

Hi All,

1: I have now checked to see if the gain of the measuring antenna was suffering any apparent loss of gain due to near-field effects during the measurements. This involved monitoring the received signal level from a radiating source (small aperture), whilst increasing the measurement distance from that used during the measurement (20cm) to two times this distance (40 cm) and noting that the expected decrease (6 dB) in signal level was observed. As this was the case, I conclude that no adjustment for near-field effects is necessary, even although the measurement distance was very short.

2: An Excel spreadsheet is attached. This contains the measurement data, and the calculated EIRP (approximately -48.5 dBm RMS). As the spectral lines were spaced at 12 MHz intervals, this EIRP remains constant for all measuring bandwidths below 12 MHz (and peak = RMS).

3: The spreadsheet also contains calculations to determine the RMS and Peak EIRP's in wider bandwidths, as well as the EIRP of the entire (total) transmission (both Peak and RMS).

4: Conclusions. The UWB transmission observed was exactly as Dr Andy Ward described. It consisted of discrete spectral lines spaced every 12 MHz. Although it was not noise-like, the RMS (and peak) EIRP in a 1 MHz BW was approximately 7 dB below the FCC indoor limit. The RMS and peak EIRP's of the entire transmission (non-band limited) was of the order of -29 and -4.5 dBm respectively.

Please e-mail or telephone to discuss.

Regards

John Mellish

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4: Conclusions. The UWB transmission observed was exactly as Dr Andy Ward described. It consisted of discrete spectral lines spaced every 12 MHz. Although it was not noise-like, the RMS (and peak) EIRP in a 1 MHz BW was approximately 7 dB below the FCC indoor limit. The RMS and peak EIRP's of the entire transmission (non-band limited) was of the order of -29 and -4.5 dBm respectively.

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