

## *WASHINGTON FEDERAL STRATEGIES*

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November 7, 2019

Marlene Dortch  
Secretary  
Federal Communications Commission  
445 12<sup>th</sup> St., S.W.  
Washington, DC 20554

Re: Radio Physics Solutions Stand Off Threat Detection  
Docket Number 19-158  
Ex Parte Letter

Ms. Dortch:

On November 6, 2019, Radio Physics Solutions had telephonic meetings with both the FCC Office of Engineering and Technology and the Wireless Telecommunications Bureau. Attachment 1 to this letter provides a list of participants on each telephone call.

The purpose of these meetings was for Radio Physics to learn the status of its pending Petition for Waiver, WTB 19-158.

The meeting with OET was brief, with a short recap of the technology and description of the spectrum requested in the waiver. The OET officials on the call explained that their office was not taking the lead on this item. They agreed to consult with the Wireless Bureau and to provide Radio Physics with an update on the status of the Petition.

WTB informed the Radio Physics participants that the Waiver Petition is under consideration.

The Bureau staff asked a number of questions to review the functioning of the stand-off threat detection system. Radio Physics director Vito Levi D'Ancona explained in response to some questions that the in-house security advisors to Radio Physics have advised the company that a person who is going to carry out an attack most often has a "scenario" or "video" of some kind playing in their head. If early detection is possible using the stand-off threat detection system, that disrupts the internal "video" and it can foil the attack.

The Bureau asked also about the proposed regulatory framework for the product. Radio Physics' team explained that the company is flexible about which regulations the FCC might waive, and the product could be regulated under Part 101, Part 90, or some combination that fits the needs of the Commission.

The Bureau asked about the plans for marketing, selling, installing, and licensing the stand-off threat detection system. Radio Physics' team explained that it would be working with sales partners in the US. The sale is a consultative one, often involving security personnel, who will need to develop a concept of operations that ensures that threats detected are passed on to a team that responds.

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Because of the complexity of the product and its installation, Radio Physics' is proposing to secure licenses on behalf of its customers, to ensure that the installations are licensed properly.

The Bureau also asked about the need for 15 GHz of contiguous spectrum, and this particular band of spectrum. The spectrum band used in this stand-off threat detection system is 15 GHz, operating from 71-86 GHz. Radio Physics' CTO, Steve Clark, and its Director, Vito Levi D'Ancona, provided some technical details on the spectrum selected; there is no feasible other band to use:

- This spectrum will penetrate clothing, and give radar returns from threats detected, which allows the system to work. This characteristic is specific to this frequency band.
- The amount of spectrum currently required is needed to achieve the granularity needed for the system to do proper detection.
- The components that are needed to generate the radar signals are not available at cost-effective pricing in any other radio band.
- Attempting to operate above 100 GHz would not result in a viable product because the signals would attenuate too quickly for the system to be viable.

In the continued conversation between the Bureau and Radio Physics, there was discussion about whether future generations of this product might be able to operate using less spectrum. Radio Physics might, in several years, develop a product that works effectively with less spectrum.

Radio Physics underscored the need for this waiver, as soon as possible. The technology is designed to save lives, and it cannot be sold in the US without the waiver. As a result, the financial position of the company is highly constrained while waiting on the regulatory process.

Radio Physics offered to be available to respond to any further questions that the Bureau might have. Further, it offered – if the Bureau is interested – to set up a call with the TCB Lab that undertook product testing to examine and determine that the Radio Physics technology would not interfere with other operators in the band.

Sincerely,



Anne E. Cortez, Esq.  
Counsel to Radio Physics Solutions

CC: Gary King, CEO  
Vito Levi D'Ancona, Director  
Steve Clark, CTO  
Julius Knapp, OET  
Blaise Scinto, WTB

**Attachment 1: Ex Parte Meeting Participants**

Radio Physics – OET Meeting, November 6, 2019, 10:00 am

For OET:

Julius Knapp  
Michael Ha  
Karen Rackley  
Anh Wride  
Jameson Prime

For Radio Physics:

Gary King  
Vito Levi D’Ancona  
Steve Clark  
Anne Cortez

Radio Physics – Wireless Telecommunications Bureau Meeting, November 6, 2019, 11:00 am

For WTB:

Blaise Scinto  
Steve Benzo  
Peter Daronco  
Charley Oliver  
Scot Stone  
Sean Spivey  
Joel Taubenblatt

For Radio Physics:

Vito Levi D’Ancona  
Steve Clark  
Anne Cortez