

December 19, 2017

Federal Communications Commission

OMB Control Number 3060-1211

Explanation of Non-Substantive Changes to OMB Control Number: 3060-1211

Purpose of this Submission: This submission is being made to an existing information collection pursuant to 44 U.S.C. § 3507 for a non-substantive change to this collection.¹ On April 21, 2015, the Federal Communications Commission (Commission or FCC) released a Report and Order and Second Further Notice of Proposed Rulemaking (*Report and Order*) in GN Docket No. 12-354, FCC No. 15-47, that establishes rules for commercial use of 150 megahertz in the 3550-3700 MHz (3.5 GHz) band and creates a new Citizens Broadband Radio Service.

The band is currently used by Department of Defense (DoD) radar systems, commercial fixed satellite service (FSS) earth stations, and commercial wireless radio services. The *Report and Order* establishes a roadmap for making the entirety of the band available for commercial use in a phased manner and creates a three-tiered sharing framework enabled by a Spectrum Access System (SAS). Incumbent users represent the highest tier in this framework and receive interference protection from Citizens Broadband Radio Service users. The Citizens Broadband Radio Service itself consists of two tiers—Priority Access and General Authorized Access (GAA)—both authorized in any given location and frequency by an SAS and users will operate Citizens Broadband Radio Service Devices (CBSDs), which are fixed stations, or networks of such stations. Incumbent FSS earth station licensees must register annually with the Commission through an online system to receive interference protection from CBSDs. This registration information will be made available to all approved SASs.

The Commission sought and received approval from the Office of Management and Budget (OMB) for this information collection requirement. However, at that time, the Commission had not finalized FSS registration process. The Commission is now in the final stages of developing the online registration system, and, therefore, can now provide the exact registration information parameters required of licensees, and the estimated cost to the Federal Government. The estimated burden hours and costs for the respondents provided in the Supporting Statement remain unchanged.

FSS earth station licenses will provide location, technical, and contact information as part the registration.² The system maintenance will be provided by IT contractors who are hired to

¹ 47 U.S.C. § 3507.

² Specifically, the registration system will include the following fields: Start Date/Time EST, Related Registration, Earth Station Latitude Degrees, Earth Station Latitude Minutes, Earth Station Latitude Seconds, Latitude Direction, Earth Station Longitude Degrees, Earth Station Longitude Minutes, Earth Station Longitude Seconds, Longitude Direction, Earth Station Latitude Decimal Degrees, Earth Station Longitude Decimal Degrees, Earth Station Site Elevation (meters), Earth Station Antenna Height AGL (meters), Earth Station Antenna Height AMSL (meters),

support a platform, versus a specific application, and the contract does not break down the cost per application. While it is not feasible to provide an exact estimated cost to the Federal Government, we expect the maintenance of the registration system to result in minimal time and cost (in proportion to the overall contract).

Rule:

96.17 - Protection of Existing FSS Earth Stations in the 3600-3700 MHz Band and 3700-4200 MHz Band

(a) FSS earth stations licensed to operate in the 3600–3700 MHz band listed at www.fcc.gov/cbrs-protected-fss-sites shall be protected from CBSD operation consistent with this section. The protections in this section shall only apply to registered FSS earth stations that are authorized to operate on a co-primary basis consistent with § 2.106 of this chapter.

(1) FSS earth stations in the 3650–3700 MHz band will be afforded protection consistent with this section only after the conditions set forth in § 96.21(c) are satisfied.

(2) Co-channel. The aggregate passband radiofrequency (RF) power spectral density at the output of a reference RF filter and antenna at the location of an FSS earth station operating in the 3600–3700 MHz band, produced by emissions from all co-channel CBSDs (within 150 km) operating in the Citizens Band Radio Service shall not exceed a median root mean square (RMS) value of -129 dBm/MHz. The reference antenna system requires SAS to calculate antenna gain using § 25.209(a)(1) and (4) of this chapter, and a reference RF filter between the feed-horn and low noise amplifier (LNA)/low noise block downconverter (LNB), with 0.5 dB insertion loss in the passband.

(3) Blocking. The aggregate RF power at the output of a reference RF filter and antenna at the location of an FSS earth station operating in the 3600–3700 MHz band, produced by emissions from all CBSDs (within 40 km), shall not exceed a median RMS value of -60 dBm. The reference antenna system requires an SAS to calculate antenna gain using § 25.209(a)(1) and (4) of this chapter, and a reference RF filter between the feed-horn and LNA/LNB, with a filter mask of 0.6 dB/MHz attenuation to 30.5 dB at 50 MHz offset below the lower edge of the FSS earth station's authorized passband, and 0.25 dB/MHz attenuation to 55.5 dB at an offset greater than or equal to 150 MHz below the lower edge of the FSS earth station's authorized passband.

(b) Registered FSS earth stations in the 3700–4200 MHz band listed at www.fcc.gov/cbrs-protected-fss-sites shall be protected from CBSD operation in accordance with this section. Only licensed FSS earth stations used for satellite telemetry, tracking, and control (TT&C) operations will be protected under this section. Other licensed 3700–4200 MHz earth stations may be protected consistent with § 96.17(f).

Antenna Gain (dBi), Lower Frequency (MHz), Upper Frequency (MHz), Pointing Azimuth (degrees), Pointing Elevation (degrees), GSO Satellite Longitude Decimal (+E,-W), Location Used for Tracking Telemetry and Command, Location Status, FCC Comments, Registration Number, Certification Date, Action Date, Certifier First Name, Certifier Middle Initial, Certifier Last Name, Certifier Suffix, Certifier Title.

(1) Out-of-band emissions into FSS. The aggregate passband RF power spectral density at the output of a reference RF filter and antenna at the location of a TT&C FSS earth station operating in the 3700–4200 MHz band, produced by emissions from all CBSDs (within 40 km) operating in the Citizens Band Radio Service shall not exceed a median RMS value of -129 dBm/MHz. The reference antenna system requires SAS to calculate antenna gain using § 25.209(a)(1) and (4) of this chapter, and a reference RF filter between the feed-horn and LNA/LNB, with 0.5 dB insertion loss in the passband.

(2) Blocking. The aggregate RF power at the output of a reference RF filter and antenna at the location of a TT&C FSS earth station operating in the 3700–4200 MHz band, produced by emissions from all CBSDs (within 40 km), shall not exceed a median RMS value of -60 dBm. The reference antenna system requires SAS to calculate antenna gain using § 25.209(a)(1) and (4) of this chapter, and a reference RF filter between the feed-horn and LNA/LNB, with a filter mask of 0.6 dB/MHz attenuation to 30.5 dB at 50 MHz offset below the lower edge of the FSS earth station's authorized passband, and 0.25 dB/MHz attenuation to 55.5 dB at an offset greater than or equal to 150 MHz below the lower edge of the FSS earth station's authorized passband.

(c) These protection criteria will be enforced by the Spectrum Access System authorized consistent with subpart F of this part.

(d) FSS earth station licensees requesting protection under this part must register with the Commission annually, no later than 30 days before the end of the preceding calendar year, or upon making changes to any of the operational parameters listed in this section. Registration information will be made available to all approved SASs.

(1) Annual registration for each earth station shall include, at a minimum:

- (i) The earth station's geographic location (Using NAD83 coordinates);
- (ii) Antenna gain;
- (iii) Azimuth and elevation antenna gain pattern;
- (iv) Antenna azimuth relative to true north; and
- (v) Antenna elevation angle.
- (vi) Whether the earth station is used for satellite telemetry, tracking, and control (for earth stations in the 3700–4200 MHz band).

(2) Such information must be made available to SAS Administrators and maintained consistent with § 96.55.

(e) CBSDs may operate within areas that may cause interference to FSS earth stations, in excess of the levels described in § 96.17(a) and (b), provided that the licensee of the FSS earth station and the authorized user of the CBSD mutually agree on such operation and the terms of any such agreement are provided to an SAS Administrator that agrees to enforce them. The terms of any such agreement shall be communicated promptly to all other SAS Administrators.

(f) FSS earth station licensees in the 3600–3700 and 3700–4200 MHz bands may request additional protection from SAS Administrators to prevent harmful interference into their systems. SAS Administrators must establish a process to receive and address such requests, consistent with §§ 96.53(o) and 96.63 and shall make good faith efforts to address interference concerns, consistent with their other responsibilities under this part. In addressing such requests, SASs shall assume that 3700–4200 MHz earth stations are utilizing filters with the characteristics described in § 96.17(a)(3) or (b)(2) as appropriate for the 3600–3700 or 3700–4200 MHz band.