

Reply Comments of Radar Solutions International

Radar Solutions International is a small woman-owned, disadvantaged business (WBE/DBE Certified) which relies exclusively on the use of ground penetrating radar (GPR) and other electromagnetic tools for solving environmental, engineering, geotechnical, archeological, forensic, and other problems. As Dr. Olhoeft pointed out in his brief to you, our tools are designed for non-destructive inspection of the subsurface using frequencies below 2 GHz.

On behalf of our highly specialized and knowledgeable geophysical community, I strongly urge the FCC and governing bodies to exempt the ultrawideband tools used in geophysical exploration on the basis that these tools contribute an insignificant amount to the RF noise within the bandwidth, and that GPR antennas are almost always shielded, directional (i.e. point only into the ground), and typically have a very limited investigative depth. I believe the usefulness of these tools not only enable me to a livelihood, but also has greatly benefitted society. In my 16+ year as a geophysicist, I have:

Detected over 125,000 lost drums at numerous U.S.E.P.A. Superfund Sites,
Located over 1000 abandoned or leaking underground tanks,
Delineated hundreds of landfill boundaries and contamination plumes,
Mapped shallow bedrock topography and fractures within the bedrock for tracing contaminants,
Participated in over 500 utility and buried surveys, including detecting gas and high-voltage lines,
Detected countless voids beneath runways, taxiways, hangars, highways, and concrete structures,
Evaluated thousands of miles of concrete and bituminous asphalt pavements,
Participated in a handful of FBI investigations that has lead to the conviction of corrupt officials, business executives, and the largest transportation industry fine (\$15M) in the history of the U.S.,
Helped State Police and FBI recover 3 murder victims and provide closure for their families,
Conducted a fracture trace survey that helped save a community's 70-acre open space area, and located one buried city.

This is the contribution of just one geophysicist. As a community, geophysicists play an important and useful role. Let us do our job.

If the FCC and governing bodies decide to lump geophysical tools with other ultrawide band (UWB) transmitters and restricting their use or licence them, then ultimately, not only the manufacturers, but the end users, like myself, will be hurt. Ultimately, society will suffer. I also disagree with Mr. Fontana's (Multispectral Solutions, Inc.) comment that, "the geophysical community has not

demonstrated the need to manufacture and sell such (UWB) devices on a unlicensed basis...” If GPR and EM geophysical manufacturers are regulated to conform to standards of large UWB manufacturers, and if they required to re-engineer their products, then ultimately, their costs will be passed down to the end users. This would produce a hardship on the typically small geophysical consulting firms, especially when one considers that the average size of a geophysical consulting firm is 4 to 6 people.

Moreover, the FCC and governing bodies need to consider the impact on small businesses in obtaining and maintaining licensing and permits: how costly is it to get licensed? Will these licenses be good throughout the United States, or will the licensing requirements be different from state to state? The time alone spent in trying to meet proposed FCC licensing requirements would be very costly to the geophysical industry, especially, when one considers how insignificant their presence in the UWB spectrum is relative to other transmitters.

Again, I urge the FCC to EXEMPT GPR and other geophysical tools from licensing within the UWB frequencies.

Regards,

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