

August 21, 2017
Marlene Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington, DC 20554

Written Ex Parte

Re: Amendment of the Commission's Rules for Unlicensed Operations in the 600 MHz Band, ET Docket No. 14-165; Amendment of the Commission's Rules to Provide for the Preservation of One Vacant Channel in the UHF Television Band For Use By White Space Devices, MB Docket No. 15-146.

Dear Ms. Dortch,

The Information Technology and Innovation Foundation¹ works to promote pragmatic policy solutions that advance innovation: Putting to productive use the fallow spectrum in the so-called “white spaces” between television channels fits this bill. We write in support of preserving at least three channels for white space devices on a nationwide basis. A guaranteed availability of at least three channels should ensure a large enough market to see the cost of devices come down, diversifying potential connectivity models and lowering the cost of extending broadband in rural areas.

Of course, there are primary operations in the 600 MHz band that must be protected—most notably the spectrum recently allocated to flexible use mobile licenses in the incentive auction. Some, generally those to the right of the political center, prefer the clearer property rights of these licenses, and fear that widespread unlicensed use in the valuable 600 MHz band will lead to interference. This fear is misplaced.

Certainly, the right to exclude provided by spectrum licenses gives operators a powerful incentive to invest in putting spectrum to valuable use, and is a key tool to ensure reliable services and drive innovation. Spectrum auctions are our best tool yet to discover the highest value use of spectrum.

¹ Founded in 2006, ITIF is an independent 501(c)(3) nonprofit, nonpartisan research and educational institute—a think tank—whose mission is to formulate, evaluate, and promote policy solutions that accelerate innovation and boost productivity to spur growth, opportunity, and progress. ITIF's goal is to provide policymakers around the world with high-quality information, analysis, and recommendations they can trust. To that end, ITIF adheres to a high standard of research integrity with an internal code of ethics grounded in the core values of analytical rigor, policy pragmatism, and independence from external direction or bias.

But spectrum policy should be pragmatic. As Ronald Coase put it, “[i]t is sometimes implied that the aim of regulation in the radio industry should be to minimize interference. But this would be wrong. The aim should be to maximize output.”² We cannot allow a narrow focus on the allocative efficiency of exclusive licensing to undermine the overall productive efficiency of the entire band.³

In the context of the 600 MHz band, maximizing output means providing the regulatory environment to put to use that spectrum unused by either Class A full-power television stations or winners of incentive auction mobile licenses. There is a considerable amount of spectrum outside of major broadcast markets that goes completely unused—this low frequency spectrum, with its far-reaching propagation, can significantly improve the economic calculus of providing broadband in rural areas.

The incentive auction could have been designed to be more aggressive in repurposing spectrum for broadband.⁴ And one could reasonably argue that the particular way the unlicensed services were included in the incentive auction may have depressed forward bidding to a degree.⁵ But all that is behind us. The auction participants bid what they bid with the rules as they were, and it makes little sense to revisit those rules now. With the auction completed it is difficult to imagine further changes to the 600 MHz band plan any time soon. Indeed, the Middle Class Tax Relief and Job Creation Act of 2012 only allowed for a single incentive auction and reorganization of this band.⁶

With the incentive auction done, moving to provide sufficient spectrum and certainty for low-band unlicensed services is pure upside. As well explored in the record, white space devices have the potential to lower cost of last-mile connections, especially in high-cost rural areas, where connectivity is lacking but white space spectrum abundant. The open experimentation allowed by unlicensed spectrum could also support long-distance, low-data rate IoT connections or other services even where spectrum availability is relatively

² Ronald Coase, “The Federal Communications Commission,” *The J. of L. and Econ.*, Oct. 1959 2, 27, citing S. Rep. No. 659, 61st Cong., 2d Sess. 4 (1910).

³ For discussion, *see*, Doug Brake, “Coase and WiFi: The Law and Economics of Unlicensed Spectrum,” ITIF (January 2015), <http://www2.itif.org/2015-coase-wifi.pdf>.

⁴ *See*, e.g., Thomas W. Hazlett, “FCC ‘Incentive Auction’ Marks Progress and Pitfalls Towards Freeing Wireless Spectrum,” *Brookings* (May 24, 2017), <https://www.brookings.edu/blog/techtank/2017/05/24/fcc-incentive-auction-marks-progress-and-pitfalls-towards-freeing-wireless-spectrum/>.

⁵ Coleman Bazelon, et al., “Unlicensed Operations in the 600 MHz Guard Bands: Potential Impact of Interference on the Outcome of the Incentive Auction,” *TPRC* 43 (April 2015), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2587527.

⁶ 47 U.S.C. 1452(e).

limited.⁷ Economists are often fond of saying that this no free lunch, but allowing this spectrum to be used for unlicensed services is about as close as we can come.

The Commission should not allow low power television (LPTV) stations to repack into the last remaining television channel in any market. Ensuring that one vacant channel, in addition to existing unlicensed authorization in the duplex gap and channel 37, will ultimately provide significant economic benefits that greatly outweigh spectrally-inefficient LPTV broadcasts. The one-to-many broadcast format inherently cannot present as diverse of programming as a robust broadband connection (provided over white space spectrum or otherwise); existing LPTV stations should be transitioned to IP-based distribution regardless. Furthermore, preserving a single vacant channel is only expected to impact a very limited number of markets—the public interest overwhelmingly favors a sub-1 GHz unlicensed service over a handful of small broadcast stations, especially when other, superior means to distribute their content are available.

Chairman Pai, in his dissent from the Commission’s 2015 proposal to preserve a vacant channel in the UHF band for white space devices, has argued that the Commission should look elsewhere for unlicensed spectrum, and for greater amounts, calling for 195 megahertz to be made available on an unlicensed basis in the 5 GHz band.⁸ We also support efforts to make additional spectrum in both the 5 and 6 GHz bands available for unlicensed use, but preserving a vacant channel is about more than just the 6 megahertz of spectrum that one TV channel affords. The guarantee of at least three total channels available nationwide is needed to see a sufficient market for device manufacturers to produce at scale, bringing down the cost of devices even where much more spectrum is available in rural areas.

We urge you to move quickly, and ensure three channels are available for unlicensed use after the repack.

Sincerely,

Doug Brake
Senior Analyst, Telecom Policy
The Information Technology and Innovation Foundation

⁷ See Monica Allevan, “Artemis Eyes 600 MHz Band, Will Conduct Demo at Mobile World Congress Americas,” *Fierce Wireless*, (July 2017), <http://www.fiercewireless.com/wireless/artemis-eyes-600-mhz-band-will-conduct-demo-at-mobile-world-congress-americas>.

⁸ Dissenting Statement of Commissioner Ajit Pai, Amendment of Parts 15, 73 and 74 of the Commission’s Rules to Provide for the Preservation of One Vacant Channel in the UHF Television Band For Use By White Space Devices and Wireless Microphones, MB Docket No. 15-146; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, https://apps.fcc.gov/edocs_public/attachmatch/FCC-15-68A2.pdf.