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FCC Application Processing Branch

Applicant: Orthogon Systems Ltd
FCC ID: QWP54XX
Form 731 Confirmation Number: EA397650
Date of Original E-Mail: 04/05/2007
Correspondence Reference Number: 32833

- 1) The antenna information recently added to the application indicates that this device can operate with antennas from +13 to +22 dBi gain depending on the model. It looks like the test sample has a 22 dBi gain antenna. This limits the Grant to operation only with the 22 dBi antenna. Verify that the intent of this application is only for the 22 dBi antenna. The general DFS antenna policy is:

For EMC Tests: The device must be tested with the highest antenna gain for each antenna type

FOR DFS Tests: The device must be tested with the lowest antenna gain. Antenna type is irrelevant for receiver threshold detection. The receiver must be tested as worst case so the lowest antenna gain must be used providing the least receiver sensitivity to radar signals.

The manufacturer can then market the device with antennas that fall within the antenna criteria above as long as the RF exposure requirements are met.

<CCS ANSWER:> Our integrated antenna is 23dBi not 22dBi; we are happy for the grant to be limited to that.

- 2) The antenna is a H/V linear polarization. Both the H and V inputs are connected to the main board. This is essentially two antennas - one horizontal and one vertical. Do both polarizations act in tandem or do they operate separately? Please explain how the antenna operates?

<CCS ANSWER:> The system is MIMO and we use H/V antennas to give polarisation diversity. The same information is transmitted on each antenna and the optimally combined signal recreated at the receiver. Therefore we add the H/V power levels together to compare with operating power limits. We also use the total power on the two antennas to determine the radar detection threshold applied to each antenna (worst case). The Tx/Rx circuits are identical for both H and V antennas.

3) You will be sent a separate E-mail with configuration questions. This is done to protect the applicant's proprietary information.

<**CCS ANSWER:**> The email was received, thank you. We responded to it this morning (April 10, 2007). Please note that we responded on the website, and are unsure about confidentiality.

Thank you.

September Radecki

for Michael Heckrotte