Federal Communications Commission
Washington, D.C. 20554

DA 19-892

Mr. Terry G. Mahn
Fish & Richardson, P.C.
1000 Maine Avenue S.W., Suite 1000
Washington, DC 20024

September 11, 2019

Subject: Request for Modification of Waiver Granted to Proceq USA Inc., DA 18-251

Dear Mr. Mahn:

In response to your letter dated May 17, 2019, on behalf of your client Proceq USA Inc. (Proceq), the Office of Engineering and Technology (OET) is granting your request to modify an existing waiver to accommodate the operation of Proceq's Ultra-Wideband (UWB) ground penetrating radar device across a wider frequency range.[1]

On March 14, 2018. OET granted a waiver of Section 15.31(c) of the FCC rules to allow the radio frequency emissions from Proceq's device to be measured in the active mode of operation rather than with the stepping function stopped. It also waived Section 15.503(d) that defines a UWB transmitter as a device that "at any point in time" has an UWB bandwidth equal to or greater than 500 megahertz, or a fractional bandwidth equal to or greater than 0.20.[2]

You state that Proceq has developed a new version of its device that uses an expanded frequency range (200-6000 MHz instead of 200-4000 MHz) to improve its resolution and technical performance. You further state that the expanded operating range poses little risk of causing harmful interference to communication services because it is technically similar to other stepped-frequency GPR devices that have been approved under Commission waivers.[3]

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

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[1] Letter from Terry G. Mahn, Counsel to Proseq USA Inc., to Marlene H. Dortch, Secretary, Federal Communications Commission (May 17, 2019) (filed in INBOX-PART 15 in the Commission's Electronic Comment Filing System) (Proseq Waiver Modification Letter). This letter corrected and replaced an earlier submission made on behalf of Proseq.

[2] *Proceq USA Inc. Request for Waiver of Section* 15.31, 15.503, *and* 15.521 *of the Commission's Rules to Permit the Certification and Marketing of Ground Penetrating Radar (GPR) Device that Operates in the 0.2-4 GHz Range*, Order, 33 FCC Rcd 2258 (OET 2018) (Proceq Order).

[3] Proseq Waiver Modification Letter at 3-4 and 4-5 n.4.

[4] 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).

granted "where particular facts would make strict compliance inconsistent with the public interest."[5] To make this public interest determination, the waiver cannot undermine the purposes of the rule, and there must be a stronger public interest benefit in granting the waiver than in applying the rule.[6]

We find that the waiver standard has been met. Changing the upper frequency range of the Proceq GPR from 4000 MHz to 6000 MHz is consistent with spectrum currently available for GPR devices[7] and does not alter the technical and operational conditions included in the existing waiver that we previously determined were sufficient to protect other spectrum users.[8] Proceq will continue to be subject to those conditions, which ensures that operation of its new device across the expanded frequency range will not introduce new risks of causing harmful interference to communications services. We further recognize that Proceq's new device will offer expanded public interest benefits, including higher resolution scanning that will enable more sophisticated applications.

To give effect to our decision, we revise the second condition of the existing waiver to read as follows: "The Proceq GPR device shall operate with stepped frequency CW modulation in 10, 20 or 40 megahertz steps between 200 and 6000 MHz." All other conditions associated with the waiver continue to apply without alteration.

Accordingly, pursuant to authority delegated in Sections 0.31 and 0.241 AND 1.3 of the Commission's rules, 47 C.F.R §§ 0.31, 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 waiver issued to Proceq by Order dated March 14, 2018, is hereby modified as described above effective upon release of this Order.

FEDERAL COMMUNICATIONS COMMISSION

Julius Knapp
Chief
Office of Engineering and Technology

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[5] *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.

[6] *See, e.g.*, *WAIT Radio*, 418 F.2d at 1157 and *Northeast Cellular*, 897 F.2d at 1166 .

[7] UWB ground penetrating radar devices are permitted to operate up to 10.6 GHz under our existing rules. *See* 47 C.F.R. § 15.509(a).

[8] These include, for example, limiting the dwell time on any one frequency to no more than 2 microseconds and limiting the dwell time during any step of the Proceq GPR to no more than 0.04 percent of the devices minimum scan/cycle rate. Proceq Order at 4.