



(Original Signature of Member)

116TH CONGRESS  
1ST SESSION

# H. R. 5000

To amend the National Telecommunications and Information Administration Organization Act to provide for the establishment of an electromagnetic spectrum sharing prototyping program and an integrated spectrum automation enterprise strategy, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

November 8, 2019

Mr. MICHAEL F. DOYLE of Pennsylvania (for himself and Mr. LATTA) introduced the following bill; which was referred to the Committee on Energy and Commerce.

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## A BILL

To amend the National Telecommunications and Information Administration Organization Act to provide for the establishment of an electromagnetic spectrum sharing prototyping program and an integrated spectrum automation enterprise strategy, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

1 **SECTION 1. SHORT TITLE.**

2 This Act may be cited as the “Studying How to Har-  
3 ness Airwave Resources Efficiently Act of 2019” or the  
4 “SHARE Act”.

5 **SEC. 2. NTIA ELECTROMAGNETIC SPECTRUM SHARING**  
6 **PROTOTYPING PROGRAM AND AUTOMATION**  
7 **STRATEGY.**

8 Part A of the National Telecommunications and In-  
9 formation Administration Organization Act (47 U.S.C.  
10 901 et seq.) is amended by adding at the end the fol-  
11 lowing:

12 **“SEC. 106. ELECTROMAGNETIC SPECTRUM SHARING**  
13 **PROTOTYPING PROGRAM AND AUTOMATION**  
14 **STRATEGY.**

15 “(a) **PROTOTYPING PROGRAM.—**

16 “(1) **IN GENERAL.—**Not later than 1 year after  
17 the date of the enactment of the Studying How to  
18 Harness Airwave Resources Efficiently Act of 2019,  
19 the Assistant Secretary, in consultation with the  
20 Commission, shall establish a program to facilitate  
21 the prototyping of innovative technologies and tech-  
22 niques that facilitate the sharing of the same cov-  
23 ered electromagnetic spectrum by more than one  
24 Federal entity.

25 “(2) **SHARING TEST BED.—**Not later than 15  
26 months after the date of the enactment of the

1 Studying How to Harness Airwave Resources Effi-  
2 ciently Act of 2019, the Assistant Secretary, in con-  
3 sultation with the Commission, shall, under the pro-  
4 gram established under paragraph (1), establish at  
5 least one test bed to demonstrate the potential for  
6 the dynamic sharing of the same covered electro-  
7 magnetic spectrum by more than one Federal entity.

8 “(b) DEVELOPMENT OF INTEGRATED SPECTRUM AU-  
9 TOMATION ENTERPRISE STRATEGY.—

10 “(1) IN GENERAL.—Not later than 18 months  
11 after the date of the enactment of the Studying How  
12 to Harness Airwave Resources Efficiently Act of  
13 2019, the Assistant Secretary, in consultation with  
14 the Commission, shall, under the program estab-  
15 lished under subsection (a)(1), propose, after notice  
16 and opportunity for comment, an integrated spec-  
17 trum automation enterprise strategy to address the  
18 management of covered electromagnetic spectrum in  
19 order to facilitate the sharing of such spectrum by  
20 more than one Federal entity.

21 “(2) MATTERS ENCOMPASSED.—In developing  
22 the strategy under paragraph (1), the Assistant Sec-  
23 retary shall consider, at a minimum, whether to pro-  
24 pose in the strategy—

1 “(A) changes in policy or to the law, in-  
2 cluding legislative and regulatory changes; and

3 “(B) using—

4 “(i) databases;

5 “(ii) artificial intelligence;

6 “(iii) spectrum management proc-  
7 esses;

8 “(iv) public-facing application pro-  
9 gramming interfaces and online tools;

10 “(v) automatic frequency coordination  
11 systems, including standard interfaces and  
12 data exchange formats and requirements;

13 “(vi) spectrum enforcement require-  
14 ments;

15 “(vii) listen-before-talk;

16 “(viii) environmental sensing capabili-  
17 ties; and

18 “(ix) electromagnetic spectrum com-  
19 patibility analyses.

20 “(3) UPDATES TO STRATEGY.—Not later than  
21 2 years after the strategy under paragraph (1) is  
22 proposed, and every 2 years thereafter, the Assistant  
23 Secretary shall update such strategy.

24 “(c) BIENNIAL REPORT.—Not later than 18 months  
25 after the date of the enactment of the Studying How to

1 Harness Airwave Resources Efficiently Act of 2019, and  
2 in the last quarter of each even numbered calendar year  
3 thereafter, the Assistant Secretary, in consultation with  
4 the Commission, shall submit to the Committee on Energy  
5 and Commerce of the House of Representatives and the  
6 Committee on Commerce, Science, and Transportation of  
7 the Senate a report containing the status and results of  
8 the program established under subsection (a), including  
9 the status and results of the test bed established under  
10 paragraph (2) of such subsection and the strategy devel-  
11 oped under subsection (b).

12 “(d). AUTHORIZATION OF APPROPRIATIONS.—There  
13 is authorized to be appropriated to the Assistant Secretary  
14 to carry out this section \$50,000,000. Such amounts are  
15 authorized to remain available until expended.

16 “(e) DEFINITIONS.—In this section:

17 “(1) COVERED ELECTROMAGNETIC SPEC-  
18 TRUM.—The term ‘covered electromagnetic spec-  
19 trum’ means electromagnetic spectrum allocated for  
20 exclusive or primary use by Federal entities.

21 “(2) FEDERAL ENTITY.—The term ‘Federal en-  
22 tity’ has the meaning given such term in section  
23 113(1).”.

1 **SEC. 3. FCC AND NTIA REPORT ON EXPANDING SPECTRUM**  
2 **SHARING TECHNIQUES AND SHARING STRAT-**  
3 **EGIES.**

4 (a) REPORT.—Not later than 1 year after the conclu-  
5 sion of the first auction of Priority Access Licenses in the  
6 3.5 gigahertz band, the Federal Communications Commis-  
7 sion and the Assistant Secretary of Commerce for Com-  
8 munications and Information, in consultation with the Di-  
9 rector of the National Institute of Standards and Tech-  
10 nology, after notice and opportunity for comment, shall  
11 submit to the Committee on Energy and Commerce of the  
12 House of Representatives and the Committee on Com-  
13 merce, Science, and Transportation of the Senate a report  
14 that assesses and provides recommendations for expanding  
15 upon and improving spectrum sharing techniques devel-  
16 oped for use in the 3.5 gigahertz band, or other spectrum  
17 sharing strategies, that includes the following consider-  
18 ations:

19 (1) How to promote an ecosystem of devices  
20 employing such sharing techniques or such other  
21 sharing strategies.

22 (2) How to incentivize spectrum users to em-  
23 ploy such sharing techniques or such other sharing  
24 strategies.

1           (3) How to ensure that any Federal protection  
2           zones and corresponding technical rules and power  
3           levels are no more protective than necessary.

4           (4) The applicability of such sharing techniques  
5           or such other sharing strategies to frequencies be-  
6           tween 3100 megahertz and 3550 megahertz, inclu-  
7           sive, and frequencies between 7125 megahertz and  
8           8400 megahertz, inclusive, to the extent any portion  
9           of such frequencies cannot be cleared in a reasonable  
10          amount of time.

11          (b) RULE OF CONSTRUCTION.—Nothing in sub-  
12          section (a)(4) may be construed to require that every spec-  
13          trum sharing technique developed for use in the 3.5  
14          gigahertz band be recommended for use in other bands.