

114TH CONGRESS
1ST SESSION

S. 424

To promote unlicensed spectrum use in the 5 GHz band, to maximize the use of the band for shared purposes in order to bolster innovation and economic development, and for other purposes.

IN THE SENATE OF THE UNITED STATES

FEBRUARY 10, 2015

Mr. RUBIO (for himself and Mr. BOOKER) introduced the following bill; which was read twice and referred to the Committee on Commerce, Science, and Transportation

A BILL

To promote unlicensed spectrum use in the 5 GHz band, to maximize the use of the band for shared purposes in order to bolster innovation and economic development, 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,*

3 **SECTION 1. SHORT TITLE.**

4 This Act may be cited as the “Wi-Fi Innovation Act”.

5 **SEC. 2. PROMOTING UNLICENSED SPECTRUM.**

6 (a) DEFINITIONS.—In this section:

7 (1) COMMISSION.—The term “Commission”
8 means the Federal Communications Commission.

1 (2) DEDICATED SHORT-RANGE COMMUNICA-
2 TIONS SERVICES.—The term “Dedicated Short-
3 Range Communications Services” has the meaning
4 given the term in section 90.7 of title 47, Code of
5 Federal Regulations.

6 (3) DYNAMIC FREQUENCY SELECTION.—The
7 term “Dynamic Frequency Selection” has the mean-
8 ing given the term in section 15.403 of title 47,
9 Code of Federal Regulations.

10 (4) 5850–5925 MHZ BAND.—The term “5850–
11 5925 MHz band” has the meaning given the term
12 in section 6406(c) of the Middle Class Tax Relief
13 and Job Creation Act of 2012 (47 U.S.C. 1453(c)).

14 (5) NTIA.—The term “NTIA” means the Na-
15 tional Telecommunications and Information Admin-
16 istration.

17 (6) TECHNICAL RULES SUITABLE FOR THE
18 WIDESPREAD COMMERCIAL DEVELOPMENT OF UNLI-
19 CENSED OPERATIONS.—The term “technical rules
20 suitable for the widespread commercial development
21 of unlicensed operations” means technical rules that,
22 to the maximum extent feasible—

23 (A) permit outdoor unlicensed operations;

1 (B) permit unlicensed operations at a maximum
 2 conducted transmitter output power limit
 3 of not less than 1 watt; and

4 (C) do not require unlicensed devices to
 5 employ Dynamic Frequency Selection.

6 (b) MODIFICATION OF REGULATIONS TO PROMOTE
 7 UNLICENSED USE IN THE 5 GHz BAND.—

8 (1) IN GENERAL.—

9 (A) PROVISION OF ADDITIONAL UNLI-
 10 CENSED SPECTRUM.—The Commission shall
 11 modify title 47, Code of Federal Regulations, to
 12 provide additional unlicensed spectrum in the
 13 5850–5925 MHz band under technical rules
 14 suitable for the widespread commercial develop-
 15 ment of unlicensed operations in the band, as
 16 specified under paragraph (2).

17 (B) NTIA COOPERATION.—The NTIA
 18 shall facilitate the modification described in
 19 subparagraph (A) by cooperating with the Com-
 20 mission to identify the spectrum management
 21 actions necessary to accommodate the regu-
 22 latory changes specified under paragraph (2).

23 (2) REQUIRED ACTIONS AND MODIFICATIONS.—

24 (A) IN GENERAL.—

1 (i) OFFICE OF ENGINEERING AND
2 TECHNOLOGY PUBLIC NOTICE.—Not later
3 than 3 months after the date of enactment
4 of this Act, the Office of Engineering and
5 Technology of the Commission shall issue
6 a public notice seeking comment on pro-
7 posals for—

8 (I) interference-mitigation tech-
9 niques and technologies, and potential
10 rechannelization, that would accom-
11 modate both incumbent licensees, in-
12 cluding Dedicated Short Range Com-
13 munications Services licensees, and
14 widespread commercial unlicensed op-
15 erations in the 5850–5925 MHz band;
16 and

17 (II) deployment timelines for the
18 technologies described in subpara-
19 graph (I).

20 (ii) NTIA RESPONSE.—The NTIA, in
21 response to the public notice issued under
22 clause (i), shall publicly submit to the Of-
23 fice of Engineering and Technology a de-
24 scription of any current and anticipated

1 further Federal uses of the 5850–5925
2 MHz band.

3 (B) TEST PLAN.—

4 (i) IN GENERAL.—Not later than 6
5 months after the date of enactment of this
6 Act, the Commission shall, in consultation
7 with the Department of Transportation
8 and the NTIA, develop and publish a test
9 plan, including a timeline, for the use of
10 unlicensed devices in the 5850–5925 MHz
11 band.

12 (ii) REQUIREMENT.—The test plan
13 developed and published under clause (i)
14 shall be designed to allow the Commission
15 to evaluate technologies for allowing unli-
16 censed devices to utilize the 5850–5925
17 MHz band without causing harmful inter-
18 ference to incumbent licensees, including
19 Dedicated Short Range Communications
20 Services licensees.

21 (iii) TESTING MULTIPLE METHODS.—
22 The Commission may choose to test mul-
23 tiple methods of sharing the 5850–5925
24 MHz band.

1 (iv) CONSIDERATIONS.—In developing
2 the test plan under clause (i), the Commis-
3 sion shall consider—

4 (I) the comments filed in re-
5 sponse to the public notice issued
6 under subparagraph (A)(i);

7 (II) the comments filed in re-
8 sponse to ET Docket No. 13–49;

9 (III) the functions currently au-
10 thORIZED under exclusive allocation
11 that could be performed by unlicensed
12 or shared spectrum;

13 (IV) whether a system of priority
14 access could substitute for exclusive li-
15 censing and, if so, whether the system
16 of priority access should be confined
17 to—

18 (aa) particular portions of
19 the 5850–5925 MHz band; and

20 (bb) functions critical for
21 dedicated short-range commu-
22 nications crash avoidance;

23 (V) whether non-exclusive licens-
24 ing or other forms of shared spectrum

1 access could substitute for exclusive li-
2 censing;

3 (VI) whether the Commission
4 could promulgate rules to migrate ex-
5 isting licensees to an alternative band;

6 (VII) whether, to protect critical
7 public safety communications, the
8 Commission could allow sharing in
9 only a portion of the 5850–5925 MHz
10 spectrum; and

11 (VIII) whether shared use or a
12 system of priority access—

13 (aa) causes harmful inter-
14 ference to incumbent licensees; or

15 (bb) compromises safety-of-
16 life uses by incumbent licensees
17 that are necessary for advancing
18 motor vehicle safety.

19 (C) TESTING; RESULTS.—Not later than
20 15 months after the date of enactment of this
21 Act, the Commission, in consultation with the
22 Department of Transportation and the NTIA,
23 shall—

1 (i) conduct testing in accordance with
2 the test plan developed under subpara-
3 graph (B);

4 (ii) publish a summary of the results
5 of the testing to the docket relating to the
6 5850–5925 MHz band; and

7 (iii) reference the results of the test-
8 ing and the comments filed under subpara-
9 graph (A) in determining unlicensed device
10 use of the 5850–5925 MHz band.

11 (D) REGULATIONS.—

12 (i) IN GENERAL.—Not later than 18
13 months after the date of enactment of this
14 Act—

15 (I) if the Commission determines
16 that a mitigation technology, re-
17 channelization, or other approach
18 would allow unlicensed operations in
19 the 5850–5925 MHz band that will
20 not cause harmful interference to ex-
21 isting licensees of that band, the Com-
22 mission shall modify part 15 of title
23 47, Code of Federal Regulations, to
24 adopt technical rules suitable for the
25 widespread commercial deployment of

1 unlicensed operations for the 5850–
2 5925 MHz band; or

3 (II) if the Commission deter-
4 mines that no mitigation technology,
5 rechannelization, or other sharing ap-
6 proach would prevent unlicensed oper-
7 ations in the 5850–5925 MHz band
8 from causing harmful interference to
9 existing licensees of that band, the
10 Commission—

11 (aa) shall provide notifica-
12 tion of the determination to—

13 (AA) Congress;

14 (BB) the Department
15 of Transportation; and

16 (CC) the NTIA; and

17 (bb) may not modify part 15
18 of title 47, Code of Federal Reg-
19 ulations, to adopt technical rules
20 suitable for the widespread com-
21 mercial deployment of unlicensed
22 operations for the 5850–5925
23 MHz band until the Commission
24 can ensure that such operations
25 will not cause harmful inter-

1 ference to existing licensees of
2 that band.

3 (ii) INTELLIGENT TRANSPORTATION
4 SYSTEMS.—The Commission shall modify
5 subpart M of part 90 of title 47, Code of
6 Federal Regulations (relating to the Intel-
7 ligent Transportation Systems radio serv-
8 ice), and subpart L of part 95 of title 47,
9 Code of Federal Regulations (relating to
10 dedicated short-range communications
11 service on-board units), if the Commission
12 determines that such a modification would
13 maximize the utility of the 5850–5925
14 MHz band while protecting existing licens-
15 ees from harmful interference.

16 **SEC. 3. ASSESSING UNLICENSED SPECTRUM AND WI-FI USE**
17 **IN LOW-INCOME NEIGHBORHOODS.**

18 (a) STUDY.—

19 (1) IN GENERAL.—The Commission shall con-
20 duct a study to evaluate the availability of
21 broadband Internet access using unlicensed spec-
22 trum and wireless networks in low income neighbor-
23 hoods.

1 (2) REQUIREMENTS.—In conducting the study
2 under paragraph (1), the Commission shall consider
3 and evaluate—

4 (A) any barriers preventing or limiting the
5 deployment and use of wireless networks in low-
6 income neighborhoods;

7 (B) how to overcome the barriers described
8 in subparagraph (A) through incentives, poli-
9 cies, or requirements that would increase the
10 availability of unlicensed spectrum and related
11 technologies in low-income neighborhoods to in-
12 crease broadband adoption by elementary and
13 secondary school-age children in schools and at
14 home in these communities;

15 (C) proposals that would encourage the
16 home broadband adoption by not less than 50
17 percent of households with elementary and sec-
18 ondary school-age children that are in low in-
19 come neighborhoods; and

20 (D) the availability of wireless Internet hot
21 spots and access to unlicensed spectrum for
22 children described in subparagraph (B).

23 (b) REPORT.—Not later than 1 year after the date
24 of enactment of this Act, the Commission shall submit to
25 the Committee on Commerce, Science, and Transportation

1 of the Senate and the Committee on Energy and Com-
2 merce of the House of Representatives a report that—

3 (1) summarizes the findings of the study con-
4 ducted under subsection (a); and

5 (2) makes recommendations with respect to the
6 potential incentives, policies, and requirements de-
7 scribed in subsection (a)(2)(B).

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