

From: Richard Ridgway

To: Leann Nguyen

Date: August 21, 2008

Subject: FCC File# 0397-EX-ST-2008

Message:

August 21, 2008

Federal Communications Commission
Experimental Licensing Branch
445 12th Street, S.W., Room 7A-321
Washington, D.C. 20554
Attn: James R. Burtle

Subject: Experimental License Application, File No. 0397-EX-ST-2008
Response to Correspondence Reference Number: 7363

Dear James R. Burtle,

Thank you for your timely response to our request for an experimental FCC license to evaluate our millimeter-wave data transmission system. Would it be possible to get some additional guidance regarding the nature of the suspected interference?

1. Are you concerned about our use of the frequency band from 94 GHz to 94.1 GHz? If we limited our data rate and only consumed a bandwidth of 3 GHz (90.66 GHz to 93.66 GHz), would that keep us away from the frequencies in question?
2. Is the private Airport Site (which would be closed during testing) the potential interference concern. Would it be better to propose another location?
3. If we limited our peak power to 1 mW, which is our usual power level, would that alleviate the interference potential?
4. If we moved our carrier frequency above 100 GHz, would that eliminate the anticipated harmful interference?

While I appreciate you are trying to anticipate harmful interference to existing systems, the signal we are producing is incredibly small and difficult to detect. At a distance of 500 meters from the transmitter, the emission of the transmitted signal would be about 3 microV/m². A 2 foot diameter (53 dBi @92 GHz) receive antenna with perfect alignment would produce a total received power of about -20 dBm. I would be surprised if our system would interfere with another system that didn't have a high gain antenna directly in the line of sight. That being said, if the FCC will not allow any emission between 94 GHz and 94.1 GHz and this is the primary reason for dismissal, I believe we can work around this requirement and would like some guidance as to how to proceed. Please let me know if this is the limitation.

I would be glad to have a telephone conversation with you to discuss these issues with you. Please let me know if that would be possible.

Best Regards,

Richard W. Ridgway, Ph.D.
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