

Date: 14th May 2008

Gregory Czumak PCTEST Engineering Laboratory, Inc. 6660-B Dobbin Road Columbia, MD 21045

Re: Correspondence Number AZ480344 with FCC ID: AZ489FT7032.

Confirmation Number: 804180344-47

Dear Mr. Czumak;

Motorola Inc., 8000 West Sunrise Boulevard, Fort Lauderdale, Florida 33322, herein submits its response to the 2nd May 2008 request for information in Correspondence Number AZ480344.

- Q1. Please resubmit the user's manual, including the information to the user required by Sections 15.19 and 15.105, as well as the RF Exposure warning statement (also see question 7, below).
- R1. Attached please find required user manual and product safety booklet:
 - For FCC notice please see pages no: 12 and 13
 - For Product Safety and RF Exposure info please see page no. 11.
- Q2. Please submit a block diagram of the Bluetooth transmitter, including all of the clocks/oscillators, as required.
- R2 Attached please find revised Ex-4 and Ex-12. (See p#4 and p#2 respectively)
- Q3. Please address the 4 points of Section 15.247(a) (1) for the frequency hopping Bluetooth transmitter.
- R3. See the answers below:
 - A) Is the hopping sequence pseudorandom? Yes
 - B) Are all channels are used equally on average? Yes
 - C) Does the receiver input bandwidth equal the transmit bandwidth? Yes
 - D) Does the receiver hop in sequence with the transmit signal? Yes
- Q4. Please address Sections 15.247(g) and (h) for the frequency hopping Bluetooth transmitter.
- R4. See the answers below:

15.247(g): In accordance with the Bluetooth Industry Standard, the system is designed to comply with all of the regulations in Section 15.247 when the transmitter is presented with a continuous data (or information) stream. We comply.

15.247(h): In accordance with the Bluetooth Industry Standard, the system does not coordinate its channel selection/hopping sequence with other frequency hopping systems for the express purpose of avoiding the simultaneous occupancy of individual hopping frequencies by multiple transmitters. We comply.

BT radio is hopping independently and randomly. See the attached BQ approval.

- Q5. The Bluetooth transmitter is capable of EDR mode. Please verify that the bandedge plots (4.6.1 4.6.4) were taken at this higher data rate. Please specify the data rate used during the peak power measurements (the lower data rate typically yields the higher output power levels).
- R5. The bandedge measurements (Plots 4.6.1 to 4.6.4) were taken in the EDR mode and the peak power measurements were taken at lower data rate.
- Q6. Please address Section 15.407(c) for the NII transmitter- this is typically done in the form of a declaration statement).
- R6. Our product is a VOIP WLAN-system phone based on IEEE 802.11a/b/g standards. The WLAN subscriber is a non-continuous transceiver that means that only when data exists, will the WLAN processor prepare the data for transmission and turn on the transmitter.

The transmission ceases after the sending of information data packets has been completed, according to the IEEE 802.11a/b/g protocols.

Regarding operational failure scenario, one possibility would be high temperature which might hypothetically cause the radio to transmit unexpectedly. However, our product has a temperature sensing mechanism that turns the WLAN section completely off if a temperature limit is exceeded.

This could also protect from unintentional transmission due to any other failure mode that would produce long continuous transmission causing the transmitter to heat up.

- Q7. Please address Section 15.407(e) for the NII transmitter- this is typically done in the form of a warning statement to the user, in the user's manual (see number 1, above).
- R7. Please see R1 (above):
 - For Product Safety and RF Exposure info please see page no. 11
- Q8. Are any of the transmitters capable of transmitting while the EUT is connected to the AC adapter? If so, the appropriate test report (15C BT, 15C WLAN, and/or 15E) must also include test data demonstrating compliance with the AC Line conducted emission requirements of Section 15.207. Please resubmit, if so required.
- R8. Line conducted emissions measurements with the AC adapter were taken with the radios in transmit and receive modes and the worst case results i.e., WLAN in transmit mode, was presented in the test report Ex6 part 4. (See pages 12-15).
- Q9. On p.6/54 of the 15.247 DTS report, the maximum output power levels listed are not supported by the data on p.14/54. Please revise and resubmit.
- R9. Peak output power of range 2.4GHz shows power readings, which fulfilling the 5% tolerance.

See channel 2427MHz test result at page #14, section 4.2. Maximum Peak Output Power, 2400-2483.5 MHz.

Note: WLan 802.11 b&g use same Frequency range: 2.412 – 2.462 GHz

Q10. Please address the FCC's Handset SAR requirements-specifically, please submit a photo showing the location and identity of each antenna in the EUT, and the distance(s) between them. From this, and the information in the Handset SAR document, please ascertain if a simultaneous SAR measurement (WLAN and BT) is required (please note that any application containing simultaneous SAR measurements must now be submitted directly to

FCC ID: AZ489FT7032

the FCC for review). If it is not required, please remove any references to simultaneous SAR measurements from the SAR report and resubmit it.

R10. All reference to simultaneous transmissions were removed (section 3.0 and section 10.0) and final SAR results were updated accordingly. Please refer to the attached photo with this response which shows antenna separation distances exceeding 2.5cm. The following note was added in section 7.1 of the SAR report.

Note that although stand alone BT data is presented, it is not required per FCC TCB workshop February 2008 and FCC OET draft 648474 (April 2008) "SAR Evaluation Considerations for Handsets with multiple Transmitters and Antennas" because the maximum output power for BT is 2.51mW and the separation distance between the BT antenna and WLAN antenna is greater than 2.5cm.

Contact me at (954) 723-5793 if you require any additional information.

Sincerely, /s/ Mike Ramnath (signed)

Manager, Regulatory Compliance Email: <u>Mike.Ramnath@motorola.com</u>