Before the
Federal Communications Commission
Washington, DC 20554

In the Matter of	)	
	)	
Petition of American Hotel & Lodging	)	RM No. 11737
Association, Marriott International, Inc.	)	
and Ryman Hospitality Properties for a	)	
Declaratory Ruling to Interpret 47 U.S.C.	)	
§ 333, or, in the Alternative, for Rulemaking	)	

REPLY COMMENTS OF
OPEN TECHNOLOGY INSTITUTE AT NEW AMERICA FOUNDATION
AND
PUBLIC KNOWLEDGE

The Open Technology Institute at New America Foundation (OTI) and Public Knowledge (PK) (collectively "OTI/PK") submit these Reply Comments in opposition to the above captioned Petition.[1] As demonstrated by numerous and diverse commenters, the Commission should take this opportunity to reaffirm its long-standing interpretation that Section 333[2] applies to all communications by radio authorized by the Commission, whether codified in Part 15 or elsewhere.

Operators of networks using Part 15 devices have many alternative and permissible ways to combat cybersecurity threats and criminal activities – including notification of the relevant law enforcement authorities. By contrast, nothing could more undermine the stability of our wireless infrastructure than to authorize a set of trigger-happy vigilantes to engage in wide-area jamming at will. Any reduction in either the actual or perceived ubiquity or reliability of Wi-Fi

[1] *See Public Notice*, Report No. 3012 (rel. Nov. 19, 2014). *See also* Opposition of Open Technology Institute and Public Knowledge, RM-11737 (filed Dec. 19, 2014).
[2] 47 U.S.C. § 333.

due to blocking by venues would in aggregate reduce the connectivity options, throughput and affordability of mobile data for consumers. Nor is this danger of vigilante action limited to unlicensed networks. As "hetnets" relying on the seamless transfer of traffic between licensed and unlicensed frequencies become the norm, permitting blanket interference with Part 15 operations in the name of "cybersecurity" threatens the operation of cellular networks using licensed spectrum.

SUMMARY

Hotels employ security guards to help manage their property and provide a first line defense against theft, trespass or other threats to their guests. No one imagines that these private security guards should have SWAT-team style weapons and body armor, or that hotels should force guests through a TSA-like body scan to prevent terrorist attacks. Similarly, hotels (and other operators) have more than adequate means to protect their networks without resorting to jamming. The concerns articulated by the Hotel interests do not justify a resort to willful interference with non-hotel Wi-Fi networks or devices.

In three pages, Brown University provides all the "clarification" the Hotel interests require.[3] While taking no position on the Petition itself, Brown notes that the restrictions cited by Petitioners govern Brown's use (and its students' use) of the university's own network. Further, in the event someone did interfere with the school's network, Brown states it would not engage in remote signaling to deal with the problem. Rather, Brown would exercise its rights to control its physical property. Presumably, in the event of a genuine network attack, Brown would notify the relevant federal and state authorities. But it would not resort to vigilante signal jamming in violation of federal law.

[3] *See* Comments of Brown University, RM-11737 (filed Dec. 18, 2014).

In the more than 85 years since Congress passed the Federal Radio Act, the Commission has ***never*** authorized a private party to deliberately interfere with the communications of others. The Commission should reaffirm this fundamental principle here.

ARGUMENT

As discussed below, virtually every assumption of the Hotel interests and their supporters is wrong. The Commission *has* referred to Part 15 devices as "stations." It *has* "authorized" and regulated them "under" the Communications Act of 1934. Congress *was* aware of the FCC's 50-year-old Part 15 regime when it enacted Section 333. Further, even if one accepts the Petition's incorrect version of history, it would not in any way impact the broad, plain-language interpretation of the statute.[4] Further, to the extent the OTARD rules are even relevant to this discussion, their pro-competitive purpose and history, grounded in the Commission's role as the ultimate authority over radio transmission, apply with equal force to application of Section 333.

The broad scope of commenters opposing any authorized jamming of, or willful interference to, Part 15 operations – ranging from cable operators,[5] technology companies,[6] rural broadband providers,[7] and even operators of licensed wireless networks[8] – emphasizes the growing role of unlicensed spectrum use in every aspect of our communications infrastructure and our daily lives. Wi-Fi chips are being built into a growing share of consumer electronics – everything from smartphones and laptops, to portable media players, TVs and cameras.[9]

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[4] *See Consumer Electronic Association v. FCC*, 347 F.3d 291 (D.C. Cir. 2003) ("*CEA*"); *Office of Communication, Inc., of United Church of Christ v. FCC*, 327 F.3d 1222 (D.C. Cir. 2003) ("*UCC*").
[5] Opposition of National Cable Telecommunications Association ("NCTA") (filed Dec. 19, 2014).
[6] *See, e.g.*, Comments of Microsoft ("MS"), RM-11737 (filed Dec. 19, 2014).
[7] Comments of Wireless Internet Service Providers Assn., RM-11737 (filed Dec. 19, 2014), at 5-6.
[8] Comments of CTIA – The Wireless Association ("CTIA"), RM-11737 (filed Dec. 19, 2014).
[9] Richard Thanki, *The Economic Value Generated by Current and Future Allocations of Unlicensed Spectrum* (Sept. 2009), at p. 19; http://fjallfoss.fcc.gov/ecfs/document/view?id=7020039036.

Surveys further show that mobile device users are rapidly increasing their reliance on a *combination* of mobile carrier networks and Wi-Fi connected to fixed networks.[10] A majority of mobile device data traffic is already being offloaded onto fixed networks via Wi-Fi.[11] Indeed, unlicensed spectrum is even being incorporated into traditional licensed mobile networks. These heterogeneous networks, or "hetnets," potentially allow wireless providers to integrate access to "carrier-grade" Wi-Fi networks, enabling seamless connections and hand-offs between licensed and unlicensed bands (and between carrier and fixed networks). A combination of automatic authentication and handoffs between the core network and Wi-Fi will allow consumers to maintain their video stream or other Internet session as they move from an indoor (nomadic) Wi-Fi, or other small-cell network, to the wide-area macro network. As these hybrid network technologies mature, it is likely that many consumers will not necessarily know (or care) whether they are communicating over the cellular or fixed portion of the network at any particular time – and they may frequently traverse both in rapid succession, depending not just on location, but possibly on the application or service they are attempting to utilize and its cost.[12] Marriott's actions and petition threatens this virtuous connectivity cycle.

The FCC must retain its role as sole authority over radio transmission,[13] and not allow self-interested vigilantes to engage in indiscriminate jamming.

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[10] Stuart Taylor and Tine Christensen, *Understanding the Changing Mobile User: Gain Insights from Cisco's Mobile Consumer Research*, Cisco (November 2013), at 3.

[11] Cisco Inc., *Visual Networking Index*, Mobile Forecast Highlights, 2013-2018 (February 2014), *available at* http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country. Specific projections for the United States are available by selecting the filters "United States" and "Device Growth/Traffic Patterns."

[12] For additional discussion of HetNets and the growing role of unlicensed spectrum supplementing licencsed mobile services, see Comments of the Open Technology Institute at the New America Foundation and Benton Foundation, *Protecting and Promoting the Open Internet*, GN No. 14-28 (July 17, 2014) at 42-44.

[13] *See* Public Notice, Commission Staff Clarifies FCC's Role Regarding Radio Interference Matters and Its Rules Governing Customer Antennas and Other Unlicensed Equipment, DA 04-1844, 19 FCC Rcd 11300 (2004) ("*OET 2004 PN*") and sources cited therein.

I. PART 15 DEVICES ARE "STATIONS" REGULATED "UNDER" THE COMMUNICATIONS ACT OF 1934.

Cisco asserts that the Commission has never regulated Part 15 devices as a "station" under the Communications Act.[14] The Petition claims that the authorization of Part 15 devices lies outside the Communications Act and that Part 15 signals are therefore not "authorized under this Chapter." Neither assertion is correct. The Commission has previously described Part 15 devices as "stations" that are "authorized" under Sections 301, 303(f), and 303(r).

Although the Commission has, at times, relied on various theories of authority for its Part 15 rules,[15] it provided its most complete explanation of this authority in the *Second Report and Order on Ultra-Wideband*.[16] Of relevance here, the FCC explicitly described Part 15 devices as "stations" and asserted that it regulated them pursuant to Sections 301 and 307 of the Act:

> The requirements that apply to Part 15 devices ensure that emissions from such unlicensed apparatus do not rise to the level that would require licensing. For example, ***relying on its authority under Section 301*** to prohibit certain radio uses ("No person shall use or operate any apparatus for the transmission of energy or communications or signals by radio…except under and in accordance with this Act and with a license in that behalf granted under the provisions of this Act."), and ***under Section 303(f***) to make "regulations not inconsistent with law as it may deem necessary to prevent interference ***between stations*** and to carry out the provisions of this Act,"[17] the Commission prescribes technical requirements which, if exceeded, would require the user of a device to acquire an individual license or to cease operation. Thus, although certain devices are unlicensed, they are still subject to appropriate regulation to ensure that they do not cause harmful interference to authorized users of the spectrum.[18]

To summarize, the Commission regulates Part 15 devices under a combination of its Section 301 authority and its Section 303(f) authority to make rules preventing interference

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[14] Comments of Cisco Systems, Inc., RM-11737 (filed December 19, 2014) at 15-19.
[15] *See* Harold Feld, *From Third Class Citizen To First Among Equals: Rethinking the Place of Unlicensed Spectrum In The FCC Hierarchy*, 15 *Commlaw Conspectus* 53, 60-72 (2006).
[16] Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmissions, ET Docket No. 98-153, *Second Report & Order*, 19 FCC Rcd 24558 (2004) ("*UWB 2nd R&O*").
[17] 47 U.S.C. §§ 301, 303(f).
[18] *UWB 2nd R&O* at ¶71 (emphasis added).

between stations. But the Commission did not stop here. The Commission went further, explaining that:

> Section 301 does not limit the types of licenses that the Commission may grant, and the Commission has exercised discretion in developing a diverse regulatory scheme. ***Section 3 of the Act defines "station license," "radio station license," or "license" broadly*** to mean "that instrument of authorization required by this Act or the rules and regulations of the Commission made pursuant to this Act, for the use or operation of apparatus for the transmission of energy, or communications, or signals by radio by whatever name the instrument may be designated by the Commission." The Commission's licensing regime includes, in addition to "license by rule" and site-specific licensing, blanket and wide-area licensing schemes. The typical blanket or wide-area licensing scheme allows individual customers/users to operate within a network without benefit of individual licenses, and the network operator is the sole licensee, as is done, for example, in the cellular wireless service. Because the network operator can control system design and access, and because the Commission has maintained through an individualized approval process the ability to control the use of spectrum, individual users' rights can be identified and interference between users can be avoided; ***thus, these licensing schemes are a reasonable exercise of the Commission's authority under Sections 4(i), 303(f) and 303(r) of the Act***.[19]

In other words, when in doubt, the Commission will consider operation of a Part 15 device as constituting use of an "authorized station" and a form of licensing on a non-exclusive basis.

Likewise, in 2006, the Commission expressly relied on its authority to regulate the siting of "radio stations" under Section 303(d)[20] when resolving Continental Airline's complaint against Massport for blocking use of its own Wi-Fi system.[21] As the Commission explained, the authority to control the siting of "radio stations" existed well before the specific direction of Congress to use this authority to preempt certain contractual restrictions on the siting of antenna equipment. By applying this provision to Continental's Wi-Fi system, the Commission

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[19] *Id.* at ¶76 (citations omitted, emphasis added)
[20] 47 U.S.C. 303(d).
[21] Continental Airlines Petition for Declaratory Ruling Regarding Over-The-Air Receiver Devices, *Memorandum Opinion and Order*, ET Docket No. 05-247, 21 FCC Rcd 13201, 13216-17 (2006)("*Continental Petition*").

unambiguously classified Part 15 devices (particularly private Wi-Fi hotspots) as "stations" under Section 303(d).

The argument that the Commission has never applied the term "license" to Part 15 devices, or does not regulate them under Section 301 and other relevant provisions of "this Chapter," is simply false to fact. The Commission has previously asserted that it regulates unlicensed devices generally (and Wi-Fi hotspots in particular) as "stations" pursuant to Sections 303(d) and 303(f). The argument that Part 15 devices are not "stations" for purposes of Section 333 would violate these previous Commission holdings.

II. THE PLAIN LANGUAGE OF SECTION 333 MAKES CLEAR THAT IT APPLIES TO PART 15 DEVICES AND PROHIBITS INTERFERENE BY TRANSMITING FALSE SIGNALS.

As several parties have already noted,[22] the plain language of Section 333 makes clear that it applies to the use of de-authentication packets that incapacitate rival networks.[23] Any other interpretation would create surplus language, a clear violation of the cannons of statutory interpretation.[24] As noted above, lawful signals emanating from Part 15 devices are either "licensed" or "authorized" "by this Chapter."

Similarly, the statute prohibits parties from *either* "interfering with" or "causing interference to" authorized signals. If Cisco were correct that Section 333 applied only to RF interference, then the words "interfere with" would be rendered superfluous. While the Commission does not have unlimited authority to regulate anything which might interfere with

[22] *See, e.g.*, NCTA Opposition at 5-7; Comments of MS at 3-4; Opposition of Google, Inc., RM-11737 (filed Dec. 19, 2014), at 2-3.
[23] This does not, of course, prevent network operators from using de-authentication packets to prevent parties from connecting to their ***own*** networks, where appropriate as an exercise of reasonable network management.
[24] *See generally Corely v. U.S.*, 556 U.S. 303 (2009).

radio signals,[25] prohibiting the transmission of false signals for the purpose of willfully or maliciously disrupting legal communications falls well within the Commission's purview and the intent of Congress in enacting Section 333.

Furthermore, the Commission has asserted authority over resolution of interference claims against unlicensed devices and prohibited self-help since 2004.[26] As explained in the 2004 Public Notice, "under the Communications Act of 1934, as amended, the FCC holds exclusive jurisdiction over the regulation and resolution of RFI [radio frequency interference] issues."[27] In explaining the Commission's authority, the Public Notice traced explicit Congressional acknowledgement of the FCC's Part 15 authorization regime as far back as 1968.[28] The assertion that Congress had no knowledge of the FCC's Part 15 authorization, and could not possibly have conceived of such an authorization, directly contradicts previous findings by the Commission.[29]

Moreover, as the D.C. Circuit has previously explained, "statutes written in broad, sweeping language have broad sweeping affect."[30] Whatever specific events prompt passage of a general statute, "evidence of a specific 'catalyzing' force for the enactment 'does not define the outer limits of the statute's coverage.'"[31] Especially in the absence of any evidence that Congress affirmatively intended to preclude protection of stations authorized pursuant to Part 15, Section 333 must be given the broad interpretation consistent with its plain language.[32]

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[25] *See, e.g., Illinois Citizens Comm. for Broad. v. FCC,* 467 F.2d 1397, 1400 (7th Cir. 1972).
[26] *OET 2004 PN*, *supra* n.13.
[27] *Id.*
[28] *Id.*
[29] *Id.*, *See also UWB 2nd R&O*, ¶69.
[30] *Consumer Electronics Association v. FCC,* 347 F.3d 291, 298 (D.C. Cir. 2003).
[31] *Id.* (citing *New York v. FERC,* 535 U.S. 1 (2002)).
[32] *Id.* at 298-99. *See also UCC v. FCC,* 327 F.3d 1222, 1226-27 (D.C. Cir 2003).

III. PETITIONERS' ARGUMENTS THAT APPLICATION OF SECTION 333 TO PART 15 DEVICES CONFLICTS WITH EITHER THE OTARD RULES OR WITH THE PART 15 RULES THEMSELVES CONTRADICTS THE COMMISSION'S *CONTINENTAL* RULING.

Finally, Petitioners seek to create a conflict between the OTARD rules and Section 333, and between application of the requirement that Part 15 devices accept interference.[33] The Commission's *Continental Petition* ruling forecloses both these arguments. To the contrary, the policy arguments that inform the OTARD and the Part 15 rules – promotion of competition and innovation – support the plain language reading of Section 333 as prohibiting interference with lawful communications using Part 15 devices.

A. Application of Section 333 Does Not Conflict With the OTARD Rules.

To argue for a conflict with the OTARD rules, Petitioners appear to assume the following: First, the OTARD rules define the outer limit of the Commission's authority to regulate the operation of authorized devices on private property. Second, because the OTARD rules do not generally apply to hotel guests and other temporary visitors, neither should Section 333. Petitioners do not explain why, in such cases, Section 333 would apply to *licensed* communications but not *unlicensed* communications. Either Petitioners believe they have an equal right to jam CMRS and other licensed signals – because Section 333 cannot extend to private property not covered by the OTARD rules – or Petitioners must explain why the limitations of the OTARD rules are relevant to interpreting application of Section 333 to Part 15, but not to Part 24 or Part 90.

The Commission has never found a right of a private landowner to interfere with the lawful wireless communication of another, whether as a transient guest or as a lessee. The OTARD rules address the installation of fixed antennas, a right that the Commission has

[33] *Petition* at 17-20.

properly limited to those with more interest in the location than a transient guest. The OTARD rules have nothing to do with the right of a landholder to willfully or maliciously interfere with another person's lawful communications, and therefore present no conflict with Section 333.

In any event, the Commission has made it abundantly clear that Congress, in directing it to promulgate the OTARD rules, did not convey to the Commission any new authority. Rather, as explained in the *Continental Petition* and sources cited therein, Section 207 of the 1996 Act directed the Commission to use its *pre-existing* authority to promulgate certain rules by a specific deadline.[34] To the extent Petitioners argue that the OTARD rules represent an outer limit of the Commission's authority to regulate use of the electromagnetic spectrum, this argument is foreclosed by the *Continental Petition* and the authorities cited therein.

B. Application of Section 333 Does Not Conflict With Part 15.

Similarly, Section 333 only prohibits "willful or malicious" interference.[35] To the extent network operators seek to construct and operate their networks in a lawful manner, and this operation causes incidental interference with other Part 15 systems, they do not violate Section 333. The Commission made this abundantly clear in the *Continental Petition*. "Users who believe they must have interference-free communication should pursue the exclusive-use options under our licensed service models instead of relying on Part 15 devices."[36] To the extent Petitioners argue that application of Section 333 prevents them from offering the quality of service they would like to offer, this does not constitute a conflict with Section 333. Nor does a prohibition on *willful* or *malicious* interference conflict with an obligation for Part 15 devices to accept interference from the lawful operation of any other device.

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[34] *Continental Petition*, 21 FCC Rcd at 13215-17.
[35] As Microsoft notes, the term "willful" is defined in the Act as "the conscious and deliberate commission or omission of [any] act, irrespective of any intent to violate any provision" of the Communications Act. 47 U.S.C. § 312(f). *See* MS Comments at 5.
[36] *Id.* at 13214.

C. Same Policy Considerations The Support Application of The OTARD Rules To Unlicensed Devices Support Application of Section 333 to Unlicensed Spectrum.

In the *Continental Petition*, the Commission listed several reasons to apply the OTARD rules to both licensed and unlicensed fixed wireless systems.[37] The same policy reasons apply for application of Section 333 to both licensed and unlicensed systems. As the Commission noted in its recent enforcement action, Marriott charges between $225 and $1,000 per day to access its own WiFi services. As with Massport's monopoly on WiFi access, for which it charged consumers, this obvious conflict of interest should create a healthy skepticism that Marriott and other hotel interests seek only to act for the common good.

In granting the *Continental Petition*, the Commission found that application of the OTARD rules to both licensed and unlicensed wireless networks would further the interests of competition and innovation. The Commission also found that application of the OTARD rules to unlicensed wireless networks would serve the purposes of Section 706 of the 1996 Telecommunications Act, [38] and Section 1 of the Communications Act of 1934.[39]

This logic is equally compelling with regard to application of Section 333 to Part 15 devices. As we continue to see, licensed and unlicensed services are complementary and continually blending together. Application of Section 333 equally to both licensed and unlicensed networks will encourage this pro-consumer innovation. It takes nothing from the protection that licensed services enjoy to protect licensed and unlicensed services alike from willful or malicious interference – a protection that should be aggressively enforced where, as here, parties engage in the sort of knowing and economically-motivated interference that Petitioners seek to legitimate with this Petition.

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[37] *Id.* at 13217-23.
[38] Now codified at 47 U.S.C. §1302.
[39] 47 U.S.C. §151.

CONCLUSION

Upton Sinclair once said: "It is difficult to get a man to understand something, when his salary depends on not understanding it." The 'confusion' of the Hotel Interests and their insistence on the need for further clarity amounts to such self-interested willful blindness. There is a critical distinction between inadvertent interference and the sort of knowing and anti-competitive, economically-motivated interference that Petitioners seek to legitimate with this Petition. The Commission's precedents are abundantly clear. The Commission should reject the Petition for Declaratory Ruling, and decline to engage in any further rulemaking.

Respectfully Submitted,

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