

SUPPORTING STATEMENT

**A. Justification:**

**1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection. Attach a copy of the appropriate section of each statute and regulation mandating or authorizing the collection of information.**

On November 14, 2008, the Federal Communications Commission (“Commission”) adopted a Second Report and Order and Memorandum Opinion and Order (“Second Report and Order”), FCC 08-260, ET Docket No. 04-186 that established rules to allow new and unlicensed wireless devices to operate in the broadcast television spectrum at locations where that spectrum is not being used by licensed services (this unused TV spectrum is often termed television “white spaces”). The rules will allow for the use of unlicensed devices in the unused TV spectrum to provide broadband data and other services for consumers and businesses.

Subsequently on September 23, 2010, the Commission adopted a Second Memorandum Opinion and Order, ET Docket No. 04-186; ET Docket No. 02-380; FCC 10-174, finalizing the rules to make the unused spectrum in the TV bands available for unlicensed broadband wireless devices. This action resolved on reconsideration certain legal and technical issues in order to provide certainty concerning the rules for operation of unlicensed transmitting devices in the television broadcast frequency bands (“white space devices”). Resolution of these issues will now allow manufacturers to begin marketing unlicensed communications devices and systems that operate on frequencies in the TV bands in areas where they are not used by licensed services.

The Commission is requesting OMB approval for a revision to the previously approved information collection. On August 11, 2015, the Federal Communications Commission adopted a Report and Order (R&O), ET Docket No. 14-165 and GN Docket No. 12-268, FCC 15-99. This R&O made certain changes to the rules for unlicensed device operations in the frequency bands that are now and will continue to be allocated and assigned to broadcast television services (TV bands), including fixed and personal/portable white space devices and unlicensed wireless microphones. It also adopted rules for fixed and personal/portable white space devices and wireless microphones in the 600 MHz guard bands, including the duplex gap, and the 600 MHz band that will be repurposed for new wireless services, and for fixed and personal/portable white space devices on channel 37.

In the Second Report and Order, the Commission decided to designate one or more database administrators from the private sector to create and operate white space databases. The white space database administrators will act on behalf of the Commission, but will offer a privately owned and operated service. Each database administrator will be responsible for operation of their database and coordination of the overall functioning of the database with other administrators, and will provide database access to white space devices.

The rules as amended by the R&O require that each database administrator shall:

- (a) Maintain a database that contains the information described in Section 15.713 of the rules. The R&O amended this section to require the databases to include the locations where a part 27 600 MHz service licensee has commenced operation (Section 15.713(b)(2)(iv)) and the locations of health care facilities that use WMTS equipment operating on channel 37 (Section 15.713(b)(2)(v)). It also changed the information required in the databases for certain Private Land Mobile and Commercial Mobile Radio Service (PLMRS/CMRS) stations operating in the TV bands. Specifically, it required the databases to include the TV channel number on which a PLMRS/CMRS station operates, but removed the requirement for the database to include the operating power and antenna heights above ground and average terrain (Section 15.713(j)(4));
- (b) Establish a process for acquiring and storing in the database necessary and appropriate information from the Commission's databases and synchronizing the database with the current Commission databases at least once a week to include newly licensed facilities or any changes to licensed facilities;
- (c) Establish a process for registering fixed white space devices, and registering and including in the database those facilities entitled to protection but not contained in a Commission database, including Multi-channel Video Programming Distributor ("MVPD") receive sites. The R&O amended the rules to require that database administrators establish procedures to allow part 27 600 MHz service licensees to upload, modify and replace registration information for areas where they have commenced operations; allow health care facilities to register the locations of facilities where they operate WMTS networks on channel 37; and to allow unlicensed wireless microphone users in the 600 MHz band to register with the database and to provide lists of channels available for wireless microphones at a given location (Sections 15.715(n), (p) and (q)). The R&O also required database administrators to remove from the database the registrations of fixed white space devices that have not checked the database for at least three months to update their channel lists (Section 15.715(o));
- (d) Establish a process for registering facilities where Part 74 low power auxiliary devices are used on a regular basis;
- (e) Provide accurate automated information regarding available channels to fixed and personal/portable white space devices that submit to the database the information required under Section 15.713(e), (g) and (h) based on the geographic location of the device; and provide accurate automated information regarding available channels to fixed and Mode II devices requesting information regarding available channels for Mode I devices. Database administrators may allow prospective operators of white space devices to query the database and determine if there are vacant channels at a particular location;

- (f) Establish protocols and procedures to ensure that all automated communications and interactions between the database and white space devices are accurate and secure and that unauthorized parties cannot access or alter the database or the information regarding available channels sent to a white space devices consistent with the provisions of Section 15.713(l);
- (g) Make database services available to all unlicensed white space device users on a non-discriminatory basis;
- (h) Provide service for a five-year term. This term can be renewed at the Commission's discretion;
- (i) Respond in a timely manner to verify, correct and/or remove, as appropriate, data in the event that the Commission or a party brings a claim of inaccuracies in the database to the attention of the administrator. This requirement applies only to information that the Commission requires to be stored in the database;
- (j) Transfer the database, along with the IP addresses and URLs used to access the database and data for registered fixed and personal/portable white space devices, to another designated entity in the event it does not continue as the database administrator at the end of its term;
- k) The database must have functionality such that upon request from the Commission it can indicate that no channels are available when queried by a specific white space devices or model of white space device;
- (l) If more than one database is developed, the database administrators must cooperate to develop a standardized process for providing on a daily basis or more often, as appropriate the data collected for the facilities listed in section 15.713(b)(2) to all other white space databases to ensure consistency in the records of protected facilities.
- (m) The database administrator may charge a fee for provision of lists of available channels to fixed and personal/portable devices and for registering fixed devices. This provision applies to devices that operate in the TV bands, 600 MHz service band, and the 600 MHz guard bands and duplex gap. A white space database administrator may also charge a fee for provision of lists of available channels to wireless microphone users.

**Revised Information Collection Requirements:**

The Commission is now requesting a revision of the previously approved information collection to modify Section 15.713 by adding paragraphs (b)(2)(iv)-(v), (j)(4), (j)(10), (j)(11); modify Section 15.715 by adding paragraphs (n) through (q); and by adding Section 27.1320:

**Section 15.713 (b)(2)(iv)-(v)**

(b)(2) Facilities that are not recorded in Commission databases. Identifying and location information will be entered into the white space database in accordance with the procedures established by the white space database administrator(s). These include:

(iv) 600 MHz service band operations in areas where the part 27 600 MHz service licensee has commenced operations.

(v) Locations of health care facilities that use WMTS equipment operating on channel 37 (608-614 MHz).

**Section 15.713(j)(4)**

(j)(4) PLMRS/CMRS base station operations located more than 80 km from the geographic centers of the 13 metropolitan areas defined in § 90.303(a) of this chapter (e.g., in accordance with a waiver).

(i) Transmitter location (latitude and longitude in NAD 83) or geographic area of operations.

(ii) TV channel of operation.

(iii) Call sign.

**Section 15.713(j)(10)**

(j)(10) 600 MHz service in areas where the part 27 600 MHz band licensee has commenced operations.

(i) Name of 600 MHz band licensee;

(ii) Name and address of the contact person;

(iii) An email address for the contact person (optional);

(iv) A phone number for the contact person;

(v) Area within a part 27 600 MHz band licensee's Partial Economic Areas (PEA), as defined in § 27.6 of this chapter, where it has commenced operation. This area must be delineated by at minimum of eight and a maximum of 120 geographic coordinates (latitude and longitude in NAD 83, accurate to +/- 50 m);

(vi) Date of commencement of operations;

(vii) Identification of the frequencies on which the part 27 600 MHz band licensee has commenced operations;

(viii) Call sign.

**Section 15.713(j)(11)**

(j)(11) Location of health care facilities operating WMTS networks on channel 37 (608-614 MHz)

(i) Name and address of the health care facility;

(ii) Name and address of a contact person;

(iii) Phone number of a contact person;

(iv) Email address of a contact person;

(v) Latitude and longitude coordinates referenced to North American Datum 1983 (NAD 83) that define the perimeter of each facility. If several health care facilities using 608-614 MHz wireless medical telemetry equipment are located in close proximity, it is permissible to register a perimeter to protect all facilities in that cluster.

**Section 15.714**

A white space database administrator may charge a fee for provision of lists of available channels to fixed and personal/portable devices and for registering fixed devices. This provision applies to devices that operate in the TV bands, 600 MHz service band and the 600 MHz guard bands and duplex gap.

**Section 15.715 (n) through (q)**

(n) Establish procedures to allow part 27 600 MHz service licensees to upload the registration information listed in § 15.713(j)(10) for areas where they have commenced operations and to allow the removal and replacement of registration information in the database when corrections or updates are necessary.

(o) Remove from the database the registrations of fixed white space devices that have not checked the database for at least three months to update their channel lists. A database administrator may charge a new registration fee for a fixed white space device that is removed from the database under this provision but is later re-registered.

(p) Establish procedures to allow health care facilities to register the locations of facilities where they operate WMTS networks on channel 37.

(q) Establish procedures to allow unlicensed wireless microphone users in the 600 MHz band to register with the database and to provide lists of channels available for wireless microphones at a given location.

**§ 27.1320 Notification to white space database administrators.**

To receive interference protection, 600 MHz licensees shall notify one of the white space database administrators of the areas where they have commenced operation pursuant to §§ 15.713(j)(10) and 15.715(n) of this chapter.

This collection of information is authorized under Sections 4(i), 302, 303(e), 303(f), and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(c), 303(f), and 307.

This information collection does not affect individuals or households – respondents are limited to applicants, protected entities and licensees using the subject radio frequency (RF) spectrum. Thus, there are no impacts under the Privacy Act and a Privacy Impact Assessment is not required.

**2. Indicate how, by whom and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.**

The Commission's Office of Engineering and Technology has designated parties to collect information from white space database administrators and to administer the databases of authorized services in the TV bands in order to maximize the use of the white space spectrum.

Protected entities (see 1 (c) and (d) above) shall submit information to the white space database as follows:

- (a) Parties operating services in the TV bands, 600 MHz service band or on channel 37 that are either not listed in the Commission's databases or are not licensed by specific coordinates shall voluntarily submit information to the white space database in order to seek protection from potential interference.
- (b) In the TV bands, these services include Broadcast Auxiliary Service (BAS) links authorized on a temporary basis, receive sites for TV translators and cable TV systems, and sites where wireless microphones are used regularly and predictably, such as major sporting events.
- (c) In the 600 MHz service band, this information includes the geographic areas where 600 MHz Band licensees have commenced operation as specified in § 15.713(j)(10)
- (d) On channel 37, this information includes the locations where the Wireless Medical Telemetry Service (WMTS) operates as specified in § 15.713(j)(11).
- (e) The purpose of this information is to prevent white space devices from causing interference to services that do not appear in the Commission's databases. The submission of such information is strictly voluntary, but services operated by parties that do not submit this information may not be protected against interference from white space devices.

In addition to the information on protected entities listed above, white space database administrators shall collect information submitted from white space devices as follows:

- (a) A fixed or Mode II white space device shall submit location and operational information to the database in order to determine and provide the available TV channels at the white space device's location. Available channels are determined based on the interference protection requirements in Section 15.712.
- (b) The white space device must make an automated re-check contact and the database shall provide fixed and Mode II personal portable white space devices with channel availability information that includes scheduled changes in channel availability over the course of the either 24 or 48 hour periods, as appropriate for the type of device, beginning at the time the white space device make a re-check contact.
- (c) The above collections of information from white space devices are automated functions of devices as approved under the Commission's equipment authorization program. The transfer of information to the white space database is therefore an operational characteristic of the device, and the burden for collection of this information from the white space device user is insignificant.

The Wireless Telecommunications Bureau will collect requests to register sites from unlicensed wireless microphone users operating at major events or large venues. The registration request must be filed at least 30 days in advance and the requests will be made public to provide an opportunity for public comment or objections. Once approved, the information will be sent to the database administrators. Submittal of the information will be voluntarily in order to seek protection from potential interference. Services operated by parties that do not submit this information may not be protected against interference from white space devices. This registration process for unlicensed wireless microphone users will be eliminated 18 months after the effective date of the rules adopted in the R&O, but no later than release of the Channel Reassignment Public Notice upon completion of the broadcast television spectrum incentive auction, as defined in Section 73.3700(a).

**3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses, and the basis for the decision for adopting this means of collection. Also describe any consideration of using information technology to reduce burden.**

The information submitted for the white space databases shall be collected via electronic means. Information that is not contained in the Commission's databases, such as the location of receive sites and wireless microphones, shall be submitted electronically by the party requesting registration directly to the white space database administrators. Requests for unlicensed wireless microphone registration will be submitted electronically to the Commission.

**4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in item 2 above.**

The FCC is the only agency believed to require or possess the subject information. Therefore, this is no duplication of effort.

**5. If the collection of information impacts small businesses or other small entities, describe any methods used to minimize burden.**

The information that will be submitted to the white space database is necessary to ensure that white space devices operate only on unoccupied channels and do not cause harmful interference to authorized services in the TV bands, the 600 MHz Band or on channel 37. Thus, the same information must be submitted by both large and small businesses. The Commission will work with the database administrators and other interested parties to ensure that information is collected in the least burdensome manner to all businesses, both large and small. For unlicensed wireless microphone registrations, the Commission will limit the information requirements to



those absolutely necessary for evaluating and processing each request.

**6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.**

The Commission provides for the operation of unlicensed radio transmitters in Part 15 of its rules. Operation under Part 15 is subject to the condition that a device does not cause harmful interference to authorized services, and that it must accept any interference received. The rules adopted in the Second Report and Order permit unlicensed devices to operate on TV channels that are not in use in their vicinity, subject to specific technical requirements that are intended to prevent interference to TV broadcasting and other authorized users of the TV bands. The rules adopted in the R&O in this proceeding also permit unlicensed devices to operate in the 600 MHz service band and on channel 37 at locations where these frequencies are not in use by authorized services.

If the required information is not collected from operating white space devices, significant interference could result to broadcast television and other important licensed radio services.

Similarly, if the needed information on registered licensed low power broadcast auxiliary devices, unlicensed wireless microphones operated at large event facilities, 600 MHz service band operations, WMTS operations on channel 37, and headend receive sites of multiple video program distributors, low power TV stations and TV translator stations is not obtained, those facilities may receive interference.

**7. Explain any special circumstances that cause an information collection to be conducted in a manner: requiring respondents to report information to the agency more often than quarterly; requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it; requiring respondents to submit more than an original and two copies of any document; requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.**

Fixed and Mode II white space device respondents shall be required to electronically resubmit their location and operating parameters at least every 48 or 24 hours in order to determine channel availability information that includes scheduled changes in channel availability over the course of the recheck period. This shall be an automated process and the burden for submission of information is insignificant.

**8. If applicable, provide a copy and identify the date and page number of publication in the Federal Register of the agency's notice, required by 5 CFR 1320.8(d), soliciting**

**comments on the information prior to submission to OMB.**

**-Describe efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.**

The Commission published a Federal Register notice on January 22, 2016 2016 81 FR 3799, soliciting comments from the public on the information collection requirements contained in this supporting statement. No PRA comments were received from the public.

**9. Explain any decision to provide any payment or gift to respondents, other than remuneration of contractors or grantees.**

No payments or gifts are given to respondents.

**10. Describe any assurance of confidentiality provided to respondents and the basis for the assurance in statute, regulation or agency policy.**

The Commission is not requesting respondents to submit confidential information to the Commission. Applicants may request that portions of their applications remain confidential in accordance with Section 0.459 of the Commission's rules.

**11. Provide additional justification for any questions of a sensitive nature.**

No sensitive information is required for this collection of information

**12. Provide estimates of the hour burden of the collection of information. The statement should: indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance.**

***Licensed low power broadcast auxiliary devices and receive sites.*** It is estimated that approximately 1,500 respondents (applicants/licensees) will file registrations with the database administrators for licensed low power broadcast auxiliary devices (wireless microphones), headend receive sites of multiple video program distributors, low power TV stations and TV translator stations. It is estimated that approximately 500 respondents (applicants/licensees) will file registrations with the Commission for unlicensed wireless microphones operated at large event facilities.

As noted above in Question 2, the burden for automated submission of information by white

space devices is a function of the device and is therefore insignificant.

The respondents are expected to register once annually and the Commission estimates the burden of registration for both the database administrators and the Commission will be 2 hours for each registration. We expect that respondents will fulfill the requirements of this collection with in-house clerical staff.

**Total Number of Respondents:**  $1,500 + 500 = 2,000$  (respondents).

**Total Number of Responses Annually:** 2,000 registrations.

**Total Annual Burden Hours:**  $2,000 \text{ responses} \times 2 \text{ hours/response}^1 = 4,000 \text{ hours}$ .

**600 MHz Band licensees.** It is estimated that approximately 10 respondents (600 MHz Band licensees) will register information on the locations where they have commenced operation with a white space database. It is also estimated that each respondent will register 200 locations annually. The respondents are expected to register information on a location once when they commence operations in an area. A respondent must update a previous registration or make an additional registration when it expands the area in which it is operating.

**Total Number of Respondents: 10.**

**Total Number of Responses Annually: 2,000 registrations.**

**Total Annual Burden Hours:**  $2,000 \text{ registrations} \times 2 \text{ hours/response}^2 = 4,000 \text{ hours}$ .

**Cumulative Totals:**

**Total Number of Respondents:**  $2,000 + 10 = 2,010$  (respondents).

**Total Number of Responses Annually:**  $2,000 + 2,000 = 4,000$  registrations.

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<sup>1</sup> This time period also accounts for the applicants/licensees (respondents) keeping copies/records of their registrations.

<sup>2</sup> This time period also accounts for the applicants/licensees (respondents) keeping copies/records of their registrations.

**Total Annual Burden Hours:** 4,000 + 4,000 = **8,000 hours.**

**In-House Costs:** The Commission estimates at clerical staff paid at \$10.00 per hour will fulfill the requirements. Therefore, the in-house costs are: \$10.00 per hour x 8,000 hours = **\$80,000.**

**13. Provide estimates for the total annual cost burden to respondents or recordkeepers resulting from the collection of information. (Do not include the cost of any hour burden shown in items 12 and 14).**

(a) The capital and start-up costs for manufacturers of white space devices is part of the design, development and manufacture of these devices. As such, this cost is included in the capital and start-up costs for equipment authorization as reported in OMB 3060-0057 (Form 731 Application for Equipment Authorization), OMB 3060-0329 (Equipment Authorization – Verification), and OMB 3060-0636 (Equipment Authorization – Declaration of Conformity). For protected entities, the capital and start-up costs are insignificant as these entities are already doing business, and there would be no preparation costs for reporting of their location and operating parameters to the white space database administrators.

(b) Operation and maintenance costs for white space devices are likewise included in the above mentioned OMB approvals. Operation and maintenance costs for protected entities is estimated to be \$50 for the reporting of required information to the white space database administrators. Therefore:

Capital and start-up costs:	2,000 respondents X \$ 0	\$ 0
Operation/Maintenance (wireless microphones/receive sites):	2,000 respondents X \$50	\$ 100 ,000
Operation/Maintenance (600 MHz Band licensees):	2,000 registrations X \$50	<u>\$ 100 ,000</u>
<b>Total Respondent Cost Estimate:</b>		<b>\$ 200,000</b>

**14. Provide estimates of annualized costs to the Federal government. Also provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff) and any other expenses that would not have been incurred without this collection of information.**

There is no cost to the Federal government for the database administrator collection of information. Protected entities will deal directly with the white space database administrators, and the cost for white space device information collection has been included in the noted equipment authorization collections.

The total annualized cost to the Federal government associated with the collection of information for unlicensed wireless microphone registrations is \$6,680.

It is estimated that a GS-11, Step 5 industry analyst (\$35.11 per hour) spends approximately 15 minutes reviewing each of the estimated 500 requests for registration. The total annualized cost to the Federal Government for these reviews is  $(\$35.11 \times 500 \times .25 =)$  **\$4,388.75**.

The Commission estimates that approximately 10% of the 500 requests for registration will require additional review to justify the need for channels, for a total of 50 applications. Review of this information requires a higher grade level engineer and requires more time. For this purpose, it is estimated that a GS-13, Step 5, electronics engineer (\$50.04 per hour) spends approximately one hour in reviewing these applications. The total annualized cost to the Federal government for these reviews is  $(\$50.04 \times 50 =)$  **\$2,502.00**.

Therefore, the cost to the Federal Government is  $\$4,388.75 + \$2,502.00 =$  **\$6,891 (rounded)**.

As discussed above, this registration process for unlicensed wireless microphone users will be eliminated 18 months after the effective date of the rules adopted in the R&O, but no later than release of the Channel Reassignment Public Notice upon completion of the broadcast television spectrum incentive auction, as defined in Section 73.3700(a).

**15. Explain the reasons for any program changes or adjustments to this information collection.**

There is a program changes/increases to this collection as follows: 10 to the number of respondents, 2,000 to the annual number of responses, 4,000 to the annual burden hours and \$100,000 to the annual cost. These increases are due to the addition of the 600 MHz Band licensees.

There are no adjustments to this collection.

**16. For collections of information whose results will be published, outline plans for tabulation and publication.**

The information and data will not be published.

**17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons that display would be inappropriate.**

The Commission is seeking OMB approval to request a waiver of displaying the OMB expiration date on the on-line forms. This will alleviate the Commission from having to update the OMB expiration date each time this collection is submitted for OMB review and approval.

The Commission will use an edition date in lieu of an OMB expiration date.

**18. Explain any exceptions to the Certification Statement.**

There are no exceptions to the certification statement

**B. Collection of Information Employing Statistical Methods:**

This collection of information does not employ statistical methods.