

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
International Bureau Seeks Comment on)	
Recommendations Approved by World)	IB Docket No. 16-185
Radiocommunication Conference Advisory)	Document WAC/066 (01.10.18)
Committee)	
)	

COMMENTS OF WI-FI ALLIANCE

Wi-Fi Alliance submits these comments in response to the Public Notice issued in the above-referenced proceeding by the International Bureau.^{1/} The Public Notice seeks comment on draft recommendations made by the Commission’s World Radiocommunication Conference (“WRC- 19”) Advisory Committee (“WAC”) and draft proposals provided by the National Telecommunications and Information Administration (“NTIA”) to assist the Commission develop U.S. positions for the upcoming WRC-19.

Among the WAC’s recommendations is a proposal (WAC/066) for WRC-19 Agenda Item 1.16 regarding radio local area networks (“RLANs”) in the 5150-5250 MHz (“U-NII-1”) band. Wi-Fi Alliance urges the Commission to adopt View A for this agenda item, which appropriately would reaffirm the U.S. position regarding co-existence of RLANs in this spectrum with other services and align International Telecommunications Union (“ITU”) Radio Regulations with the U.S. rules governing RLAN operations in the band.

^{1/} *International Bureau Seeks Comment on Recommendations Approved By World Radiocommunications Conference Advisory Committee*, Public Notice, IB Docket No. 16-185 (rel. Oct. 3, 2018) (“*Public Notice*”).

I. INTRODUCTION AND BACKGROUND

Wi-Fi Alliance®^{2/} is a global, non-profit industry association of over 800 leading companies from dozens of countries devoted to seamless interoperability. With technology development, market building, and regulatory programs, Wi-Fi Alliance has enabled widespread adoption of Wi-Fi® worldwide by certifying thousands of Wi-Fi products each year. It is also an active participant before the FCC and in international proceedings, promoting regulatory actions that facilitate Wi-Fi connectivity while maximizing unlicensed spectrum use in general. Because the Commission may support a position regarding a WRC-19 issue that can affect international Wi-Fi use of the 5 GHz band, Wi-Fi Alliance is pleased to have the opportunity to submit these comments.

In 1997, the Commission made 300 megahertz of spectrum available for use by Unlicensed National Information Infrastructure (“U-NII”) devices (including Wi-Fi) and, among other actions, established rules for the U-NII-1 band.^{3/} In 2014, based on an extensive record, the Commission further revised the U-NII rules reforming the operational requirements and constraints for Wi-Fi operations in the 5 GHz band, including allowing U-NII-1 devices outdoors, with strong protections for the operations of Globalstar, Inc. (“Globalstar”).^{4/}

^{2/} Wi-Fi®, the Wi-Fi logo, the Wi-Fi CERTIFIED logo, Wi-Fi Protected Access® (WPA), WiGig®, the Wi-Fi Protected Setup logo, Wi-Fi Direct®, Wi-Fi Alliance®, WMM®, Miracast®, Wi-Fi CERTIFIED Passpoint®, and Passpoint® are registered trademarks of Wi-Fi Alliance. Wi-Fi CERTIFIED™, Wi-Fi Protected Setup™, Wi-Fi Multimedia™, WPA2™, WPA3™, Wi-Fi CERTIFIED Miracast™, Wi-Fi ZONE™, the Wi-Fi ZONE logo, Wi-Fi Aware™, Wi-Fi CERTIFIED HaLow™, Wi-Fi HaLow™, Wi-Fi CERTIFIED WiGig™, Wi-Fi CERTIFIED Vantage™, Wi-Fi Vantage™, Wi-Fi CERTIFIED TimeSync™, Wi-Fi TimeSync™, Wi-Fi CERTIFIED Location™, Wi-Fi Location™, Wi-Fi CERTIFIED Home Design™, Wi-Fi Home Design™, Wi-Fi CERTIFIED Agile Multiband™, Wi-Fi Agile Multiband™, Wi-Fi CERTIFIED Optimized Connectivity™, Wi-Fi Optimized Connectivity™, Wi-Fi CERTIFIED EasyMesh™, Wi-Fi EasyMesh™, Wi-Fi CERTIFIED Enhanced Open™, Wi-Fi Enhanced Open™, Wi-Fi CERTIFIED Easy Connect™, Wi-Fi Easy Connect™, and the Wi-Fi Alliance logo are trademarks of Wi-Fi Alliance.

^{3/} *Amendment of the Commission’s Rules to Provide for Operation of Unlicensed U-NII Devices in the 5 GHz Frequency Range*, Report and Order, 12 FCC Rcd 1576 (1997).

^{4/} *Revision of Part 15 of the Commission’s Rules to Permit Unlicensed National Information Infrastructure (U-NII) Devices in the 5 GHz Band*, First Report and Order, 29 FCC Rcd 4127 at ¶¶ 25-37 (2014) (“2014 5 GHz Order”).

Agenda Item 1.16 covers the use of several bands, including the U-NII-1 band, by RLANs.^{5/} Two groups supported different proposals for the U-NII-1 band. View A, supported by technology companies and trade associations (including Wi-Fi Alliance), would align the ITU Radio Regulations with U.S. rules governing the U-NII-1 band by permitting outdoor operations at up to 1 watt effective isotropic radiated power (“EIRP”) provided the EIRP does not exceed 125 mW at any elevation angle above 30 degrees from the horizon. Taking this action, consistent with technical analyses submitted by the U.S. to the ITU, is important to foster the globally harmonized use of this spectrum, which will benefit U.S. consumers and businesses and allow the U.S. to retain its leadership in making Wi-Fi available.^{6/}

II. DISCUSSION

View A would align ITU regulations with the positions that the U.S. has already taken based on significant deliberation and technical analyses. That position is consistent with the rules the Commission adopted in 2014 after the development of a full record and the establishment of safeguards to protect Globalstar’s operations. In that proceeding, the Commission considered all comments, multiple technical analyses provided by Globalstar, NCTA, and others, and numerous *ex parte* presentations.^{7/} To assuage Globalstar’s concerns, the Commission established a strict antenna pointing requirement limiting the energy radiated toward space. It allowed fixed access point outdoor operations at a conducted power level of up to 1 W (30 dBm), and a PSD of 17

^{5/} *Public Notice*, Attachment A, Agenda Item 1.16 (Document WAC/066).

^{6/} *Id.* at View A.

^{7/} *See 2014 5 GHz Order*, ¶ 31; *see also NCTA Ex Parte*, ET Docket No. 13-49, (Sept. 18, 2013); *NCTA Ex Parte* (Sept. 23, 2013); *NCTA Ex Parte* (Oct. 22, 2013); *NCTA Ex Parte* (Oct. 28, 2013); *NCTA Ex Parte* (Jan. 17, 2014); *NCTA Ex Parte* (Jan. 22, 2014); *NCTA Ex Parte* (Feb. 3, 2014); *NCTA Ex Parte* (Feb. 26, 2014); *Globalstar Ex Parte* (Nov. 22, 2013); *Globalstar Supplemental Comments* (Nov. 29, 2013); *Globalstar Supplemental Comments* (Dec. 13, 2013); *Globalstar Ex Parte* (Jan. 28, 2014); *Globalstar Investors Ex Parte Filings* (Jan. 31, 2014); *Globalstar Ex Parte* (Feb. 7, 2014); *Globalstar Ex Parte* (Feb. 14, 2014); *Globalstar Ex Parte* (Feb. 20, 2014).

dBm/MHz with an allowance for a 6 dBi antenna gain (i.e. a total 36 dBm EIRP), and limited the maximum EIRP above 30 degrees elevation to 125 mW (21 dBm) EIRP.^{8/} View A would conform ITU regulations to these FCC rules.

The Commission's 2014 action was, and remains, critical. Wi-Fi has evolved from a nascent technology in to a vital component of telecommunications infrastructure – leveraging a limited amount of unlicensed spectrum into connectivity for billions of users and establishing U.S. leadership in this multibillion dollar, global industry. Demand for Wi-Fi connectivity necessitates rules that support both indoor and outdoor applications. For example, campus settings require Wi-Fi access within and between buildings. The Commission's 2014 actions helped, and continues to help, meet these needs.

The U.S. has consistently maintained its position on RLAN outdoor deployments in the 5150-5250 MHz band, in line with its 2014 decision, in international fora. As recently as May, 2018, the United States submitted a contribution to ITU Working Party 5A in preparation for WRC-19 with a study analyzing compatibility between Globalstar's feeder links and RLAN outdoor operations in the U-NII-1 band.^{9/} This U.S. study confirms that RLAN operations under the existing U-NII-1 band rules, both outdoors and indoors, pose “no harmful interference to the single [Mobile Satellite Service] system using the 5 150–5 250 MHz band for FSS feeder links” (*i.e.*, Globalstar).^{10/} This conclusion is based on a technical conclusion that is precisely the opposite of

^{8/} See 2014 5 GHz Order, ¶¶ 36-37.

^{9/} Radiocommunication Study Groups, Preliminary Draft CPM Text for WRC-19 Agenda Item 1.16, (May 8, 2018); Sharing and Compatibility Study Between WAS/RLAN Applications and NGSO Systems in the Mobile Satellite Service with FSS Feeder Links Operating in the 5091-5250 MHz Band, Document 5A/727-E (May 9, 2018).

^{10/} *Id.* at 35.

what is expressed in View B.^{11/} But just as Globalstar failed to provide any basis for changing the Commission's rules, there is no reason for the U.S. to adopt View B, which would be directly contrary to all actions the U.S. has taken domestically and internationally with respect to the U-NII-1 band.

Aligning radio regulations internationally benefits everyone. Promoting harmonization through consistent regulatory regimes produces greater economies of scale, thereby reducing costs, increasing quality, and speeding products to market. Moreover, consistent worldwide technical regulations facilitates frictionless use of devices internationally. This consistency is particularly important to Wi-Fi because it allows consumers and businesses to use the same equipment (smartphones, laptops and other devices) in any country to which they travel. That is precisely the approach that View A would promote.

In fact, global harmonization has already begun and WRC-19 adoption of the proposed changes to Resolution 229 would help further accelerate that process. As a result of the U.S. decision to allow outdoor U-NII-1 operations, Canada^{12/}, Japan^{13/} and South Korea^{14/} have followed the U.S. lead with similar regulations. And at the last WRC-19 preparatory meeting of the Inter-

^{11/} Earlier this year, Globalstar asked the Commission to initiate a Notice of Inquiry ("NOI") seeking to reevaluate the 2014 decision to allow outdoor operations in the U-NII-1 band. *See Petition for Notice of Inquiry of Globalstar, Inc.*, RM-11808 (May 21, 2018). In response to the Public Notice seeking comment on the petition, Wi-Fi Alliance and many other groups, filed comments opposing the petition, noting that Globalstar had presented no evidence of a link between its concerns as to noise levels and the U-NII-1 rules. It asked the Commission to dismiss the petition.

^{12/} *See Decision on the Technical and Policy Framework for Radio Local Area Network Devices Operating in the 5150-5250 MHz Frequency Band*, Innovation, Science and Economic Development, Canada, 26, May 2017.

^{13/} Japanese Ministry of Internal Affairs and Communications, *Amendment to Ministerial Ordinance*, available at <https://members.wto.org/crnattachments/2018/TBT/JPN/18216300e.pdf>.

^{14/} National Radio Research Agency (Korea), *Partial revision of technical standards for radio equipment for telecommunications business*, Administrative Notice, Mar. 27, 2018 (available at https://www.rra.go.kr/ko/notice/policyList_view.do?pc_seq=710&pc_type=1&pc_status=&searchCon=&searchTxt=&sortOrder).

American Telecommunication Commission (“CITEL”), Mexico introduced a proposal that is aligned with the View A approach.^{15/}

III. CONCLUSION

Wi-Fi Alliance urges adoption of the proposal included in WAC/066-View A. The only objective of the View A proposal is to align the ITU Radio Regulations with the FCC rules governing RLAN operations in the U-NII-1 band. In contrast, the View B proposal would be inconsistent and contradictory to actions taken in the U.S. and abroad for existing and future Wi-Fi operations.

Respectfully submitted,

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^{15/} Inter-American Telecommunications Commission, *Preliminary Proposals for WRC-19 Output Document of the 31st Meeting of the PCC.II* at p. 63 (Jul. 20, 2018).