

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

In the Matter of	)	
	)	
Petition for Rulemaking: Amendment of	)	CG RM-11844
Rules Governing Ultra-Wideband Devices	)	
and Systems	)	

**Reply Comments of Vayyar Imaging Ltd.**

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## **Introduction**

Vayyar would like to express its support for Robert Bosch LCC's request to review the ultra-wideband (UWB) rules. Vayyar develops and supplies 3D imaging sensors that operate under FCC Part 15, Subpart F (the ultra-wideband rules) as well as sensors operating in millimeterwave bands. Vayyar's sensors include, among others, Walabot DIY™ product for in-wall imaging and Walabot Home™ product for in-home monitoring, such as detecting falls in bathrooms. Vayyar's primary interest is in Parts 15.517 (indoor systems) and 15.519 (handheld systems) that can be marketed to the general public.

Vayyar's comments have addressed several topics:

- Removing the bias towards UWB communications systems in 15.519, and making it more receptive to sensor systems
- Recognizing the proliferation of stepped and swept frequency UWB systems, especially in sensor applications, and making the limits and the measurement techniques better suited to these signals
- Relaxing the prohibition to fixed installation of UWB systems or parts of UWB systems.
- Recommendation to create a "generic UWB device" category or convert the "handheld" into such category.

## **Addressing comments received during the proceedings**

We are pleased to see the interest of the industry in the UWB technology and the desire to amend the rules to streamline certification of UWB devices and expand the range of applications of the technology.

We would like to join our support to increasing the limits on the allowed emissions from UWB devices.

We are glad to see the overwhelming support to enabling a broader range of outdoor uses of UWB technology.

As of comments by Alteros, we welcome the use of UWB technology for wireless microphones, and allowing their use wherever the application calls for it. Nevertheless, we do not agree with the call of Alteros to provide wireless microphones protection from other unlicensed services, as afforded to Part 74 operators of Part 74 equipment. Such protection will put an unnecessary burden on all the ecosystem of unlicensed devices with respect to the need to detect UWB devices, classify them, and upon detecting that those are microphones avoid interfering with them.

Regarding uses for material testing and other applications involving transmission into materials (GPR, in-wall, medical). We would recommend adding to 15.519 a clause that addresses such applications, to allow proliferation of these applications without requiring operation by a specialized personnel and registration of systems. For example, UWB medical equipment can then be in a clinic of every practitioner. We recommend adding a clause to 15.519 saying, "for devices intended to transmit into a material, the radiation limits may be tested when the device is in contact with a representative object under test. In such case, when the device is detached from object under test, within 10 seconds the device shall either cease transmission or revert to the general limits of this section." Such addition shall allow using higher power during testing and allow larger penetration depth.

**Summary**

We support the intent of the petition of Robert Bosch LLC to update the UWB rules according with the currently used UWB technologies and corresponding applications. We are glad to see the general support for this, and suggest specific amendments to address some of the issues with current regulations.

/s/ Naftali Chayat

Respectfully,

Naftali Chayat

CTO, Vayyar Imaging Ltd.