



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

January 22, 2005

RE: YDI Wireless

FCC ID: NB5-MB-49-HP

I have a few comments on this Application. Depending on your responses, kindly understand there may be additional comments. Please confirm that this device is intended to operate under the provisions of Part 90 Subpart Y. The following questions are based upon this assumption

- 1.) This device is described as a point-to-point or point-to-multipoint system. Is the Applicant aware of the potential site license limitations imposed by 90.1207(d)?
- 2.) Kindly show how this device will meet the channelization requirements of 90.1213. Please provide a complete list of all channels and their associated bandwidths.
- 3.) Please provide information on the peak transmit power and the associated bandwidth per 90.1215(a). Please provide evidence of compliance with the spectral power density requirements also found in this subsection.
- 4.) Please note the method for power measurement in 90.1215(b). Your report identifies the diode detector/signal generator substitution technique for power measurement. If RMS equivalent measurements are not possible please specify how your method is equivalent. A presentation of oscilloscope plots showing the EUT fundamental and the reference levels measured and used would be helpful.
- 5.) Given the channel bandwidths of 90.1213 please reconsider the occupied bandwidth masks presented in the Test Report. In addition, please provide vertical graticule on figures 3, 4, 17, and 20.
- 6.) Licensed radios must show all applicable emission designators and the applicable frequency range and power for each designator. Please modify your Form 731.
- 7.) The label is incorrect for a Licensed radio transmitter also which contains a receiver. The user has rights to non-interference that are not extended to Unlicensed Part 15 products. Therefore the labeling of 15.19(a)(1) would be more appropriate.
- 8.) The Parts List is incomplete and does not cover the 802.11a/g radio.
- 9.) The Tune Up procedure is inadequate. Please describe how this device is tuned up during production and what assurances are available that RF power and frequency limitations to be specified on the Grant of Equipment Authorization are maintained.
- 10.) Frequency stability was performed using a 120vac supply. However, the operational description indicated this device runs off of 48VDC. In instances where DC power only is available, it would be prudent to do frequency stability testing using a DC supply. Please provide frequency stability data using the DC supply only.
- 11.) In addition to the RF Exposure evaluation, a statement confirming compliance with the RF Safety requirements for both fundamental and unwanted emissions must be submitted. Please see 90.1217.
- 12.) The RF Exposure exhibit also indicates that additional antennas may be used with the system. Please note the allowed transmit power may change when antennas greater than 9dBi are utilized. See 90.1215(a).
- 13.) Please provide photographs of all antennas for which approval is sought at this time.
- 14.) Per 2.1033(c)(7) please identify the maximum power rating as defined in the applicable part(s) of the rules.
- 15.) Per 2.1033(c)(8) please provide the dc voltages applied to and dc currents into the several elements of the final radio frequency amplifying device for normal operation over the power range.

- 16.) Please provide a data sheet including filter response on the external filter used for harmonic suppression. This should be included in the Parts List.
- 17.) Please clarify if both the 2.4GHz 802.11g and 5GHz 802.11a signals are used by this device and fed to the amplifier. It is unclear if both portions of the 802.11b/g card are utilized. A more detailed description indicating how the 802.11b/g radio signal is up converted to the 4.9GHz band would be helpful.
- 18.) Was the Terrabeam radio rotated about it's axis on three orthogonal planes for spurious emission testing? The Test Setup photographs do not give me a clear indication.
- 19.) Since this broadband radio has two bandwidths with two emission designators, and since the limits of 90.210(l) is expressed in terms of dBm/MHz, it would be prudent to measure the radiated spurs on both applicable bandwidths. Please review.
- 20.) FYI: For your convenience, I am also attaching portions of 90.210(l), Part 90 Subpart Y, and portions of the Frequency Allocation table in Part 2.



William H. Graff
President and Director of Engineering

[mailto: whgraff@AmericanTCB.com](mailto:whgraff@AmericanTCB.com)

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.