

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

In the Matter of )  
 )  
Modification of November 2, 2023 GPR, Inc. ) ET Docket No. 19-241  
Order for Waiver of the Commission’s Part 15 )  
Rules Applicable to Ultra-Wideband Devices )

ORDER

Adopted: November 27, 2023

Released: November 27, 2023

By the Chief, Office of Engineering and Technology:

1. By this Order, we find that there is good cause to modify our November 2, 2023 Order (Waiver Order) that granted GPR, Inc. (GPR) a limited waiver of our part 15 rules to remove a single waiver condition that requires GPR’s device to cease operation when the vehicle on which it is mounted comes to a stop.

2. The Waiver Order waived Sections 15.509(b) and 15.525 of the Commission’s rules to permit the marketing and operation of GPR’s driver-assistance safety technology that is designed to use ultra-wideband (UWB) ground penetrating radar to “read” subterranean information that is used to help keep vehicles in lane under different driving conditions.<sup>1</sup> The Waiver Order included multiple conditions to help limit the potential for harmful interference from GPR’s devices to authorized services while still allowing for its deployment in vehicular applications.<sup>2</sup>

3. In a November 13, 2023 filing in the docket, GPR requested that we modify the Waiver Order to remove condition 6, which requires the GPR device to cease operation when the vehicle on which it is mounted comes to a stop.<sup>3</sup> GPR states that updates to the system’s design to improve its functionality and safety now require it to begin transmitting continuously when the vehicle’s electrical power system begins operating, including when the vehicle is stopped.<sup>4</sup> It further states that continuously providing UWB outputs while stopped allows for the system to make constant vehicle position corrections, which substantially increases the positioning accuracy and timeliness of vehicle position data when moving from a situation when the vehicle has come to a complete stop (e.g., stopping at a stoplight).<sup>5</sup> GPR states that this change will not result in any significant increase in the interference potential of the device.<sup>6</sup>

<sup>1</sup> *GPR, Inc. Request for Waiver of the Commission’s Part 15 Rules Applicable to Ultra-Wideband Devices*, Order, DA 23-1041 (OET Nov. 2, 2023).

<sup>2</sup> Waiver Order at 6. The conditions included limitations to the device’s operating frequency range and emissions in bands adjacent to its operating frequencies, as well as operational conditions such as permitting the device to operate only when pointed at the ground and not when a vehicle is stopped or the ignition is turned off. *Id.*

<sup>3</sup> Letter from Michele C. Farquhar, Counsel to GPR, Inc., Hogan Lovells US LLP, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 19-241, at 1 (filed Nov. 13, 2023) (GPR Nov. 13, 2023 *Ex Parte*).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *Id.* at 2.

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.<sup>7</sup> Good cause, in turn, may be found and a waiver granted “where particular facts would make strict compliance inconsistent with the public interest.”<sup>8</sup> 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.<sup>9</sup>

5. We find that removing condition 6 of the Waiver Order will not undermine the purpose of the UWB rules, i.e., to prevent harmful interference to authorized services. As discussed in the Waiver Order, the likelihood of harmful interference from the GPR device is extremely low due to a number of factors, including operating in frequency bands that were selected to reduce the likelihood of harmful interference to authorized services, at low power levels with emissions in adjacent bands attenuated to protect services in those bands, only when pointed at the ground, and under conditions that limit how the units may be deployed.<sup>10</sup> We agree with GPR that any increased device transmission time resulting from deletion of condition 6 would be minimal and would not significantly alter the harmful interference environment.<sup>11</sup> Taking into consideration the ample protections afforded by the conditions we are retaining and recognizing that removal of condition 6 will not fundamentally alter the way GPR’s devices are deployed (i.e., they will continue to be used in vehicles while pointed downwards to “read” subsurface information for lanekeeping purposes), we conclude that the condition is not critical for interference protection.

6. We also find that removing this condition is in the public interest. The Waiver Order noted the significant new public interest benefit in the developing field of subterranean driver-assistance technologies, and that because the GPR system relies on locating underground features that are not obscured by weather conditions and that do not change significantly with time, it can increase the reliability and safety of driver-assistance technologies and autonomous vehicle navigation.<sup>12</sup> Allowing the GPR device to continue to operate while stopped will substantially increase the accuracy and timeliness of vehicle position data when a vehicle moves from a complete stop, which will increase the public benefits of the device.<sup>13</sup> It will also enable GPR to deploy its equipment more promptly, thus bringing the benefits of this technology to the public sooner.<sup>14</sup> We therefore modify the Waiver Order by removing condition 6. Consistent with this action, we also make a minor revision to condition 9 by removing the reference to condition 6 so that condition 9 now reads, “GPR shall include conditions 5, 7 and 8 above in its sale contracts with its customers.”

7. Accordingly, pursuant to authority delegated in Sections 0.31 and 0.241 of the Commission's rules, 47 CFR §§ 0.31, 0.241, and Section 1.3 of the Commission's rules, 47 CFR § 1.3, IT

---

<sup>7</sup> 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).

<sup>8</sup> *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.

<sup>9</sup> *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).

<sup>10</sup> Waiver Order.

<sup>11</sup> GPR Nov. 13, 2023 *Ex Parte* at 2.

<sup>12</sup> Waiver Order at 5.

<sup>13</sup> GPR Nov. 13, 2023 *Ex Parte* at 1.

<sup>14</sup> *Id.* at 2.

IS ORDERED that GPR's November 13, 2023 request to remove condition 6 from OET's November 2, 2023 Waiver Order IS GRANTED consistent with the terms of this Order. This action is taken pursuant to Sections 4(i), 302, 303(e), and 303(r) of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), and 303(r). This action is effective upon release of this Order.

8. IT IS FURTHER ORDERED that, if no applications for review are timely filed, this proceeding SHALL BE TERMINATED, and the docket CLOSED.

FEDERAL COMMUNICATIONS COMMISSION

Ronald T. Repasi  
Chief  
Office of Engineering and Technology