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

In the Matter of	)	
	)	
SmartAuger, Inc.	)	ET Docket No. 26-38
	)	
Request for Waiver of Sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's Rules	)	

ORDER

Adopted: June 16, 2026 **Released: June 16, 2026**

By the Chief, Office of Engineering and Technology:

I. INTRODUCTION

1. By this Order, we grant a request by SmartAuger, Inc. (SmartAuger) to waive sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's rules to permit SmartAuger to certify and market a stepped-frequency, continuous-wave-modulated ultra-wideband (UWB) ground penetrating radar (GPR) transmitter that operates in the 170 to 670 MHz band.[1] For the reasons discussed below, we find that there is good cause to grant SmartAuger's waiver request.

II. BACKGROUND

2. The SmartAuger GPR device is designed to detect and visualize underground utilities in real time to support active excavation and progressive digging workflows.[2] It is a portable device that contains a radar head integrated into a polymer sled that allows the device to be pushed across the ground during scanning operations.[3] SmartAuger states that the device combines GPR hardware with proprietary artificial intelligence (AI) software that analyzes radar returns and presents results in a simple visual format that can be understood by non-technical professional users.[4] The GPR steps through 96 frequencies in the range of 170-670 MHz for an overall bandwidth of 500 megahertz.[5] Each frequency step is 5 megahertz with a duration of 280 microseconds on each step.[6] The device "notches out" (i.e., does not transmit in) the frequency band 322-335.4 MHz, which is used for radio astronomy and aeronautical radionavigation.[7] It includes a feature to ensure that it will only transmit when placed in full contact with the ground or surface being measured and will cease transmission when such contact is lost.[8]

3. SmartAuger states that because the device achieves its operating bandwidth by stepping a narrowband signal across a wide frequency range, it does not satisfy the instantaneous bandwidth

[1] *SmartAuger, Inc. Petition for Waiver of Sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's Rules*, ET Docket No. 26-38 (filed Feb. 6, 2026), (SmartAuger Waiver Request).

[2] SmartAuger Waiver Request at 2.

[3] *Id.* at 4-5.

[4] *Id*.

[5] *Id.* at 12.

[6] *Id.*

[7] *Id.* at 12, 13.

[8] *Id.* at 13.

requirement in the Commission's rules.[9] Section 15.503(d) of the Commission's rules defines a UWB device as an intentional radiator that, at any point in time, has either a fractional bandwidth of 0.20 or greater or a UWB bandwidth of 500 megahertz or greater, regardless of the fractional bandwidth.[10] As the use of stepped frequency operation by a UWB device such as SmartAuger proposes does not comply with Commission's UWB definition, SmartAuger seeks a waiver of section 15.503(d) to allow certification and marketing of its device.[11]

4. Section 15.31(c) and 15.521(d) of the Commission's rules require UWB device emissions to be measured with the transmitter stepping function stopped.[12] SmartAuger states that with this function stopped, emissions would not comply with the fractional bandwidth or minimum bandwidth requirements so a waiver is necessary.[13] It states that its device uses stepped-frequency continuous-wave-modulation to achieve improved performance characteristics, including enhanced material penetration, better material analysis performance, and faster survey speeds.[14] SmartAuger notes that the Commission has previously granted waivers of these rule sections for stepped-frequency UWB devices that operate analogously to SmartAuger's device, finding in each case that measuring emissions with the stepping function active does not increase the devices' interference potential when the applicable emission limits are met.[15] To further reduce the likelihood of harmful interference to authorized services, SmartAuger proposes a number of conditions consistent with those the Commission imposed for other GPR devices authorized under similar waivers.[16]

5. On February 18, 2026, OET issued a Public Notice seeking comment on the SmartAuger Waiver Request.[17] Three parties filed comments in support of the request and SmartAuger filed reply comments.[18] Commenters argue that underground utility strikes are a persistent risk across the construction and maintenance industries, and that tools such as the GPR device that SmartAuger is developing can reduce the likelihood of damage to critical facilities and support safer outcomes for crews and the public.[19]

III. DISCUSSION

6. 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.[20] Good cause, in turn, may be found and a waiver

[9] *Id.* at 7.

[10] 47 CFR § 15.503(d).

[11] SmartAuger Waiver Request at 7.

[12] 47 CFR §§ 15.31(c), 15.521(d).

[13] SmartAuger Waiver Request at 9.

[14] *Id.*

[15] *Id.*

[16] *Id.* at 12-15.

[17] *Office of Engineering and Technology Seeks Comment on SmartAuger, Inc. Petition for Waiver of Sections 15.503(d), 15.31(c) and 15.521(d) of the Commission's Rules*, ET Docket No. 26-38, Public Notice, DA 26-167 (OET Feb. 18, 2026).

[18] NUCA of Ohio Comments at 1-2; Allied Title and Escrow Comments at 1-2; Welty Development Comments at 1-2.

[19] *Id.*

[20] 47 CFR § 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).

granted "where particular facts would make strict compliance inconsistent with the public interest."[21] 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.[22]

7. We conclude that, with appropriate operational and technical restrictions to prevent harmful interference to authorized services, granting SmartAuger's request for waiver does not undermine the purpose of the rules. The technical and operational standards for UWB devices in Part 15 are designed to ensure that these devices do not cause harmful interference to authorized radio services.[23] As an initial matter, we note that SmartAuger's GPR system will emit signals at very low power levels, consistent with the UWB rules.[24] The rules require radiated emissions from GPR devices operating below 960 MHz to comply with the limits in section 15.209, and SmartAuger is not seeking a waiver of that requirement.[25] Further, to provide additional protection to radio astronomy and aeronautical radionavigation operations, any emissions into the 322-335.4 MHz band from the SmartAuger system must be at least 10 dB below the limit for the band as set forth in section 15.209 of the rules.[26]

8. The Commission has previously granted waivers of the section 15.503(d) UWB definition for GPR devices that use stepped frequency modulation, finding that this type of modulation scheme is functionally equivalent to the impulse type envisioned in the rules in that it uses transient signals spread across a wide bandwidth.[27] For this reason, the risk of interference from UWB GPR devices using stepped frequency modulation is no greater than from UWB GPR devices that comply with the rules.[28] Similarly, the Commission has previously granted waivers of section 15.31(c) and 15.521(d) for UWB GPR devices that use stepped frequency modulation, finding that allowing stepped frequency devices to be measured with the stepping function on would not increase the interference potential of a device above that of impulse UWB devices if all other emission limits and technical requirements are met.[29] In these respects, the SmartAuger stepped frequency UWB GPR device is functionally equivalent to other UWB devices for which the Commission has granted waivers, and grant of this waiver will not undermine the purpose of the rules.

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[21] *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.

[22] *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).

[23] *See generally, Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems,* First Report and Order, ET Docket 98-153, 17 FCC Rcd 7435 (2002) (*UWB First R&O*)*; see also* 47 CFR. §§ 15.501-15.525.

[24] SmartAuger Waiver Request at 8.

[25] *Id.*; 47 CFR §§ 15.509(d), 15.209.

[26] SmartAuger Waiver Request at 13-14.

[27] *Proceq USA Inc. Request for Waiver of Part 15 of the Commission's Rules Applicable to Ultra-Wideband Devices*, DA 18-251, Order, 33 FCC Rcd 2258, 2259, para. 6 (2018) (2018 Proceq Order). The Commission has waived sections 15.503(d), 15.31(c) and 15.521(d) in a number of other instances. *See e.g. Geophysical Survey Systems, Inc. Request for Waiver of Sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's Rules*, ET Docket No. 23-650, Order, 38 FCC Rcd 6704 (2023); *Kontur, AS Request for Waiver of Sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's Rules*, ET Docket No. 24-209, Order, 40 FCC Rcd 448 (2025).

[28] 2018 Proceq Order, 33 FCC Rcd 2259, para. 6.

[29] *Id.* at 2260, para. 8.

9. As suggested by SmartAuger, we condition the grant of this waiver to further reduce any likelihood of harmful interference to authorized radio services.[30] We require the SmartAuger device to be certified by the Commission via an accredited Telecommunication Certification Body, and we specify the testing requirements and operational parameters for the device, including 10 dB lower emission limits in the 322-335.4 MHz band to provide additional protection to radio astronomy and aeronautical radionavigation operations. As discussed above, we will allow emission measurements to be conducted with the stepping function active, and we will require that these measurements to be made across the full tuning range of the device and for all possible frequency step sizes implemented by the device.[31] We also require that the device transmit only when in contact with the ground or another surface being measured or evaluated.[32]

10. Finally, considering the advantages of the SmartAuger device and the low risk of harmful interference, we find a stronger public interest benefit in granting the waiver than in applying the rule. As SmartAuger indicates, inadvertent damage to underground utilities is a persistent problem, with disruptions caused by inaccurate or unavailable GPR data resulting in significant costs and risks to life, property, and the environment.[33] The SmartAuger device will reduce safety risks, financial exposure, and costly delays by providing timely and vital information to frontline construction and utility workers. It will improve the accuracy, accessibility, and timeliness of subsurface utility detection by automating the interpretation of GPR data and presenting results in a simplified, visual format, giving professionals trained in construction, excavation, and utility installation and maintenance a better tool for avoiding damaging underground facilities. It will allow operators of the SmartAuger device to more safely, efficiently, and effectively complete excavation and construction projects and thus will benefit the public at large.

11. For these reasons, we conclude that there is good cause to waive sections 15.503(d), 15.31(c), and 15.521(d) of the Commission's rules to permit the certification, marketing, and operation of SmartAuger's UWB GPR device. This waiver is subject to the following conditions:

1) SmartAuger's device shall be certified by the Commission via an accredited Telecommunication Certification Body, and the certification application shall include a copy of this waiver order.
2) SmartAuger's device shall operate with stepped-frequency continuous-wave (CW) modulation and shall step in 5-megahertz increments over 170-670 MHz.
3) Emissions from SmartAuger's device in the 322-335.4 MHz band shall not exceed 10 dB below the limit in Section 15.209(a), measured using a CISPR quasi-peak detector as specified in 15.209(d).
4) The maximum frequency step duration shall be 280 microseconds.
5) SmartAuger's device shall include a feature to ensure that it will only transmit when placed in full contact with the ground or surface being measured and/or evaluated and shall cease transmission when that contact condition is not met.
6) For certification testing, the measurement of emissions from the device may be conducted with the stepping function active across the full tuning range and for all possible frequency step sizes implemented by the device.

[30] SmartAuger Waiver Request at 14-15.

[31] SmartAuger Waiver Request at 15.

[32] This condition is more stringent than the rules require, which allow a GPR to operate only when in contact with, or within one meter, of the ground. 47 CFR § 15.503(f).

[33] SmartAuger Waiver Request at 15.

7) The SmartAuger device shall comply with all other technical and operational requirements applicable to UWB GPR devices under Part 15, Subpart F.

12. 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 SmartAuger, Inc. on February 6, 2026 IS GRANTED consistent with the terms of this Order. This action is effective upon release of this Order**.**

13. IT IS FURTHER ORDERED that if no petitions for reconsideration or applications for review are timely filed, this preceding SHALL BE TERMINATED and ET Docket No. 26-38 CLOSED.

FEDERAL COMMUNICATIONS COMMISSION

Andrew Hendrickson
Chief
Office of Engineering and Technology