

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of

Petition for Declaratory Ruling Regarding)
Treatment of Rulemakings and Waivers)
Related to New Equipment and Services)
at Frequencies Greater Than 95 GHz)

ET Docket 13-259

**Comments of
Radio Physics Solutions, Inc. (RPS)**

SUMMARY

As a start-up company focused primarily on systems operating in the upper MMW region, Radio Physics Solutions is extremely concerned about the present uncertainties associated with FCC adoption of rules for operation at frequencies above 95GHz. Radio Physics Solutions, Inc. supports recent initiatives to classify equipment operating above 95GHz as "New Technology" in an effort to accelerate FCC action by imposing the 1-year response time limit of Section 7 of the "Act". It is the contention of Radio Physics Solutions that the present delays in addressing the spectrum above 95GHz has created a destructive environment of uncertainty that financially restricts innovation from lack of investment, and dissuades young engineering professionals from choosing this area of career focus.

As original employees of Harmonix Corp. and early innovators and NPRM contributors to Part 15.255 (Docket 94-124) in 1995 and E-Band Light Licensing rules (Docket 02-146) in 2003, the technologists of RPS have seen how a collaborative relationship with industry can promote the efficient use of RF spectrum to further the public good; opening new spectrum for new technologies, creating jobs and spurring innovation. Lately, we have witnessed first-hand how the Commission's lack of decisive action has cobbled innovation and restrained use of new spectrum. Conversely, foreign regulatory authorities have embraced and in many cases promoted the use of frequency spectrum above 95GHz.

The allocation of unlicensed spectrum in the 60GHz (1999) and E-Band regions in (2003) spurred the birth of several domestic suppliers who together employed hundreds of US citizens in high paying / high tech jobs. Additionally, several thousands of MMW radio links were deployed successfully to provide high capacity data connectivity to thousands of Americans. While possibly anecdotal, it is interesting to see the status of these early innovator companies today and how many citizens they employ.

- **Gigabeam**– Liquidated through Bankruptcy 0 employees remain
- **Terabeam Corp.**– HXI, MMW group acquired by YDI Corp. Renamed Proxim Wireless and sold to REC; 3 employees remain.
- **Loea Corp.** – MMW Radio Group disbanded, no full time employees remain
- **E-Band Communications, Corp.** – Liquidated through asset sale to Mosely, retained number of employees unknown.
- **Bridgewave Communications, Corp.** – outsourced all production to Remec Corp. for manufacturing the Philippines and released the majority of their domestic support staff.

Other important growth industries are also dependent on continued innovation in the upper MMW or Terahertz regions of the RF spectrum. These include but are not limited to, medical imaging application advancements and nanotechnology sciences. Delay in responses to new technology applications at frequencies above 95GHz will adversely affect these sectors as well.

Radio Physics Solutions is founded and funded based on novel intellectual property and expertise in upper MMW region technologies and design; primarily those at MMW frequencies above 60GHz. Products under development and in need of funding investment include point to point data transport systems in the 91-95GHz upper E-Band allocation and active, ultra-wide band (UWB) MMW threat detection systems for use by security personnel to protect soft targets of opportunity. The current environment of regulatory uncertainty is delaying our growth and staffing plans. Furthermore, it is providing an advantage to our international competitors in the form of more readily available capital investment and preferential treatment by their home governments.

Radio Physics Solutions, Inc. urges the FCC to adopt a more responsive posture in relation to the allocation of rules at frequencies above 95GHz. Whether this involves adoption of temporary rules as an interim step or compliance with the "New Technology" response time limits expressed in Section 7 of the "Act" is unimportant. What is important, is that Commission provides rules guidance for companies wishing to innovate through technologies using spectrum above 95GHz.

Respondent Bio

The author of this letter David Russell has been involved in the MMW Industry for over 30 years. His accomplishments include the pre-TCB coordination of the first Part 15.255 equipment type certification under FCCID #O2700000-30-30 as an employee of Harmonix Corp. He remains the POC of record for this grant and subsequent grants under FCCID# O2700001-30-30 and FCCID# O2700002-30-30. Mr. Russell acted as MMW Radio, Product Line Manager for Harmonix Corp., Terabeam Corp., YDI Wireless, Proxim Corp. and HXI prior to joining Radio Physics Solutions as Operations Manager in October of 2012. He has manufactured, deployed and supported several thousand MMW point to point radio systems over the years and possesses a unique knowledge of MMW system characteristics, applications and the nuances of MMW signal propagation.

/s/



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cc:

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