

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

In the Matter of)
)
32 Technologies LLC Request for Waiver of)
Part 15 of the Commission’s Rules Applicable to)
Wideband Systems)

ORDER

Adopted: November 30, 2018

Released: November 30, 2018

By the Chief, Office of Engineering and Technology:

1. By this Order, we grant a request by 32 Technologies LLC (32 Technologies) for a waiver of Section 15.250(c) of our rules governing unlicensed wideband devices. Specifically, we are waiving the prohibition on the use of fixed outdoor infrastructure to allow 32 Technologies to obtain equipment certification for and market a pet collar product designed to operate in the 6.240 to 6.740 GHz range.¹ We find that this product, when operating under the specified waiver conditions, poses no greater risk of causing harmful interference to communication services than those devices already permitted under the existing rules, and that grant of the waiver will serve the public interest.

2. Part 15 of the Commission’s rules permits low-power radio frequency device operation without an individual license from the Commission.² In 2004, the Commission adopted rules governing wideband system operation in the 5925-7250 MHz frequency band.³ Among these rules is Section 15.250(c), which provides that “[e]xcept for operation onboard a ship or terrestrial transportation vehicle, the use of a fixed outdoor infrastructure is prohibited,” and states that a “fixed infrastructure includes antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole.”⁴

3. 32 Technologies states that its product would provide accurate tracking of pets within containment zones that would be established by using four portable outdoor anchors spaced in proximity to each other. In cases when the pet leaves the containment zone, the pet collar will switch to the integrated LTE and GPS technology for pet tracking.⁵ This arrangement would permit the precise location tracking of associated pet collars both within and outside of the containment zone.⁶ Given the outdoor use of its product components, 32 Technologies seeks a waiver of the fixed infrastructure rules in Section 15.250(c).

¹ *Petition of 32 Technologies LLC for Waiver of Section 15.250(c) of the Commission’s Rules Applicable to Wideband Devices* (filed October 11, 2018) (32 Technologies Waiver Request). See also 47 C.F.R § 15.250(c).

² Such devices are permitted to operate only after they have been verified to comply with existing operational restrictions. See 47 C.F.R. §§ 2.901 *et seq.* & 15.1 *et seq.*

³ *Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems*, ET Docket 87-153, Second Report and Order and Second Memorandum Opinion and Order, 19 FCC Rcd 24558, 24570-71, para. 27 (2004) (*UWB Second R&O*).

⁴ 47 C.F.R. § 15.250(c).

⁵ 32 Technologies Waiver Request at 2.

⁶ *Id.* at 1.

4. We are authorized to grant a waiver under Section 1.3 of the Commission's rules if the petitioner demonstrates good cause for such action.⁷ Good cause, in turn, may be found and a waiver granted "where particular facts would make strict compliance inconsistent with public interest."⁸ To make this public interest determination, the waiver cannot undermine the purpose of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.⁹ We conclude that the waiver request meets this standard.

5. The underlying purpose of Section 15.250(c) is "to prevent the establishment of wide area communications systems" in the 5925-7250 MHz frequency band.¹⁰ 32 Technologies asserts that, in establishing the containment zone, the outdoor portable anchors will not create a communications system or network.¹¹ Except for a short period of time during the initial containment zone set-up and/or firmware updates, the anchors will not actively communicate with each other. In addition, the anchors will communicate only with its paired pet collar and not with any other devices nor will it be connected to the Internet.¹² We find that 32 Technologies has demonstrated that its product operates consistent with the intent of the rule as it will not create a wide area communications system. We observe that the 32 Technologies product is designed to comply with all the technical limits for wideband systems under the current rules. We also note that this product operates similarly to a robotic lawn mower for which we previously granted a waiver of Section 15.250(c) in 2015.¹³ Accordingly, we conclude that applying conditions to 32 Technologies similar to robotic lawn mower waiver does not increase the potential for harmful interference to authorized services and does not adversely affect other Part 15 operations.¹⁴

6. We also find that there is a stronger public interest in granting the waiver than in applying the rule. 32 Technologies describes how its product has a potential to prevent pet injuries and fatalities, as well as reduce the substantial medical and automotive repair expenses associated with vehicle-on-animal collisions.¹⁵ It also describes how relying exclusively on alternative technologies, including GPS, Wi-Fi, and Bluetooth, would require larger heavier batteries and result in a commercially unreasonable device.¹⁶

⁷ 47 C.F.R. § 1.3. See also *ICO Global Communications (Holdings) Limited v. FCC*, 428 F.3d 264 (D.C. Cir. 2005); *Northeast Cellular Telephone Co. v. FCC*, 897 F.2d 1164 (D.C. Cir. 1990); *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969).

⁸ *Northeast Cellular*, 897 F.2d at 1166. See also *ICO Global Communications*, 428 F.3d at 269 (quoting *Northeast Cellular*); *WAIT Radio*, 418 F.2d at 1157-59.

⁹ See, e.g., *WAIT Radio*, 418 F.2d at 1157 (stating that even though the overall objectives of a general rule have been adjudged to be in the public interest, it is possible that application of the rule to a specific case may not serve the public interest if an applicant's proposal does not undermine the public interest policy served by the rule); *Northeast Cellular*, 897 F.2d at 1166 (stating that in granting a waiver, an agency must explain why deviation from the general rule better serves the public interest than would strict adherence to the rule).

¹⁰ *UWB Second R&O*, 19 FCC Rcd at 24571, para. 27.

¹¹ 32 Technologies Waiver Request at 2.

¹² *Id.*

¹³ *Id.* at 4 (citing *iRobot Corporation Request for Waiver of Section 15.250 of the Commission's Rules*, Order, 30 FCC Rcd 8377 (OET 2015) (iRobot Order)).

¹⁴ See iRobot Order, 30 FCC Rcd at 8380, para. 8 (discussing the iRobot system design).

¹⁵ 32 Technologies Waiver Request at 6.

¹⁶ While 32 Technologies plans to incorporate GPS, and LTE functionalities into its device to provide tracking capabilities in the event a pet escapes the containment zone, it describes how such technologies do not provide sufficient accuracy, allow for timely stimuli, or employ reasonable power consumption to be used during normal operation. See 32 Technologies Waiver Request at 2 and 6.

7. Accordingly, we find that there is good cause to grant this waiver. This waiver is limited to 32 Technologies' pet collar product as presented in the waiver request and is subject to following conditions:

- 1) The 32 Technologies device must be certified by the Commission.¹⁷
- 2) The 32 Technologies device must comply with all other technical and operational requirements applicable to Wideband device rules under Part 15, Subpart C of the Commission's rules.
- 3) Anchors shall be no higher than the 36 inches from the ground level.¹⁸
- 4) Operation under this waiver is limited to residential use only.
- 5) 32 Technologies must take appropriate steps (including device and instruction manual labeling) to convey to users the residential use and anchor height conditions and must only market the device as a residential-use product
- 6) The 32 Technologies device must comply with the emission limits contained in Section 15.250 of the Commission's rules, as well as the out of band emission limits and other technical requirements for operation in the 5925-7250 MHz frequency band.

8. Accordingly, pursuant to authority in Sections 0.31, 0.241, and 1.3 of the Commission's rules, 47 C.F.R. §§ 0.21, 0.241, and 1.3, and Sections 4(i), 302, 303(e), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 302, 303(e), and 303(r), IT IS ORDERED that the Request for Waiver filed by 32 Technologies LLC., IS GRANTED, consistent with the terms of this Order. This action is effective upon release of this Order.

FEDERAL COMMUNICATIONS COMMISSION

Julius P. Knapp
Chief, Office of Engineering and Technology

¹⁷ The filing for certification should include a copy of this waiver order.

¹⁸ In its Supplement to *Petition of 32 Technologies LLC for Waiver of Section 15.250(c) of the Commission's Rules Applicable to Wideband Devices* (filed November 14, 2018), 32 Technologies states that this is the lowest acceptable height that will account for different-sized pets, and that placing anchors at such a height would not present new interference concerns.