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February 16, 2016

**Via ECFS**

Marlene Dortch, Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

**Re: *Ex Parte* Filing of Trex Enterprises Corporation, ET Docket No. 15-26, RM-11666, ET Docket No. 11-90 and RM-11555, ET Docket No. 10-28, and WT Docket No. 11-202**

Dear Ms. Dortch:

On February 11, 2016, John Lovberg, Trex Enterprises Corporation (Trex), and the undersigned, Thomas Cohen, Kelley Drye & Warren LLP, Counsel to Trex, had a telephone call with the following staff of the Office of Engineering and Technology: Mark Settle, Bahman Badipour, Karen Rucklus, Patrick Forster, Aspasia Paroutsas, and Howard Griboff. The purpose of the meeting was to follow up on Trex's meeting with the staff on November 23, 2015 to discuss the Notice of Proposed Rulemaking to authorize radar applications in the 76-81 GHz band.<sup>1</sup> In the November meeting, Mr. Lovberg discussed Trex's development of Phase Modulated Continuous Wave radar using all-silicon CMOS chips. Since then, Trex has moved from lab to field testing. It plans to integrate multiple transceivers with processing electronics to put an entire MIMO radar on a single piece of silicon, which should lower the cost of radar electronics to approximately \$10. As discussed below, this will enable a vast array of new applications for millimeter wave ("MMW") radar, and the Commission should account for this potential in the rules it adopts in this proceeding. Most importantly, while Trex does not object to automotive radar having a primary allocation in the 76-81 GHz band, it urges the Commission to permit other uses to have subordinate allocations.

<sup>1</sup> *Amendment of Parts 1, 2, 15, 90 and 95 of the Commission's Rules to Permit Radar Services in the 76-81 GHz Band et al.*, ET Docket No. 15-26 *et al.*, Notice of Proposed Rulemaking and Reconsideration Order, FCC 15-16 (rel. Feb. 5, 2015).

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Mr. Lovberg supported his proposal for subordinate allocations for non-automotive radar by explaining:

- MMW radar in the 76-81 GHz band is superior for many critical applications than lower-frequency microwave radio, the 57-64 GHz band, and higher frequencies. In brief, in contrast to these other bands, the 76-81 GHz band enables greater range resolution and, because of its the shorter wavelength, increased small-object returns and improved aperture directionality.
- Because of these superior attributes, MMW radar can be used for many innovative applications, including Critical Asset Perimeter Protection, Airborne Sense-and-Avoid Systems, Short-to-Medium Marine Radar, and Micro Doppler applications.
- Automotive radar is designed to coexist with hundreds of radars in one location at one time, which means any system architecture will be extremely interference-tolerant – and thus automotive radar can operate in a shared environment with applications using other, non-automotive MMW radar.

Should you have any questions, please contact me. This letter is being filed electronically pursuant to Section 1.1206 of the Commission's rules.

Sincerely,



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cc: Mark Settle  
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