

From: Steckman Dirk

To: Behnam Ghaffari

Date: August 22, 2007

Subject: FCC File No. 0212-EX-PL-2007

Message:

Hello Mr Ghaffari,

Did you see the attachment in the exhibits GPS Re-Radiation Calculations?

I am confused about your comments below:

In accordance with NTIA manual section 8.3.28, please address each item from 1 through 9 and attach your response as correspondence to this email.

Please provide a detailed calculation(s) for the link budget specified on item 6 of section 8.3.28. The attached file GPS Reradiation Calculations does not support various elements in which your experiment will be conducted.

The attached file GPS Reradiation Calculation does contain all of the elements in the setup, so I do not understand what elements are not supported. Can you please clarify for me what is meant by this response?

I also cut and pasted my calculation below?

Received Power on Earth -160.83 dBW
-130.83 dBm

Gain of Receive Antenna
38
dBic

RF loss for 100 feet LMR400 cabling and connectors from Receive Antenna to Line Amplifier
-5
dB

Gain of Line Amplifier
20
dB

Gain of Passive Radiating Antenna
3
dBic

where $d = 100$ feet distance (30.48m)

$\lambda = \text{wavelength} = c/f$

$c = \text{speed of light } (3 \times 10^8 \text{ m/sec})$

$f = \text{frequency } (1.57542 \text{ GHz})$

=
 $-10 \log [383.023/190.425 \times 10^{-3}]^2$

=
 $-10 \log [2011.41]^2$

=

-66.07
dB
100 foot distance

RF power level at 100 ft distance from building
-140.90
dBm

Thank you for help in clarifying this?

Richard Reap

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