

From: Hank Rinehart

To: Jose Trevino

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Subject: FCC file number 0042-EX-ML-2009

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Message:

Radiance Technologies has requested an experimental license grant from the Office of Engineering and Technology for the purpose of testing and validation of a mobile radiolocation system that must function in changing geographical conditions. Radiance is requesting the ability to operate, with prior frequency coordination as necessary, within the continental United States (CONUS). The focus of the field tests and validation procedures is to characterize the effects of naturally occurring geographical phenomenon on the performance of the microwave transceiver, processor, and antenna. Specific test sites in the currently licensed local area of operation do not afford the ability to test over water, mountainous terrain, arid landscapes, etc which provide considerable challenges in the development of robust clutter mitigation algorithms. The mobile nature of the system under development requires on-vehicle operational testing via ground vehicle and watercraft. As such a fixed-site scenario is insufficient to characterize the performance capabilities of the development platform. The objective of the radiolocation system is to provide enhanced detection and confirmation of the presence of objects of interest while mitigating false alarms through a rigorous characterization of the distribution of clutter and environmental effects, such as thermal layers, absorption, etc., that are dependent on atmospheric properties and terrain itself. The present literature does not provide sufficient environmental data for simulation studies and the need exists to perform accurate field surveys and mobile data collections based on the needs of the contracting agency supporting this effort.