

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

In the Matter of)	
)	
Robert Bosch, GmbH)	
)	
Request for Waiver of Part 15 Ultra-wideband)	ET Docket No. 10-253
Rules for a Wall Imaging Device)	
)	

ORDER

Adopted: May 23, 2011

Released: May 23, 2011

By the Chief, Office of Engineering and Technology:

1. By this Order, we grant a request by Robert Bosch, GmbH (“Bosch”), to waive Section 15.503(h) of our rules for its Wallscanner D-tect 150 Professional (“wallscanner”) device and for functionally identical versions of that device.¹ This will permit Bosch to import and market its wallscanner device upon receiving an FCC equipment authorization and complying with all other requirements of the FCC’s rules, including the technical and operational requirements for unlicensed ultra-wideband imaging systems in Section 15.509. We find that granting this waiver request is in the public interest in that it will allow deployment of a product with beneficial applications in building construction, as well as inspection and maintenance of buildings in the United States.

2. Bosch states that its wallscanner device is an ultra-wideband (UWB) imaging device for use by skilled professional workers in the building and construction trades (such as professional building inspection and structural engineers) for detection of ferrous and non-ferrous metals, electric cables, wooden beams, plastic pipes and structural flaws within various types of construction materials. Bosch further states that the wallscanner device is currently used in Europe, Canada, and Asia and meets all technical requirements of the Commission’s Part 15 rules applicable to UWB devices.

3. Bosch seeks a waiver of the Commission’s rules because its device does not satisfy the definitions or eligibility use restrictions for imaging systems in the UWB rules. Section 15.503(h) defines a “wall imaging system” as a “field disturbance sensor that is designed to detect the location of objects ... or to determine the physical properties within the ‘wall’ [which is a] physical structure that is dense enough and thick enough to absorb the majority of the signal transmitted by the imaging system.”² The rule expressly excludes “products such as ‘stud locators’ that are designed to locate objects behind... walls that are not capable of absorbing the transmitted signal.” Section 15.509 of the rules allows the operation of wall imaging systems and limits their use to parties eligible for licensing under Part 90 of the Commission rules for certain purposes, including construction.³ Bosch states that it may not necessarily be the case that a wall or other structure scanned by the Bosch device will be dense

¹ See “ROBERT BOSCH, GmbH Request for Waiver of Section 15.510(b) of the Commission’s Rules to Permit the Marketing, Sale and operation of Ultra-Wideband Through-Wall Imaging Device,” filed November 15, 2010, ET Docket No. 10-253.

² See 47 C.F.R. §15.503(h).

³ See 47 C.F.R. § 15.509 (a), (b).

and thick enough to absorb the entirety of the transmitted radio signal; therefore, its device will not necessarily meet that part of the definition. Bosch also states that its wallscanner device includes as one of its operating modes a “stud locator” function which would preclude its classification as a wall imaging system.

4. Section 15.503(i) defines a “through-wall imaging system” as “a field disturbance sensor that is designed to detect the location or movement of persons or objects that are located on the other side of an opaque structure such as a wall or ... [including] products such as “stud locators” that are designed to locate objects behind ... walls that ... [do not] absorb the transmitted signal.”⁴ Bosch notes that, if its imaging device were classified as a “through-wall imaging system,” its intended use would not comply with Section 15.510(b) which restricts the use of such systems to law enforcement, emergency rescue of fire-fighting organizations that are under the authority of a local or state government.

5. In its waiver request, Bosch contends that allowing operation of its wallscanner imaging device would substantially enhance, expedite and improve construction, inspection, and maintenance of buildings and transportation infrastructure in the United States and that the device meets all technical requirements of the Commission’s Part 15 rules applicable to UWB devices. Bosch further states that the wallscanner device is presently used in Europe, Canada, and Asia and that allowing operation within the United States will have no predicted adverse effect on licensed telecommunications systems and facilities. Bosch requests that the Commission waive, for its “Wallscanner D-tect 15- Professional” and for functionally identical versions of that device, either (1) the provisions in Section 15.503(h) applicable to wall imaging systems that require that the walls measured be thick or dense enough in every case to absorb the majority of the RF energy on the far side of the wall being measured and that exclude “stud locator” devices; or (2) the eligibility requirements for operation of a through-wall UWB device contained in Section 15.510(b) to permit the operation of the Wallscanner D-tect Professional by those engaged commercially in the construction or building trades, and for building inspector and structural engineers in the United States.⁵

6. The Commission issued a Public Notice soliciting comments on Bosch’s request on December 17, 2010.⁶ Only Bosch filed comments.⁷

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

⁴ See 47 C.F.R. § 15.503(i).

⁵ Because we are granting a waiver that would allow the Bosch device to operate under Section 15.509, we do not address Bosch’s alternative request to waive Section 15.510 (b).

⁶ See Public Notice, “Office Of Engineering And Technology Declares The Robert Bosch, GmbH Request For A Waiver Of Part 15 Ultra-Wideband Rules For A Through-Wall Imaging Device To Be A “Permit-But-Disclose” Proceeding For Ex Parte Purposes And Requests Comments,” released December 17, 2010, ET Docket 10-253.

⁷ See Reply Comments, “ROBERT BOSCH, GmbH Request for Waiver of Section 15.510(b) of the Commission’s Rules to Permit the Marketing, Sale and Operation of Ultra-Wideband Through-Wall Imaging Device,” ET Docket 10-253.

⁸ 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).

⁹ *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.

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.¹⁰ The definition of a wall imaging system in 15.503(h) and the technical and operational standards of Section 15.509 exist to ensure that UWB wall imaging systems do not harmfully interfere with authorized radio services, including Federal Government services. As discussed below, a waiver of the definition in 15.503(h) for the Bosch wallscanner can be granted without increasing the potential for harmful interference. Hence, granting this waiver will not undermine the purpose of the rules. Finally, there is a stronger public interest benefit in granting this waiver than in strictly applying the rules. As discussed below, a denial would prevent the availability of devices which can help building and construction professionals improve safety of infrastructure.

8. We conclude that a waiver of the definitional requirement in Section 15.503(h) can be granted without increasing the potential for harmful interference to authorized services and therefore does not undermine the policy of the rule because the technical and operational provisions of Section 15.509 that are in place to limit harmful interference to other spectrum users are not being waived. In this regard, Bosch states that its wallscanner would operate well below the maximum radiated emission level established by the Commission in Section 15.509, which is an EIRP of -41.3 dBm/MHz in the band 3,100-10,600 MHz.¹¹ Bosch further states that its device is not simply a stud finding device, which is in essence a consumer tool and would be expected to proliferate. Instead, the Bosch wallscanner would be used by and useful only to those engaged professionally in the building and construction trades and that its retail cost and function are such that it will not be considered a consumer tool. Therefore, the Commission's intention to limit the proliferation of UWB imaging devices to coordinated and controlled ranges of applications in order to limit interference potential would continue to be met.¹²

9. All other applicable technical and operational requirements including obtaining FCC certification prior to importation and marketing of any device allowed under this waiver will continue to apply to any Bosch devices certified under this waiver.

¹⁰ 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).

¹¹ See Reply Comments, "*ROBBERT BOSCH, Gmbh Request for Waiver of Section 15.510(b) of the Commission's Rules to Permit the Marketing, Sale and Operation of Ultra-Wideband Through-Wall Imaging Device*", ET Docket 10-253.

¹² See First Report and Order in ET Docket 98-153, "*Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems*," 17 FCC Rcd 7435, at para. 49 (2002).

10. Accordingly, pursuant to authority in Sections 0.31, 0.241 and 1.3 of the Commission's rules, 47 C.F.R. Sections 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. Sections 154(i), 302, 303(e), and 303(r), IT IS ORDERED that the Request for Waiver filed by Robert Bosch, GmbH, IS GRANTED IN PART AND DISMISED IN PART, 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