

**STATEMENT OF
COMMISSIONER AJIT PAI
APPROVING IN PART AND CONCURRING IN PART**

Re: *Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37; Amendment of Part 74 of the Commission's Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*

The Part 15 Notice of Proposed Rulemaking reminds me of a scene from the 2003 movie *The Matrix Reloaded*. When the Oracle appears to ask Neo a question, he hesitates, wondering whether she's really offering him a choice or if the answer has already been decided. The Oracle replies: "[Y]ou didn't come here to make a choice, you've already made it. You're here to try to understand *why* you made it."

So too it appears with today's NPRM. Why? Well, back in the May *Incentive Auction Order*, the Commission decided to permit white space devices to operate in the 600 MHz guard bands at particular power levels and bandwidths, even though we had yet to tee up the critical engineering questions that we seek comment on today.¹ As I noted at the time, my preference would have been to seek comment in a neutral manner on whether we can permit those types of operations without causing harmful interference to licensed services *before* we decided to allow them.

But that is now in the past, and I am pleased that today we are asking many of the right questions. The record developed in response to this notice will hopefully shed light not only on why we made the choices we did, but whether we got them right.

And while we won't be able to answer the latter point until all of the engineering studies and comments are in, I do think there is reason for concern. The Commission's proposals carry a risk of creating impaired spectrum licenses, depressing auction revenues, and deterring auction participation. But since we are at the beginning of the process, I am reserving judgment until all of the studies are in. As a result, I will be voting to approve in part and concur in part.

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As the record develops on these issues, I am going to continue to apply the same principles that have governed my deliberations during the course of the incentive auction proceeding. Two of those are particularly relevant to today's NPRM. The first is respect for the laws of physics. As I've said, "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."² Or as a young boy told Neo in the original *Matrix*, "Do not try and bend the spoon. That's impossible. Instead, . . . only try to realize the truth."

Second, we must be faithful to the statute. As most relevant here, that means abiding the Spectrum Act's requirement that we not permit any use of the guard bands that would cause harmful interference to licensed services.

Today, it becomes more critical than ever that we hew to each of these principles.

¹ *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, GN Docket No. 12-268, Report and Order, 29 FCC Rcd 6567, 6686 para. 273 (2014) (*Incentive Auction Order*).

² 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).

In particular, I am concerned that permitting white space devices to operate in the guard bands, at the power levels and bandwidths proposed here, might impair the adjacent licensed spectrum.

Take the NPRM's own analysis. It shows that operating white space devices in the NPRM's proposed configurations could, in the worst-case scenarios, cause harmful interference to wireless devices whenever they are within even 7 meters of each other. That would mean that white space devices could interfere with wireless handsets whenever they are in the same room.

And it could be even worse than that. The FCC's analysis assumes that wireless handsets will use additional filtering above and beyond the 3GPP standard. It also assumes that there will be at least a 3 MHz frequency separation between white space devices and licensed wireless services—yet the guard bands the FCC adopted in the *Incentive Auction Order* won't be large enough in every recovery scenario to provide that amount of separation.

Moreover, our analysis assumes that licensed wireless providers can take steps to manage the “noisy conditions” that might result from permitting the proposed white space operations, such as moving users to different spectrum bands.³ But if anything, that assumption only helps large, incumbent providers. If you're looking at the 600 MHz auction as a new entrant or a smaller provider, you might not have the spectrum inventory necessary to move consumers to alternate bands. And even if a provider could take those types of steps, would we really be offering fungible licenses if carriers would face drastically different interference scenarios depending on whether the FCC assigns them a license adjacent to a guard band or not? I'm not so sure.

Now the NPRM's analysis on these issues is only preliminary, and as it recognizes there are a variety of factors that affect actual deployments that could reduce or eliminate the chances for interference altogether. But all of this just confirms that there is a lot of difficult engineering work ahead.

So where does this leave us? Well, we must do more than persuade ourselves that permitting these types of operations won't cause harmful interference. Our analysis must convince potential bidders that we're not creating impaired licenses. They are the ones that will be valuing the spectrum, deciding whether to participate, and ultimately putting up the capital necessary for the auction to succeed. If they're not convinced, it doesn't really matter what we think or say.

As I said when the Commission adopted the *Incentive Auction Order*, I am all in favor of making more spectrum available for unlicensed use. And if we can do that here, without causing harmful interference to licensed services, that is something we should seriously consider.

But we have to make promises that the laws of physics and of Congress allow us to keep. Remember, the FCC's goal is to offer generic, fungible licenses, so impairing any spectrum around the guard bands will drive down the value of each and every single 600 MHz license and thus deter auction participation. That would mean less spectrum repurposed for mobile broadband and a failure to meet the Spectrum Act's revenue targets, which are critical to both public safety and deficit reduction.

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In the end, when it comes to many of the NPRM's proposals, perhaps Theodore Logan from *Bill and Ted's Excellent Adventure* put it best: “Dude, are you sure we should be doing this?” I look forward to reading some most excellent responses from our commenters and working with my colleagues and the Commission's talented staff on resolving these issues.

³ See NPRM at para. 85.

