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August 12, 2008

WLL Project: 10512

FCC ID: PA408002

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

RE: Comments of August 11, 2008

APPLICATION: FCC ID: PA408002 Eastman Kodak Company

Dear Mr. Johnson:

Below are the comments that you have provided regarding the application for certification referenced above. Our responses to those comments are in *bold italic*. Many responses refer you to additional exhibit(s) which has been uploaded to the application folder at the ATCB website.

Thank you for your attention. Please feel free to contact us for any additional information that you may require.

Regards,

Steven D. Koster EMC Operations Manager

Brian J. Dettling
Documentation Specialist

1) This application does not appear to be accompanied by a confidentiality letter – but the 731 denotes it should. Please correct.

R. Please see "Letter of Confidentiality Media Player"

2) Please provide a higher resolution block diagram for the WLAN portion of the device. The one provided is very difficult to read and not all information can be determined.

R. Please see "WMIR 215GN block diagram".

3) The WLAN card appears capable of 802.11n by reviewing photos and operational description. Currently this device has only been configured for 802.11 b/g (2 antennas) according to internal photographs. Receiving of 802.11n would normally require 3 antennas or more (for 802.11n there is one

1

more RX antenna for every simultaneous TX antenna used). RX/TX into one antenna only should be considered general legacy modes. Note the users manual mentions 802.11n compatible and capable. Please explain. Note that application will only cover configuration as presented.

- R. When in 802.11n mode, the unit runs in a 1T2R mode (1 TX 2 RX). There are only two antennas populated. One antenna runs as TX/RX, this antenna sits in the well nearest the HDMI and RJ45 connectors. The other antenna is RX only and sits near the power entry, therefore there are 2 Rx antennas and a single TX antenna and only one power measurement need be reported for the 802.11n mode of operation.
- 4) Schematics for the WLAN portion of the device have not been provided.
- R. Please see "WMIR 215GN schematic".
- 5) Test photographs for > 1 GHz appear to not show the device configured with cables for this portion of testing. Please explain as sometimes cables can still cause significant difference to readings of the TX or harmonics even for modular installed TX's (especially when circuits are installed under shields together). The concern here is has the device been evaluated at frequencies of interest with and without the cables. While in many cases they have little or no effect this fact is not 100% and therefore should have been investigated.
- R. Unit was retested above 1GHz fully cabled. No differences were seen in emission levels. Please see "Media Player Test Setup Photos rev 1".
- 6) Test report appears to combine both 15.247 and 15.249 data into one report. Please note that since Nov. 13, 2007 (TCB conference call), FCC has asked that for each filing for a composite application should have a separate report for each part of the composite filing.
- R. Report has been separated into two reports. Please see "Groucho Test Report 15.249" and Groucho Test Report 15.247".
- 7) Please provide appropriate RF exposure information regarding the 15.247 portion of the application.
- R. See HIL-10512 MPE Report.DOC
- 8) Users manual should contain appropriate RF exposure information. Please correct.
- R. The client will update their User Manual at the next revision cycle. In the interim, per FCC Part 2.1007(C), a separate sheet of regulatory info will be included with the product. Please see "User Guide Regulatory Info".
- 9) Section 2.1, Table 1 appears to contain different value for maximum antenna gain than the information provided on the antenna. Please review.
- R. See revised report for the corrected table.
- 10) Test report shows 802.11n power. See 3) above as well. 802.11n modes require special consideration and treatment of testing. Please explain how this power is measured. FCC does not accept combiner techniques. Generally power is measured at all TX antenna ports that TX simultaneously and then mathematically summed. Therefore please explain methods used as well as applicability to the device given 3) above.

- R. When in 802.11n mode, the unit runs in a 1T2R mode (1 TX 2 RX). There are only two antennas populated. One antenna runs as TX/RX, this antenna sits in the well nearest the HDMI and RJ45 connectors. The other antenna is RX only and sits near the power entry, therefore there are 2 Rx antennas and a single TX antenna and only one power measurement need be reported for the 802.11n mode of operation.
- 11) It is unusual to see such as difference between 802.11b and g data for power. For RF power please confirm PEAK RF power was measured not average. Note this requires appropriate RF head to be used that is capable of the appropriate Video bandwidth and measurement type as well as appropriate selection on the meter.
- R. Power measurements of the 802.11 b/g/n signals were made using the same equipment and settings (Agilent N1911A e/w Agilent Power head N1921A). The RF power was verified in 802.11b, g and n modes. Verified power readings agree with original reported levels.
- 12) For 802.11 The same concerns as given in 10) apply to 802.11n Spectral Density tests.
- R. As in comment 3 and 10, only a single TX antenna is used, therefore only a single set of PSD measurements need be made for 802.11n.
- 13) For 802.11 conducted RF, please explain why only 802.11b data is provided. Typically this type of test should be repeated when different modulations exist (802.11b vs. g).
- R. Added 802.11g Conducted Spurious to the report (see figures 3-37 3-54) as this is the highest power modulation.
- 14) Please confirm the validity of the powerline conducted data to meet a) Idle/RX mode of operation, b) 802.11 TX mode, and c) for the 15.249 TX mode. Note that much of the time these different modes do not affect powerline conducted, but sometimes they can. When they do, data should be provided for both 15.107 and 15.207 modes. Additionally, for these modes, when the TX makes a difference in the results a low/middle/high channel should be checked as required for the bandwidth of the TX mode used.
- R. AC conducted test were retested with the unit in RX only mode. Original testing was performed with the unit set to transmit from both the 15.247 radio and 15.249 radio (perceived worst case). RX only results demonstrated that there is no discernable difference in AC Conducted emissions between TX mode and RX mode.
- 15) Please provide information to show bandedge compliance with 2.4835 GHz Restricted band.
- R. See revised report. Added as figures 3-55 3-60
- 16) Average correction factors given in the operational description state they are a probabilistic approach. There are a few concerns noted:
- a) The FCC expects worse case information provided in the theory and then the test data would be <= to this information. However theory is based on long term probability and not actual worse case as the FCC desires. It would appear that with using weighting factors only and not a table that has to utilize all frequencies that in theory the same channel can possible be used 100% or 50% (if a different channel has to be chosen next). While we realize this may rarely occur, it is possible and FCC desire this information based on worse case.
- b) Without the above information average compliance for fundamental and spurious cannot firmly be determined

- R. Margins were recalculated based on worse case theoretical values as determined in "Operational Description 2.4GHz revised", which has been uploaded.
- 17) FYI...Test report and 731 form should cite lowest/highest channels available for the 802.11 device not just band of operation.
- R. See test report and 731 form.
- 18) FYI...The TX for 15.247 should cite an equipment type of DTS on the 731 application not DSS.
- R. Please see "Application Form 731 Groucho WiFi revised".
- 19) FYI...Because RX > 1 GHz are not subject to Part 15 regulations, the type of device for the 15.249 on the 731 form should cite DXX not DXT.
- R. Please see "Application Form 731 Groucho 2.4G revised".
- 20) FYI...The "base" portion appears to be subject to DoC as well. Please note that the 3 items required by 2.1077 in the manual should be presented on a single page model and U.S. contact info did not appear with regulatory info). This does not appear to have been done. The manufacturer is responsible to ensure this should be done.
- R. The client will update their User Manual at the next revision cycle. In the interim, per FCC Part 2.1007(C), a separate sheet of regulatory info will be included with the product. Please see "User Guide Regulatory Info".