

## Chris Harvey

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**From:** 이영택 <yt183@e-ctk.com>  
**Sent:** Wednesday, February 16, 2011 2:45 AM  
**To:** charvey-tcb@ccsemc.com  
**Cc:** CHARVEY@IEEE.ORG; lucy.tsai@ccsemc.com  
**Subject:** RE: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259 - AN10T1263, Notice#3  
**Attachments:** SAR\_Test Report\_STM-7700.pdf; SAR\_Test photo\_STM-7700.pdf; ANT distances.pdf; Test Report\_RFID\_modified.pdf; Test Report\_GSM\_modified.pdf

Dear Chris Harvey

The answer is as follows.

1. This Question was never answered: 1. Please confirm which of the transmitter is capable of transmitting simultaneously (DTS WLAN BT, RFID and GPRS transmitters). The RF Exposure for simultaneous transmission must be addressed (for either Portable SAR or Mobile MPE as needed). Please also confirm that users will not be able to use this device as a WiFi to Mobile-Network Hot-Spot device since it has both WiFi and GPRS capabilities.

- Transmitter is capable of transmitting simultaneously.
- Attached the Update SAR report.

2. This Question was never answered: 11. The field-strength measurements throughout the report should all indicate the measurement distance (i.e. dBuV/m @3m, not just dBuV/m). Please update all data tables in the report to state the distance at which the field-strength measurement or limit is specified.

You have stated that you revised the RFID report, but the data tables still do not specify the test distance.

- Attached a corrected RFID Test Report.

3. The SAR report only documents the GSM/GPRS transmission and does not mention the WLAN transmitter or simultaneous transmissions. Please update the SAR documentation to address the WLAN transmitter.

- Attached the Update SAR report.

4. Because this device is Portable and has multiple transmitters operating simultaneously please provide an exhibit that shows the locations of each antenna and the separation distances between antennas.

- Attached a corrected SAR Test setup photos.

5. Your new test report states that the ERP and EIRP measurements were performed using the Test Method found in ANSI TIA-603-C-2004 Section 2.2.17.2, but you have continued to provide a calculated ERP and EIRP value. As stated before the FCC requires the use of the substitution method for making ERP and EIRP measurements of devices with integral antennas. Please perform radiated field ERP and EIRP measurements, provide a detailed test procedure (not just referencing a standard, but your measurement procedures for your laboratory) and update the report accordingly.

- Attached a corrected GSM Test Report.

6. Field strength of Emissions for GSM/GPRS was tested in accordance with ANSI C63.4:2003 and against FCC Part 15 limits (for QP and Avg). FCC Part 22 and Part 24 require the field strength of spurious emission in accordance with FCC 2.1053, which uses the ANSI TIA 603-C substitution method. Please re-measure and correct the test report.

- Attached a corrected GSM Test Report.

7. You have supplied a 'modified' RFID Test Report, but there is no indication what has changed, and the Report Revision History on page 2 of 27 has no indication of changes. The GSM test report has also been modified, but the Report Revision History also has no indication of changes. Please follow the ISO Guide 17025 requirement to list revisions to test documentation.

- corrected the report revision.

8. Previous questions to you asked to address more details of how the measurements below 30 MHz were performed. The Photographs of test show the loop antenna at one location, in one orientation, but there is no description of how the measurements are performed or orientation of the loop antenna. Please revise the RFID test report once again to address the detailed measurement procedure for the measurements below 30MHz.

- corrected the measurements procedure.(RFID test report page 13)

- The testing performed on polarization of receiving antenna both horizontal and vertical.

- But, photographs of test show the loop antenna at horizontal.

- need a vertical polarization photo?

Best regards,

Young-Taek

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-----Original Message-----

From: [charvey-tcb@ccsemc.com](mailto:charvey-tcb@ccsemc.com) [<mailto:charvey-tcb@ccsemc.com>]  
Sent: Wednesday, February 09, 2011 8:58 PM  
To: [ytl83@e-ctk.com](mailto:ytl83@e-ctk.com)  
Cc: [CHARVEY@IEEE.ORG](mailto:CHARVEY@IEEE.ORG); [lucy.tsai@ccsemc.com](mailto:lucy.tsai@ccsemc.com)  
Subject: Woongjin System & Technology Co., Ltd., FCC ID: WLFSTM-7700, Assessment NO.: AN10T1259 - AN10T1263, Notice#3

Dear Young-taek Lee,

The following items still need to be resolved before the review can be continued:

1. This Question was never answered: 1. Please confirm which of the transmitter is capable of transmitting simultaneously (DTS WLAN BT, RFID and GPRS transmitters). The RF Exposure for simultaneous transmission must be addressed (for either Portable SAR or Mobile MPE as needed). Please also confirm that users will not be able to use this device as a WiFi to Mobile-Network Hot-Spot device since it has both WiFi and GPRS capabilities.
2. This Question was never answered: 11. The field-strength measurements throughout the report should all indicate the measurement distance (i.e. dBuV/m @3m, not just dBuV/m). Please update all data tables in the report to state the distance at which the field-strength measurement or limit is specified.  
You have stated that you revised the RFID report, but the data tables still do not specify the test distance.
3. The SAR report only documents the GSM/GPRS transmission and does not mention the WLAN transmitter or simultaneous transmissions. Please update the SAR documentation to address the WLAN transmitter.

4. Because this device is Portable and has multiple transmitters operating simultaneously please provide an exhibit that shows the locations of each antenna and the separation distances between antennas.

5. Your new test report states that the ERP and EIRP measurements were performed using the Test Method found in ANSI TIA-603-C-2004 Section 2.2.17.2, but you have continued to provide a calculated ERP and EIRP value. As stated before the FCC requires the use of the substitution method for making ERP and EIRP measurements of devices with integral antennas. Please perform radiated field ERP and EIRP measurements, provide a detailed test procedure (not just referencing a standard, but your measurement procedures for your laboratory) and update the report accordingly.

6. Field strength of Emissions for GSM/GPRS was tested in accordance with ANSI C63.4:2003 and against FCC Part 15 limits (for QP and Avg). FCC Part 22 and Part 24 require the field strength of spurious emission in accordance with FCC 2.1053, which uses the ANSI TIA 603-C substitution method. Please re-measure and correct the test report.

7. You have supplied a 'modified' RFID Test Report, but there is no indication what has changed, and the Report Revision History on page 2 of 27 has no indication of changes. The GSM test report has also been modified, but the Report Revision History also has no indication of changes. Please follow the ISO Guide 17025 requirement to list revisions to test documentation.

8. Previous questions to you asked to address more details of how the measurements below 30 MHz were performed. The Photographs of test show the loop antenna at one location, in one orientation, but there is no description of how the measurements are performed or orientation of the loop antenna. Please revise the RFID test report once again to address the detailed measurement procedure for the measurements below 30MHz.

The items indicated above must be submitted before processing can continue on the above referenced application. Failure to provide the requested information within 30 days of the original e-mail date may result in application dismissal and forfeiture of the filing fee. 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 e-mail address listed below the name of the sender. Revised documentation should not be emailed, but instead should be submitted through "Add Attachment" function at the UL-CCS website. Please have your Assessment Number and FCC ID/IC Certification number handy. You may use the following link: <https://cert.ccsemc.com/filing/>

Best regards,

Chris Harvey

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