

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Amendment of Part 15 of the Commission’s Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37, and	)	ET Docket No. 14-165
	)	
Amendment of Part 74 of the Commission’s Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap	)	
	)	
Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions	)	GN Docket No. 12-268
	)	

**REPLY COMMENTS OF THE  
ALARM INDUSTRY COMMUNICATIONS COMMITTEE**

The Alarm Industry Communications Committee (“AICC”), on behalf of its members, hereby submits its reply comments in response to the Notice of Proposed Rulemaking (“NPRM”) issued by the Commission seeking comment on proposed rules for the operation of unlicensed devices in spectrum generally used for broadcast television service.<sup>1</sup> As described below, AICC supports several of the proposed measures that are designed to increase access to 600 MHz spectrum by unlicensed television white space devices. However, AICC has concerns about the proposed requirements for white space devices to obtain updates concerning available spectrum, especially to the extent

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<sup>1</sup> See Amendment of Part 15 of the Commission’s Rules for Unlicensed Operations in the Television Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and channel 37, and Amendment of Part 74 of the Commission’s Rules for Low Power Auxiliary Stations in the Repurposed 600 MHz Band and 600 MHz Duplex Gap; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, Notice of Proposed Rulemaking, 29 FCC Rcd. 12248 (2014) (“NPRM”).

that the new requirements would require modification or replacement of existing devices that are already deployed.

**I. Statement of Interest**

AICC is comprised of representatives of the Central Station Alarm Association (CSAA), Electronic Security Association (ESA), Bosch Security Systems, Digital Monitoring Products, Digital Security Control, Telular Corp, Stanley Convergent (alarm division, formerly known as Honeywell Monitoring), Honeywell Security, Vector Security, Inc., ADT LLC, AES- IntelliNet, Alarm.com, Bay Alarm, Intertek Testing, RSI Videofied, Security Network of America, United Central Control, Security Industry Association (SIA), AFA Protective Systems, Vivint (formerly APX Alarm), COPS Monitoring, DGA Security, Security Networks, Universal Atlantic Systems, Axis Communications, Interlogix, LogicMark, Napco Security, Alarm Detection, ASG Security, Protection One, Select Security, Inovonics, Nortek Security & Control, LLC, Numerex, Tyco Integrated Security, FM Approvals, and the Underwriters Laboratories. ESA and CSAA, representing the alarm dealer segment, have 2434 member companies providing alarm service to the public.

AICC member companies protect a wide range of sensitive facilities and their occupants from fire, burglaries, sabotage and other emergencies. Protected facilities include government offices, power plants, hospitals, dam and water authorities, pharmaceutical plants, chemical plants, banks, schools and universities. In addition to these commercial and governmental applications, alarm companies protect a large and ever increasing number of residences and their occupants from fire, intruders, and carbon

monoxide poisoning. Alarm companies also provide medical alert services for obtaining ambulances in the event of medical emergencies. Alarm companies often use low power unlicensed devices certified under Part 15 of the Commission's Rules to relay alarm signals from various sensors to the alarm panel, and in other aspects of their operations.

## **II. The Commission Should Maximize Access to 600 MHz Spectrum for Unlicensed Devices.**

The repacking of the television spectrum bands will create much needed broadband channels to bolster commercial wireless networks, and revenues from the resulting spectrum auction will bolster public safety funding among other benefits. However, a side effect of this effort is that there will be less unused television spectrum available for use by unlicensed devices pursuant to the Commission's "TV White Space" initiative set in motion in 2008. This is a concern to alarm service providers and other users of unlicensed devices. Therefore, AICC applauds the Commission's efforts to find ways to expand access to spectrum in the post-repacking environment; and AICC joins several commenters<sup>2</sup> in supporting a number of the specific proposals to accomplish this goal. In particular:

- AICC supports the Commission's proposal to eliminate the prohibition on white space device operation on the first two vacant TV channels above and below channel 37 and make them available for use by white space devices. See NPRM at para. 25.

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<sup>2</sup> See, e.g., Comments of the WiFi Alliance at pp. 7-13; Comments of xG Technology at pp. 17-19.

- AICC agrees with the comments of xG Technology, Inc. (at p. 6) that at least one channel should be reserved for white space devices in each and every market. See NPRM at para. 26.

- AICC supports the proposal (NPRM at para. 27) to allow operation of fixed white space devices on television channels 3 and 4, as a way to provide an additional 12 MHz of contiguous spectrum for use by white space devices in areas where those channels are not used for authorized services. The current prohibition on fixed white space device operation on channels 3 and 4 is no longer warranted, since the number of TV interface devices has declined sharply since the White Space rules were originally adopted in 2008. AICC also supports the ability of portable devices to utilize this spectrum under the Part 15 rules proposed.

- AICC supports the proposal (NPRM at para. 31) to remove the prohibition on personal/portable device operation on television channels 14-20. This proposed action would make 42 megahertz of spectrum potentially available in locations where the spectrum is not used for the private or commercial land mobile operations.

- AICC agrees that personal/portable devices should be allowed to operate below channel 14. Allowing operation of such devices on channels 7-13 would make another 42 megahertz of spectrum potentially available for unlicensed devices. Alarm device manufacturers would be interested in developing devices that operate below channel 14, given the longer radio wavelengths at these lower frequencies; therefore, AICC supports the availability of as many channels in this range as possible.

- AICC supports the Commission's proposal (NPRM at para. 35) to allow fixed devices to operate adjacent to occupied TV channels (i.e., within their service contour), provided the operating power is reduced to 40 milliwatts EIRP (i.e., the same maximum power level for personal/portable devices that operate adjacent to occupied TV channels). This change would allow fixed devices to operate in locations where the spectrum is highly congested and available channels are not contiguous.

- AICC supports the proposal (NPRM para. 37) to allow fixed devices to operate with a maximum power of four watts EIRP at locations where there are two contiguous vacant channels rather than three. AICC agrees that this rule change will increase spectrum efficiency without materially increasing the potential of interference to television reception.

- AICC agrees that the Commission should allow shorter separation distances for devices operating at less than 4000 milliwatts EIRP, as a way to expand the locations at which white space devices can operate. NPRM at paras. 39 and 65. The Commission should therefore amend the table of separation distances in Section 15.712(a)(2) to reflect the proposals that would allow fixed device operation at a range of power levels below four watts EIRP. Formulating shorter separation distances for fixed white space devices with power levels below four watts will permit them to operate closer to a television station service contour, since the current separation distances were based on the assumption that a fixed device always operates at the maximum power level. AICC also agrees that since the separation distances for personal/portable devices were also based on an EIRP of four watts, they are greater than necessary, since personal/portable devices may operate with a maximum EIRP of 100 milliwatts, or 40

milliwatts if they are on a channel adjacent to an occupied channel. AICC supports the related proposal (NPRM at para. 40) to provide more flexibility for white space device users by defining intermediate power levels and corresponding separation distances, so that devices operating at less than the maximum permissible power can meet separation distances commensurate with their actual power. This approach would allow white space devices to operate in more locations with limited spectrum availability.

- AICC supports the proposal (NPRM at para. 128) to remove the out-of-band emission limits that apply on channels 36 through 38, and instead require white space devices to meet either the current adjacent channel or the Section 15.209 emission limits as appropriate. The requirement that unlicensed Channel 37 devices access a database to ensure that they will operate sufficiently far from both Wireless Medical Telemetry Service (WMTS) and Radio Astronomy Service (RAS) sites eliminates the need for the more stringent out-of-band emission limits on channels 36 through 38. This proposed change will eliminate the need for white space devices to incorporate additional filtering that blocks channel 37 and impacts the first and second adjacent channels, thus making channels 35, 36, 37, 38 and 39 useable by white space devices.

### **III. The Commission Should Not Increase the Unlicensed Database Re-Check Requirement.**

The Commission proposes in the NPRM to modify significantly the white space device “re-check interval”, which is the frequency with which white space devices must consult the database to confirm the continuing availability of a transmit frequency – from the current once per day to once *every twenty minutes*. See, e.g., NPRM at para. 202.

AICC agrees with the Wireless Internet Service Providers Association (“WISPA”)(at p. 18) and xG Technology (at p. 7) that this protocol change would place an undue burden on white space databases, device users. The principal justification for this increase in database re-checks is the need to “address the concerns of [itinerant] wireless microphone users and accommodate their needs for access to available unused television channels, free from interference from unlicensed devices.” However, there is no evidence in the record to support taking such a drastic step to ensure that adequate spectrum will be available for wireless microphones.

Wireless microphones generally communicate less than the length of a football field, and for a few minutes of on-air time. As WISPA notes (at p. 19), white space spectrum is in use in certain situations for public safety purposes; and the transmission of an alarm detecting a fire, home invasion or dangerous carbon monoxide level is certainly a safety-related communication. The risk of losing an active channel after a mere 20 minutes would disrupt such critical operations.

Wireless microphones are narrowband spectrum users operating for brief periods of time over very short distances. Thus, it is unlikely such operations will suffer harmful interference from data operations on white space devices. It is respectfully submitted that the Commission must find a more focused approach to protecting wireless microphones.

AICC agrees with the WiFi Alliance suggestion (at p. 40-41) that improved technology should allow dynamic channel assignments that would minimize the need for

database re-checks, rather than an increase in the requirement; and AICC concurs that “[i]f the device does not move while in operation, then re-checking should not be required.” AICC also has concerns about the Commission’s proposal (NPRM at para. 202) to require that white space devices that do not comply with the new re-check requirements must cease operating within 180 days of the effective date of the rules. The retroactive replacement of equipment can be unduly burdensome; and where it may be two or three years before commercial operations are in place on nearby spectrum, it is better to allow the white space device replacement process to play out through attrition.

**IV. Conclusion**

For the forgoing reasons, AICC supports the Commission’s proposal to maximize use of television spectrum by unlicensed devices, and request that the White Space rules be revised as discussed above.

Respectfully submitted,

**ALARM INDUSTRY  
COMMUNICATIONS COMMITTEE**

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