See *Report and Order* at note 1867. But that decision was based, in part, on the existence of a full service television allotment scheme that was informed by those policies. See *Low Power Television and Television Translator Service*, 2 FCC Rcd 1278, 1281 (1987). And because the incentive auction will change that allotment scheme for full-power stations *without regard* to the Commission's fair distribution policies, it only makes sense to take the relatively minor step of providing a preference for displacement applications filed by low power television stations or translators that would provide a community with its only local, over-the-air television service.

nationwide carriers with at least one-third of the low-band spectrum in a given PEA from bidding for certain blocks of spectrum in that PEA. But carriers didn't commandeer that spectrum. In many cases, they bought licenses to use it at spectrum auctions.

AT&T and Verizon, for example, spent billions of dollars purchasing spectrum in the 700 MHz auction. Their participation was a good thing. It helped to make the auction a success and raised substantial amounts of money for the Treasury. And that spectrum is being used today to deliver high-speed 4G LTE service to Americans across the country. But today, we are effectively penalizing these carriers for their past participation in that auction by limiting their ability to bid in this auction.

And who do these restrictions benefit? Carriers that chose to sit out the 700 MHz auction. To be clear, that was their decision, and I do not fault them for it. It is certainly not my position to weigh in on corporate strategy. But I do object to rewarding these carriers for their failure to bid in prior auctions, as we are doing here.

To summarize, the Commission is punishing past bidders with new restrictions and rewarding those who have not participated before with set-asides. In my view, this policy creates perverse incentives. Our goal should be to encourage robust participation in *all* of our auctions rather than holding open the prospect that those who forgo participation will qualify for special favors in future auctions.

III.

Shifting from fairness to the rule of law, I do not believe that this item stays faithful to the terms of the Spectrum Act. Most importantly, our rules run afoul of Congress's mandate during the repacking process, 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 licensee, *as determined using the methodology described in OET Bulletin 69 [OET-69] of the Office of Engineering and Technology of the Commission.*"¹³

In this item, the Commission decides to use, for repacking purposes, *TVStudy* software that departs in several respects from the methodology described in OET-69. To be clear, from a policy perspective, I generally agree with the Commission's decisions in this regard. For the most part, these departures from the OET-69 methodology appear to be changes for the better. I fear, however, that they will be all for naught if a court postpones or invalidates the incentive auction having found these changes to be unlawful.

To be sure, the item spends about fifteen pages explaining why the Commission is not straying from the OET-69 methodology and thus is complying with the Spectrum Act. I know firsthand that the attorneys in our Office of General Counsel are extremely talented, and they have certainly done yeoman's work here in developing arguments to support the Commission's position. But at the end of the day, they are trying to fit a square peg into a round hole.

For the most part, the item posits that the Commission is changing "input values" rather than the OET-69 "methodology." But it is unable to point to any Commission precedent distinguishing between the two. Indeed, this argument stands in stark contrast to prior Commission pronouncements.

Consider, for example, the issue of census data. The item maintains that census data represents an input value rather than part of the OET-69 methodology. Accordingly, we are free to substitute 2010 census data for 2000 census data. But this contradicts the position taken by the FCC in 2007 before the DTV transition. Then, the Commission stated as follows: "We will revise the OET 69 interference analysis *methodology* to make the results more accurate and ensure consistent methodology. Specifically,

¹³ See Spectrum Act § 6403(b)(2) (emphasis added).

we adopt the use of 2000 census data for use in all applications”¹⁴ In other words, we have previously recognized that switching census data means revising the OET-69 methodology.

Or take the default vertical antenna patterns set forth in Table 8 of OET-69. In 2006, the Commission described these default vertical antenna patterns as “inherent in the OET-69 methodology.”¹⁵ In this item, however, the Commission decides to use the actual beam tilt value contained in our Consolidated Database System rather than the default patterns, criticizing the latter as “using the same electrical beam tilt for every location, regardless of the actual beam tilt value.” This might very well be a positive change. But the Commission’s own words, it is not only a change to the OET-69 methodology, but something inherent in that methodology.

Indeed, the Commission considered making a similar change just before the DTV transition. In 2007, it considered whether to “retain the existing OET 69 vertical pattern” or use “actual vertical patterns” that “would result in more accurate modeling of station coverage.”¹⁶ And it rejected making such a change in a section with the following heading: “Post-Transition Interference Standards and Analysis *Methodology*.”¹⁷

Given that Congress specifically instructed the Commission to use a discrete methodology (the OET-69 methodology) for a discrete event (the incentive auction), the item understandably does not claim that we have the authority to depart from the OET-69 methodology explicitly. But neither do we have the authority to do so through sleight of hand. We can’t take elements that were part of the OET-69 methodology at the time the Spectrum Act was passed and simply assert by fiat that they are no longer part of that methodology but merely inputs.

But even absent Commission precedent, I would still reach the conclusion that many of the changes made in this item are unlawful. For instance, take the issue of whether to use three arc-second terrain elevation data or one arc-second terrain elevation data. The methodology described in OET-69 clearly involves the use of three arc-second data. OET-69 states that “[t]he FCC computer program is linked to a terrain elevation database with values every 3 arc-seconds of latitude and longitude.”¹⁸ Today, however, the Commission adopts the use of one arc-second terrain elevation data instead. The item justifies this change by arguing that OET-69’s reference to three arc-second data “is a descriptive statement about an input database . . . not a prescriptive element of the OET-69 methodology.”¹⁹ This,

¹⁴ *Third Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, MB Docket No. 07-91, Report and Order, 23 FCC Rcd 2994, 3067, para. 155 (2007) (*Third Periodic Review*).

¹⁵ *Qualcomm Incorporated Petition for Declaratory Ruling*, WT Docket No. 05-7, Order, 21 FCC Rcd 11683, 11690 (2006) (*Qualcomm Declaratory Ruling*). The Commission seeks to distance itself from its prior description of default vertical antenna patterns as being “inherent in the OET-69 methodology” by arguing that this phrase was simply used to summarize reply comments. See *Report and Order* at note 512. However, the critical sentence, read in its entirety, makes clear that the relevant characterization was being made by the Commission, not a commenter: “As for the vertical patterns that Qualcomm will actually use, compared with the default vertical antenna patterns inherent in the OET-69 methodology, Qualcomm asserts that it re-computed its sample analyses using the actual MediaFlo antenna patterns and the results are identical under either condition.” See *Qualcomm Declaratory Ruling*, 21 FCC Rcd at 11690. Moreover, the Qualcomm reply comments under discussion nowhere characterized default vertical antenna patterns as being part of the OET-69 methodology, let alone as being inherent in that methodology, again making clear that the description at issue was that of the Commission. See Qualcomm Inc. Reply Comments, WT Docket No. 05-7 (filed Mar. 25, 2005).

¹⁶ *Third Periodic Review*, 23 FCC Rcd at 3071, para. 166.

¹⁷ *Id.* at 3067 (emphasis added).

¹⁸ OET Bulletin No. 69, at 6 (Feb. 6, 2004) (OET-69), available at <http://go.usa.gov/84A5>.

¹⁹ *Report and Order* at para. 151.

however, is too cute by half.

For one thing, the statute requires the Commission to use the “methodology *described* in OET Bulletin 69” so calling the statement in question “descriptive” actually undermines the Commission’s case. Moreover, the distinction between “an input database” and “the OET-69 methodology” is an artificial one.²⁰ Pursuant to the OET-69 methodology, a television station’s service is evaluated at one-kilometer increments.²¹ That service determination, in part, depends upon the elevation of terrain between the transmitter and each point,²² and that elevation is determined by a terrain elevation database with values every 3 arc-seconds of latitude or longitude.²³ So the database, in reality, is part of the methodology.

Also, consider the implications of the Commission’s position. For example, would it constitute a change to the OET-69 methodology to replace a terrain elevation database of the United States with a database where terrain elevations were randomly generated for each geographic location? Surely, the answer to this question must be yes. But according to the Commission’s logic, the answer must be no since all that is being changed is an “input database.”

Stepping back from the trees to examine the forest, there is a larger question that needs to be asked: Why is all of this being done? To be sure, the Commission maintains that certain changes had to be made to our computer software so that it could successfully support the incentive auction. And I do not object to those changes since they do not alter the OET-69 methodology. But the changes discussed above do not fall into this category. They are luxuries, not necessities. They might be nice to have, but they are not must-haves. And they certainly aren’t worth the risk that a court will delay or invalidate the incentive auction because of our failure to comply with the Spectrum Act.

Turning from questions of substance to those of process, I am also troubled by the manner in which this issue has been handled. These changes should have been the subject of a notice-and-comment rulemaking. They were not. Instead, the Office of Engineering and Technology simply sought input through a Public Notice.²⁴ This stands in stark contrast to the last time the Commission considered making changes to OET-69 right before the DTV transition. There, the Commission issued an NPRM and engaged in a by-the-book administrative process.²⁵

I will leave it up to the courts to decide whether the process here violates the Administrative Procedure Act. I’ll simply note that I don’t believe that excluding the Commissioners from the

²⁰ Neither of the two orders cited by the Commission, *see Report and Order* at note 453, distinguishes between an “input” and a part of a “methodology.” Indeed, both of those orders were issued a decade prior to the publication of OET-69 and consequently lend no insight into what elements comprise the OET-69 methodology.

²¹ *See* OET-69 at 6–7.

²² *See Qualcomm Petition for Declaratory Ruling*, 24 FCC Rcd 13392, 13393 (2009) (“OET-69 is an engineering methodology developed to evaluate TV coverage and interference, using predictions of radio field strength at specific geographic points while accounting for the terrain between the transmitter and each specific reception point”); *Study of Digital Field Strength Standards and Testing Procedures*, ET Docket No. 05-182, Report to Congress on the Satellite Home Viewer Extension and Reauthorization Act of 2004, 20 FCC Rcd 19504, 19562 (2005).

²³ *See id.*

²⁴ *See Office of Engineering and Technology Releases and Seeks Comment on Updated OET-69 Software*, ET Docket No. 13-26, GN Docket No. 12-268, Public Notice, 28 FCC Rcd 950 (Off. Engineering & Tech. 2013).

²⁵ *See Third Periodic Review of the Commission’s Rules and Policies Affecting the Conversion to Digital Television*, MB Docket No. 07-91, Notice of Proposed Rulemaking, 22 FCC Rcd 9478 (2007).

deliberative process until today's vote was the right thing to do. Moreover, it is not even clear to me what today's vote means. In the item, the Commission states that it will "use *TVStudy* . . . in the incentive auction."²⁶ But what version of *TVStudy* will we use? We don't know because OET has been regularly releasing updated versions of the software and apparently will continue to do so even after today.

I am also disturbed by the continued confusion over whether the *TVStudy* software is operating properly. Last week, for instance, the National Association of Broadcasters (NAB) told the Commission that *TVStudy* "has yet to be capable of replicating OET-69's results. Holding the OET-69 methodology constant (i.e., using all of the calculations as they exist in OET-69 pre-TVStudy), *TVStudy* inexplicably results in a loss of coverage area for approximately 88 percent (1978 stations out of 2232)."²⁷ According to NAB, these findings suggest either that there are errors in our new software or that changes have been made to OET-69 that no one has been told about. The item attempts to rebut NAB's assertions, and I don't claim to have the technical expertise to know whether one side is right or the truth lies somewhere in middle.²⁸ Whatever the case, I would urge OET and NAB to work together collaboratively to resolve these issues. The last thing we need is another major government project going awry because of IT failures.

IV.

A year ago, I spoke of an additional principle that should guide our decision-making in this proceeding: respect for the laws of physics. As I said at the time, "we must deal with the world the way that it is, not as we might wish it were. The laws of physics aren't liberal or conservative, Democratic or Republican; they are immutable."²⁹

I therefore am pleased that the band plan adopted by the Commission is consistent with this principle. It embraces the "Down from Channel 51" approach that I endorsed last May and contains guard bands and a duplex gap that are technically reasonable.³⁰ The journey to this band plan has been a bumpy one.³¹ But I'm glad that we ended up in the right place.

Going forward, however, I am concerned by our proposal to make available six megahertz in the duplex gap for unlicensed broadband device operations without any analysis that doing so is technically possible without harming the licensed services surrounding that gap. We should have sought comment in a neutral manner on whether the duplex gap should be available for unlicensed operations, wireless microphones, or any use at all. I am all in favor of making more spectrum available for unlicensed use. If we can do so here without causing interference to the licensed spectrum we will be auctioning, that is something we should seriously consider. But I am worried that we may be making promises that the laws

²⁶ *Report and Order* at para. 130.

²⁷ See National Association of Broadcasters Comments, ET Docket No 13-26, GN Docket No. 12-268, at 4 (May 8, 2014).

²⁸ See *Report and Order* at para. 161. I am nevertheless troubled that by item's statement that "*TVStudy* is not designed to produce the identical results produced by earlier software," *id.*, to the extent this means that *TVStudy* is not designed to replicate the earlier software's output of coverage area and population served for each station even if both programs are given the same inputs.

²⁹ Opening Remarks of Commissioner Ajit Pai at CTIA 2013's Panel on the Spectrum Incentive Auctions: Step Right Up!, Las Vegas, Nevada, at 1 (May 22, 2013).

³⁰ See *id.*

³¹ *Wireless Telecommunications Bureau Seeks to Supplement Band the Record on the 600 MHz Band Plan*, GN Docket No. 12-268, Public Notice, 28 FCC Rcd 7414 (Wireless Telecommunications Bur. 2013); Statement of Commissioner Ajit Pai on the Public Notice of the Wireless Telecommunications Bureau to Supplement the Record on the 600 MHz Band Plan at 2 (May 17, 2013) (criticizing Public Notice for "refocus[ing] the agency's and the public's attention on a variety of band plans with little or no support in the record").

of physics won't allow us to keep.

V.

Last but not least, a brief word about delegation. I do not dispute that for the incentive auction to be a success, we must delegate certain tasks to the Commission's talented staff. But today's item moves too much responsibility away from the five Commissioners who have been appointed by the President and confirmed by the Senate, and who theoretically "direct[]" the agency.³²

I objected to no fewer than ten such delegations of authority. I'll mention just three of them here. First, the Commission delegates to the Media Bureau the authority to decide how to allocate money if the expenses incurred by broadcasters and MVPDs are greater than the \$1.75 billion contained in the relocation fund.³³ In my view, this issue implicates policy judgments that should be made by the Commission. Second, we delegate to the Media Bureau the authority to establish a set of construction deadlines for relocated broadcast stations.³⁴ Once again, I believe that such decisions are important enough to be made by the Commission. And third, we delegate to a broad range of Bureaus and Offices the authority to change the rules adopted in this item as necessary to conform them to the text of the Order.³⁵ This last delegation, in particular, I find curious. I had always thought that the Commission's orders were designed to explain the rules that we adopt and intend to publish in the Code of Federal Regulations, not the other way around.

* * *

To conclude, I am disappointed with where we find ourselves today. Conducting the incentive auction is one of the FCC's most prominent responsibilities, and it would have been ideal to move forward on a bipartisan basis. But fundamental decisions about the shape of this item were made long ago, and while I cannot speak for my colleagues, they were made without my input. I cannot, in good conscience, endorse those decisions when I believe that they: (1) will produce an incentive auction that is unnecessarily complicated; (2) are not fair to all stakeholders; and (3) are not faithful to the terms of the Spectrum Act. For all of these reasons, I must respectfully dissent.

³² "What We Do," <http://www.fcc.gov/what-we-do> (last visited May 14, 2014).

³³ *See Report and Order* at para. 650.

³⁴ *Id.* at para. 560.

³⁵ *Id.* at para. 811.