

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

In the Matter of	)	File No: EB-10-MA-0111
	)	
Sling Broadband, LLC	)	NAL/Acct. No.: 201132600008
	)	
Hollywood, FL	)	FRN: 0018006452
	)	
	)	

**NOTICE OF APPARENT LIABILITY FOR FORFEITURE AND ORDER**

**Adopted:** July 29, 2011

**Released:** July 29, 2011

By the Chief, Enforcement Bureau:

**I. INTRODUCTION**

1. In this Notice of Apparent Liability for Forfeiture and Order (“*NAL*”), we find that Sling Broadband, LLC (“Sling”), operator of Unlicensed National Information Infrastructure (“U-NII”) transmission systems in Deerfield Beach, Florida, apparently willfully and repeatedly violated section 301 of the Communications Act of 1934, as amended (“Act”),<sup>1</sup> and section 15.1(b) of the Commission’s rules (“Rules”)<sup>2</sup> by operating intentional radiators not in accordance with Part 15 of the Rules<sup>3</sup> and without a license. We conclude that Sling is apparently liable for a forfeiture in the amount of twenty thousand dollars (\$20,000). We further order Sling to submit a statement signed under penalty of perjury by an officer or director of the company stating that it is currently operating its U-NII systems in compliance with FCC rules and applicable authorizations.

**II. BACKGROUND**

2. Part 15 of the Rules allows devices employing relatively low-level radiofrequency (“RF”) signals to be operated without individual licenses, as long as their operation causes no harmful interference to licensed services and the devices do not generate emissions or field strength levels greater than a specified level.<sup>4</sup> Such devices must be authorized and operated in accordance with the Part 15 Rules.<sup>5</sup> For example, section 15.5 of the Rules provides that operation of an intentional radiator must not cause harmful interference.<sup>6</sup> If harmful interference occurs, the operation of the device must cease upon notification of such interference.<sup>7</sup> Operating a Part 15 device in a manner that is inconsistent with the

<sup>1</sup> 47 U.S.C. § 301; *see also* 47 C.F.R. § 15.407.

<sup>2</sup> 47 C.F.R. § 15.1(b).

<sup>3</sup> 47 C.F.R. §§ 15.1 *et seq.*

<sup>4</sup> *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, First Report and Order, 4 FCC Rcd 3493 (1989).

<sup>5</sup> 47 C.F.R. §§ 15.1(a), 15.5.

<sup>6</sup> 47 C.F.R. § 15.5

<sup>7</sup> *Id.*

Part 15 Rules requires a license pursuant to section 301 of the Act. Such operation without a license violates that provision.<sup>8</sup>

3. As part of its ongoing coordination efforts with the Federal Aviation Administration (“FAA”), the Enforcement Bureau received a complaint about radio emissions causing interference to the FAA’s Terminal Doppler Weather Radar (“TDWR”) installation serving the Fort Lauderdale – Hollywood International Airport. TDWR installations exist at 45 major airports in the United States and Puerto Rico and assist air traffic controllers in detecting low-altitude wind shear that can pose a risk to aircraft.<sup>9</sup>

4. On January 5, 2011, agents from the Enforcement Bureau’s Miami Office (“Miami Office”) confirmed by direction-finding techniques that radio emissions on the frequencies 5425 MHz, 5445 MHz, 5650 MHz, and 5670 MHz were emanating from antennas mounted near the top of ASR number 1019595 in Deerfield Beach, Florida. The owner of the antenna structure stated that Sling was the only wireless internet service provider with equipment on the antenna structure and provided copies of its collocation agreement with Sling, which authorized the placement of three U-NII transmitters, Ubiquiti Network, Inc. Rocket M5 transceivers.<sup>10</sup> The Rocket M5 model is certified for use as a Part 15 intentional radiator only in the 5745-5825 MHz band and is not certified as a U-NII intentional radiator.<sup>11</sup>

5. On January 10, 2011, agents from the Miami Office again confirmed using direction-finding techniques that Sling operated U-NII transmitters on the frequencies 5425 MHz, 5445 MHz, and 5725 MHz on ASR number 1019595.<sup>12</sup> According to Commission records, Sling does not hold licenses to operate on the frequencies 5425 MHz, 5445 MHz, 5650 MHz, 5670 MHz, and 5725 MHz from ASR number 1019595. Moreover, the Part 15 Rules do not authorize intentional radiators to operate in the 5.35-5.46 MHz band.<sup>13</sup>

6. On January 10, 2011, Sling’s Radio Frequency Engineer informed agents from the Miami Office that Sling was operating the access point with three Rocket M5s with three panel antennas for three subscriber sectors, and one more Rocket M5 for backhaul services. He stated that on January 7, 2011, he discovered a malfunction in one of the Rocket M5s, which was causing it to continuously cycle upward though all channels. Agents from the Miami Office replied that, during their previous monitoring, they only observed four constant 20 MHz wide transmissions and did not observe the transmissions cycling up, to which the engineer had no response. Sling’s RF Engineer also stated that one Rocket M5 transmitter at the site was replaced on January 7, 2011, and that the new one was set to another frequency (centered at 5725 MHz) away from the TDWR band. The FAA confirmed that the interference to the TDWR serving the Fort Lauderdale – Hollywood International Airport ceased on

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<sup>8</sup> 47 C.F.R. § 15.1(b).

<sup>9</sup> MIT Lincoln Laboratories, <http://www.ll.mit.edu/mission/aviation/faawxsystems/tdwr.html> (last visited Jan. 26, 2011).

<sup>10</sup> The collocation agreement referenced Ubiquiti Rocket M5 transceivers with FCC ID SWX-M5.

<sup>11</sup> 47 C.F.R. § 15.403(s) (defining U-NII devices as “[i]ntentional radiators operating in the frequency bands 5.15-5.35 GHz and 5.470-5.825 GHz that use wideband digital modulation techniques and provide a wide array of high data rate mobile and fixed communications for individuals, businesses, and institutions.”). Although Sling’s devices were not authorized to operate in the U-NII bands, they are subject to the U-NII rules (47 C.F.R. §§ 15.401-15.407) because Sling operated them as U-NII devices on U-NII frequencies.

<sup>12</sup> Sling was also operating on the frequency 5745 MHz, a frequency for which the Rocket M5 is certified. Operation pursuant to section 15.247 of the Rules, however, must comply with the applicable power limits specified therein. 47 C.F.R. § 15.247.

<sup>13</sup> 47 C.F.R. § 15.205(a).

January 7, 2010, thereby confirming that Sling's transmissions on the frequencies 5650 MHz and 5670 MHz were the source of the interference.<sup>14</sup>

7. The FCC agents further observed that Sling had incorporated high gain sector antennas into three of its U-NII systems.<sup>15</sup> The addition of a high gain antenna to such a system can increase the system's effective isotropic radiated power ("EIRP") to levels not authorized under the Part 15 Rules. Calculations performed by the FCC agents, based on the configuration of the Rocket M5s and the sector antennas in use at the time of the inspection, indicated that the EIRP for all three systems<sup>16</sup> may have exceeded the maximum EIRP permitted by the Rules for operation on the frequencies used by Sling.<sup>17</sup>

### III. DISCUSSION

8. Section 503(b) of the Act<sup>18</sup> provides that any person who willfully or repeatedly fails to comply substantially with the terms and conditions of any license, or willfully or repeatedly fails to comply with any of the provisions of the Act or of any rule, regulation or order issued by the Commission thereunder, shall be liable for a forfeiture penalty. Section 312(f)(1) of the Act defines willful as the "conscious and deliberate commission or omission of [any] act, irrespective of any intent to violate" the law.<sup>19</sup> The

<sup>14</sup> See email from Aaron Tuttle, TDWR & Meteorological Support, FAA, to Miami Office, dated February 22, 2011.

<sup>15</sup> According to the collocation agreement, the Rocket M5s employed Ubiquiti Airmax 5G-19-120 sector antennas with a gain of 19 dBi (18.6 dBi according to the Airmax specifications). The antennas photographed by the agents of the Miami Office on January 5, 2011 appeared to be Ubiquiti Airmax sector antennas.

<sup>16</sup> Section 15.407(a)(2) of the Rules provides:

For the 5.25–5.35 GHz and 5.47–5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz... If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Applying the Section 15.407(a)(2) formula, the maximum conducted output power (total power output) is 250 mW or 24 dBm. Given the antenna gain of 6 dBi as described above, the maximum allowable EIRP is 1 watt or 30 dBm. Systems operating on U-NII band frequencies are required to adhere to this limit.

Section 15.247 of the Rules provides that the maximum peak conducted output power of the intentional radiator shall not exceed the following:

15.247(b)(3) For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt.

15.247(b)(4) Except as shown in paragraph (c) of this section (fixed point to point operation), if transmitting antennas of directional gain greater than 6dBi are used, the conducted output power... shall be reduced below the stated values... by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Applying Section 15.247(b)(3) of the Rules, the maximum conducted output power (total power output) is 1 W or 30 dBm. Given the antenna gain of 6 dBi as described above, the maximum EIRP is 4 watts or 36 dBm. Systems operating under Section 15.247 are required to adhere to this limit.

In the configuration of its three systems at Deerfield Beach, Sling employed antennas specified to have 18.6 dBi of gain, in excess of the standard 6 dBi gain upon which the operating limits were predicated. Calculations by the FCC agents revealed that the EIRP of each of Sling's systems operating on 5650 MHz, 5670 MHz, 5725 MHz and 5745 MHz is estimated to be 9.1 watts or 39.6 dBm.

<sup>17</sup> See *supra* n. 15. The calculations assume the minimum average power specifications for the devices.

<sup>18</sup> 47 U.S.C. § 503(b).

<sup>19</sup> 47 U.S.C. § 312(f)(1).

legislative history to section 312(f)(1) of the Act clarifies that this definition of willful applies to both section 312 and 503(b) of the Act<sup>20</sup> and the Commission has so interpreted the term in the section 503(b) context.<sup>21</sup> The Commission may also assess a forfeiture for violations that are merely repeated, and not willful.<sup>22</sup> The term “repeated” means the commission or omission of such act more than once or for more than one day.<sup>23</sup>

9. Section 301 of the Act requires that no person shall use or operate any apparatus for the transmission of energy or communications or signals by radio within the United States except under and in accordance with the Act and with a license.<sup>24</sup> Part 15 of the Rules,<sup>25</sup> however, sets forth conditions under which intentional radiators may operate without an individual license. Part 15 intentional radiators are not permitted to operate in the 5.35-5.46 MHz band.<sup>26</sup> Pursuant to section 15.1(b) of the Rules, “the operation of an intentional or unintentional radiator that is not in accordance with the regulations in [Part 15] must be licensed pursuant to the provisions of section 301 of the Communications Act. . . .”<sup>27</sup> Thus, if an intentional radiator fails to comply with all of the applicable conditions set forth in Part 15 of the Rules, it is no longer covered by the unlicensed provisions of those Rules and must obtain an individual license pursuant to section 301 of the Act.

10. On January 5 and 10, 2011, as described above, agents from the Miami Office observed Sling operate four Part 15 intentional radiators, Rocket M5s, on the center frequencies 5425 MHz, 5445 MHz, 5650 MHz, 5670 MHz, and 5725 MHz from ASR number 1019595 in Deerfield Beach, Florida. No Part 15 intentional radiators are permitted to operate on the frequencies 5425 MHz and 5445 MHz, as they are in a restricted frequency band. The Rocket M5 device is only certified for use on the 5745-5825 MHz frequency band. Therefore, Sling’s operations did not comply with either the device’s Equipment Authorization or Part 15 requirements and thus required a license. According to Commission records, Sling does not hold a license to operate on the frequencies 5425 MHz, 5445 MHz, 5650 MHz, 5670 MHz, and 5725 MHz in Deerfield Beach, Florida. Thus, based on the evidence before us, we find that Sling apparently willfully and repeatedly violated section 301 of the Act and section 15.1(b) of the Rules by operating unlicensed radio transmitters on January 5 and 10, 2011.

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<sup>20</sup> H.R. Rep. No. 97-765, 97<sup>th</sup> Cong. 2d Sess. 51 (1982) (“This provision [inserted in section 312] defines the terms ‘willful’ and ‘repeated’ for purposes of section 312, and for any other relevant section of the act (e.g., section 503). . . . As defined . . . ‘willful’ means that the licensee knew that he was doing the act in question, regardless of whether there was an intent to violate the law. ‘Repeated’ means more than once, or where the act is continuous, for more than one day. Whether an act is considered to be ‘continuous’ would depend upon the circumstances in each case. The definitions are intended primarily to clarify the language in sections 312 and 503, and are consistent with the Commission’s application of those terms . . .”).

<sup>21</sup> See, e.g., *Application for Review of Southern California Broadcasting Co.*, Memorandum Opinion and Order, 6 FCC Rcd 4387, 4388 (1991) (“*Southern California Broadcasting Co.*”).

<sup>22</sup> See, e.g., *Callais Cablevision, Inc.*, Notice of Apparent Liability for Monetary Forfeiture, 16 FCC Rcd 1359, 1362 ¶ 10 (2001) (“*Callais Cablevision, Inc.*”) (proposing a forfeiture for, *inter alia*, a cable television operator’s repeated signal leakage).

<sup>23</sup> Section 312(f)(2) of the Act, 47 U.S.C. § 312(f)(2), which also applies to violations for which forfeitures are assessed under section 503(b) of the Act, provides that “[t]he term ‘repeated’, when used with reference to the commission or omission of any act, means the commission or omission of such act more than once or, if such commission or omission is continuous, for more than one day.”

<sup>24</sup> 47 U.S.C. § 301.

<sup>25</sup> See 47 C.F.R. §§ 15.1 *et seq.*

<sup>26</sup> 47 C.F.R. § 15.205(a).

<sup>27</sup> 47 C.F.R. § 15.1(b).

11. Pursuant to the Commission's *Forfeiture Policy Statement* and section 1.80 of the Rules, the base forfeiture amount for operation without an instrument of authorization is \$10,000.<sup>28</sup> In assessing the monetary forfeiture amount, we must also take into account the statutory factors set forth in section 503(b)(2)(E) of the Act, which include the nature, circumstances, extent, and gravity of the violations, and with respect to the violator, the degree of culpability, any history of prior offenses, ability to pay, and other such matters as justice may require.<sup>29</sup>

12. Because Sling operated four unauthorized U-NII transmitters and caused interference to the Fort Lauderdale – Hollywood International Airport's TDWR and posed a safety hazard to air traffic, we believe an upward adjustment in the forfeiture amount for Sling's apparent unlicensed operation is warranted. On June 9, 2010, Sling operated a Part 15 radio transmitter on 5650 MHz, a frequency for which it was not certified, without a license and caused interference to the TDWR at the Fort Lauderdale – Hollywood International Airport,<sup>30</sup> the very same activity at issue today. Accordingly, we find Sling's apparent violations to be egregious and deserving of an additional upward adjustment. Based on these factors, we find that \$10,000 is an appropriate upward adjustment for Sling's apparent unlicensed operation, resulting in a \$20,000 proposed forfeiture for this apparent violation.

13. As discussed above, following the January 5, 2011 inspection by Enforcement Bureau field agents, Sling modified the frequencies used by its transceivers to cease any interference with the FAA's TDWR installation.<sup>31</sup> One of the new frequencies used by Sling, however, was not authorized by the devices' Equipment Authorization.<sup>32</sup> We also note that the calculations performed by Enforcement Bureau field agents raise serious concerns about whether the Sling U-NII devices complied with the relevant power limits under Part 15. We further order Sling to submit a statement signed under penalty of perjury by an officer or director of the company stating that it is currently operating its U-NII systems in compliance with FCC rules and applicable authorizations. This statement must be provided to the Enforcement Bureau at the address listed in paragraph 20 within thirty days of the release date of this *NAL*.

14. Although we could impose larger upward adjustments for Sling's apparent violations, we decline to do so, based on the particular circumstances of this case. We caution Sling and other U-NII service providers, however, that we may do so in future cases if the circumstances warrant or if our current approach does not serve as a sufficient deterrent. Applying the *Forfeiture Policy Statement*, section 1.80 of the Rules, and the statutory factors to the instant case, we therefore conclude that Sling is apparently liable for a forfeiture of \$20,000 for unlicensed operation in violation of section 301 of the Act and section 15.1(b) of the Rules.

#### IV. ORDERING CLAUSES

15. Accordingly, **IT IS ORDERED** that, pursuant to section 503(b) of the Communications Act of 1934, as amended, and sections 0.111, 0.311, 0.314 and 1.80 of the Commission's rules, Sling Broadband, LLC is hereby **NOTIFIED** of this **APPARENT LIABILITY FOR A FORFEITURE** in the amount of twenty thousand dollars (\$20,000) for violations of section 301 of the Act and section 15.1(b).<sup>33</sup>

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<sup>28</sup> 12 FCC Rcd 17087 (1997), *recon. denied*, 15 FCC Rcd 303 (1999); 47 C.F.R. § 1.80.

<sup>29</sup> 47 U.S.C. § 503(b)(2)(E).

<sup>30</sup> See *Sling Broadband, LLC*, Notice of Unlicensed Operation and Notification of Harmful Interference, Document Number W201032600061 (Enf. Bur. rel. July 20, 2010).

<sup>31</sup> See *supra* ¶¶ 6, 7.

<sup>32</sup> See *supra* ¶ 11.

<sup>33</sup> 47 U.S.C. §§ 301, 503(b), 47 C.F.R. §§ 0.111, 0.311, 0.314, 1.80, 15.1(b).

16. **IT IS FURTHER ORDERED** that, pursuant to section 1.80 of the Commission's rules within thirty days of the release date of this Notice of Apparent Liability for Forfeiture and Order, Sling Broadband, LLC, **SHALL PAY** the full amount of the proposed forfeiture or **SHALL FILE** a written statement seeking reduction or cancellation of the proposed forfeiture.

17. **IT IS FURTHER ORDERED** that Sling Broadband, LLC **SHALL SUBMIT** a sworn statement as described in paragraph 13 to the Enforcement Bureau Office listed in paragraph 20 within thirty days of the release date of this Notice of Apparent Liability for Forfeiture and Order.

18. Sling Broadband, LLC is **HEREBY NOTIFIED** that its operation of an Ubiquiti Network, Inc. Rocket M5 transceiver resulted in harmful interference to the FAA's TDWR system that serves the Fort Lauderdale – Hollywood International Airport. Sling Broadband, LLC is **HEREBY WARNED** that any further operation of any U-NII device, including the Ubiquiti Network, Inc. Rocket M5, on any frequency, and at any location, that results in interference to the FAA's TDWR system serving the Fort Lauderdale – Hollywood International Airport may be considered a willful violation of section 333 of the Act, which prohibits willful or malicious interference to any radio communication of any station licensed or authorized under the Act or operated by the United States Government.<sup>34</sup>

19. Payment of the forfeiture must be made by credit card, check or similar instrument, payable to the order of the Federal Communications Commission. The payment must include the Account Number and FRN referenced above. Payment by check or money order may be mailed to Federal Communications Commission, P.O. Box 979088, St. Louis, MO 63197-9000. Payment by overnight mail may be sent to U.S. Bank – Government Lockbox #979088, SL-MO-C2-GL, 1005 Convention Plaza, St. Louis, MO 63101. Payment by wire transfer may be made to ABA Number 021030004, receiving bank TREAS/NYC, and account number 27000001. For payment by credit card, an FCC Form 159 (Remittance Advice) must be submitted. When completing the FCC Form 159, enter the NAL/Account number in block number 23A (call sign/other ID), and enter the letters "FORF" in block number 24A (payment type code). Requests for full payment under an installment plan should be sent to: Chief Financial Officer – Financial Operations, 445 12th Street, S.W., Room 1-A625, Washington, D.C. 20554.<sup>35</sup> If you have questions regarding payment procedures, please contact the Financial Operations Group Help Desk at 1-877-480-3201 or Email: [ARINQUIRIES@fcc.gov](mailto:ARINQUIRIES@fcc.gov). Sling shall send electronic notification on the date said payment is made to [SCR-Response@fcc.gov](mailto:SCR-Response@fcc.gov).

20. The written statement seeking reduction or cancellation of the proposed forfeiture, if any, must include a detailed factual statement supported by appropriate documentation and affidavits pursuant to sections 1.80(f)(3) and 1.16 of the Rules.<sup>36</sup> The written statement must be mailed to Federal Communications Commission, Enforcement Bureau, South Central Region, Miami Office, P.O. Box 520617, Miami, FL 33152 and must include the NAL/Acct. No. referenced in the caption. The statement should also be emailed to [SCR-Response@fcc.gov](mailto:SCR-Response@fcc.gov).

21. The Commission will not consider reducing or canceling a forfeiture in response to a claim of inability to pay unless the petitioner submits: (1) federal tax returns for the most recent three-year period; (2) financial statements prepared according to generally accepted accounting practices ("GAAP"); or (3) some other reliable and objective documentation that accurately reflects the petitioner's current financial status. Any claim of inability to pay must specifically identify the basis for the claim by reference to the financial documentation submitted.

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<sup>34</sup> 47 U.S.C. § 333.

<sup>35</sup> See 47 C.F.R. § 1.1914.

<sup>36</sup> 47 C.F.R. §§ 1.80(f)(3), 1.16.

22. **IT IS FURTHER ORDERED** that a copy of this Notice of Apparent Liability for Forfeiture shall be sent by both Certified Mail, Return Receipt Requested, and regular mail, to Sling Broadband, LLC at 2700 N. State Road 7, Hollywood, FL 33021.

**FEDERAL COMMUNICATIONS COMMISSION**

P. Michele Ellison  
Chief, Enforcement Bureau