COMPATIBLE ELECTRONICS

Responses to ATCB Questions

1. Please note that on pages 95 and 98 of Appendix E of the test report the average plot lines appear to have an anomaly that brings the data into question. Please note that at approximately 250 kHz the plot line drops to a flat line below the lowest graticule on the analyzer. This indicates that possibly the signal has been interrupted or lost. Please explain and/or please provide evidence that proper measurement data was taken.

Response: The place where the plot lines drops to a flat line indicates where we stopped taking average measurements. This is because past that frequency, the peak reading was well below the average limit. So where the plot line drops to a flat line represents that no average reading was taken.

2. Please note that there does not appear to be data showing the emissions results of co-transmission of both the WLAN and Bluetooth device. Please note that the FCC has stated that this data is to be provided. The concern is how the BT device and the WLAN device may produce intermodulation products which may cause failures in the restricted bands. Please provide data showing radiated emissions with both the BT and WLAN operating simultaneously. Alternately, please explain how the devices are prevented from operating simultaneously.

Response: Per the BT test report for the FCC-ID: LNQBTM200, the antenna gain is 1 dBi, the output power is 2.50 dBm (worst case). Therefore, the calculated maximum EIRP is 2.50 dBm + 1dBi = 3.33 dBm = 2.24 mW. Since the calculated maximum EIRP is below 5 mW there is no co-location in this system, this was stated on previous submissions by Bill Graff.

3. Please clearly indicate where the antenna(s) for this device are located in the host. The existing photos do not allow for clear distinction of antenna location.

Response: Please see Pages 3 and 4 of the exhibit "Antenna_Photo_Item_3"

4. Please note that the manual states that the antenna(s) used with this host are 20cm separated from the user (see page 9 of the manual). Please note that SAR has been provided which indicates that the device is used within 2.5cm of the persons body. Please be consistent in the application for rf exposure. Please provide a manual with the proper SAR information for this device.

Response: The manufacturer of the laptop (HP) has created a generic user manual for the unit. The unit tested has the capability for integrating other manufacturer's types of WLAN (Mini-PCI) cards. It seems that when this laptop has been previously assessed for compliance with another manufacturer's card or on a previous grant application (different FCC ID number) a separation distance of 20 centimeters was needed to show compliance. In the event that a revised exposure statement is needed, this will be included in the manual.

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5. Please note that the SAR report states that the power of this device is 24dBm yet the EMC report states the highest power is 17.65dBm. Please note that SAR and EMC powers MUST agree within 0.5dB for conducted and within +/-3dB EIRP for any specific granted device. The variance in measured power in this host device is greater than 6.35dB. This is not allowed. Also, please note that while SAR may have been tested to a more conservative level, this is not the intent of the application. The intent of application data is to provide evidence of how the host and transmitter work in conjunction with each other AS SOLD, and is not to determine any supposed extreme SAR value. As the module used in this device is only approved for use at 56mW (+/- 5% conducted power), not 100mW, SAR should only be performed using the modules maximum allowed power. As the actual SAR values for this power level are what is to be on the grant, it is this level (17.65dBm +/-0.5dB as measured in the EMC report) to which the system must be tested. Please provide SAR data within the allowed 0.5dBm of that measured in the EMC report as clearly

Response: (From Aprel Labs): With respect to the power levels used and referenced on pages 19-22. This was a type error with regards the power referenced on the above numbered pages. On the information page of the report the power levels are state at 802.11b 17.4 dB 802.11g 16.5 db and these were the actual power levels use during the testing. Please find attached the updated pages for 19, 20, 21, and 22 with the corrected power levels.

Note: Also attached will be the E-mail from Aprel Labs that states the above. Also, the revised SAR test file that had pages 19-22 will be uploaded.