



American Telecommunications Certification Body Inc.
6731 Whittier Ave, McLean, VA 22101

March 21, 2005

RE: YDI Wireless

FCC ID: NM5-MB-49-HP

I have a few comments on this Application. Depending on your responses, kindly understand there may be additional comments. There are multiple discrepancies between DA 04-3165, FCC 04-265 and the most current rules available online from the GPO. You may find the published versions of Part 90 Subpart Y to which I refer at: <http://www.gpoaccess.gov/ecfr/index.html>

Thank you for the documents you provided. In essence FCC 04-265 calls out for changes to the RF power and emission masks [Appendix B], while DA 04-3165 calls out for changes in licensing. This leaves still much room for discussion on a number of issues.

- 1.) The channel plan of 90.1213 does not appear to be affected. You state in your response that a single channel 20MHz wide at 4965 is utilized. My reading of 90.213 still seems to expect that the center frequency of each emission must fall directly upon the center channel frequencies called out in this table. Please review.
- 2.) I accept your test method for using the spectrum analyzer RMS detection function of this complex OFDM signal. However, I still have some concerns. Using the instrument manufacturer's explanation, the RMS value is computed for each "bucket" within the trace and then algebraically summed together. Looking at your plot, we do not have a smooth, symmetrical emission; we have a "lumpy" emission characteristic of multi carrier OFDM signals. I would like to know if the measured RMS values are affected by both sweep time and RBW settings. Moreover, using the standard 1% rule, a RBW less than 16.5MHz/100 usually should not be used unless additional explanation is provided. My preference is to know if this RMS measurement would be effected by an RBW of 300KHz or more and a sweep time greater than 50 seconds. Best accuracy is also obtained when the emission is near the top of the reference level due to errors in the log amp. Kindly help me understand the RMS detection function of this instrument. In addition, please confirm that the measurement was made over a "continuous interval" without any periods of "Tx off". Kindly refer to 90.1215(b).
- 3.) I accept your comments on the RF Tune Up procedure. However, my goal was to find the "set points" or target RF output values for this device. These target values can be provided to the Commission as part of a Confidential document, if so desired. In addition I have some confusion over the frequencies available for this device. The tune-up indicates a frequency "list" is available in software, but elsewhere you indicate this is a single-channel device which only transmits on 4965MHz. Please review.
- 4.) Your response to item 12 appears to indicate that antennas with an expected gain of up to 26dBi are possible with this device. However, the RF Exposure evaluation only shows antennas at 10dBi. Please review. RF exposure evaluation also shows a channel of 4955MHz – different from what is claimed elsewhere in this filing.
- 5.) It is unlikely that the full 36-60VDC supply is providing power to the final amplifying circuitry. For voltage and current through the finals, use the regulated voltage that actually appears on the output stage. The reason for this rule is to compare the total power consumed with the total RF power output as a "reality check" for the examiner.
- 6.) Kindly provide a calculation of how you determined the limits of Table 6.
- 7.) I do not agree with your response about testing three orthogonal planes. Even case radiation at 4.9GHz can be very "peaky". Consequently, it is important to follow this procedure regardless of the form factor of the device.

A handwritten signature in black ink, appearing to read 'William H. Graff', with a stylized, cursive script.

William H. Graff
President and Director of Engineering

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The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information may result in application termination. Correspondence should be considered part of the permanent submission and may be viewed from the Internet after a Grant of Equipment Authorization is issued.

Please do not respond to this correspondence using the email reply button. In order for your response to be processed expeditiously, you must submit your documents through the AmericanTCB.com website. Also, please note that partial responses increase processing time and should not be submitted.

Any questions about the content of this correspondence should be directed to the sender.