## **dBi Corporation** 216 Hillsboro Ave.

Lexington, KY 40511-2105

November 4, 2010

Two Dimensional Instruments 6901 Briarhill Rd Crestwood, KY 40014

## Gentlemen;

Test report 10dBi030a, dated November 4, 2010, replaces test report 10dBi030, dated October 12, 2010, in its entirety.

The attached test report contains the results of the electromagnetic compatibility (EMC) testing that dBi Corporation performed on the TVRFL4 Base Station, the WS4HETM, WS4HETC, WS4IPR, WS4ITMIHM, and WS4HITMIHM Wireless Sensors, and the WS4TX Transmitter Module on September 4-October 10, 2010.

We evaluated TVRFL4 serial number (S/N) 10 (with ThermaViewer RF S/N WS11652 as auxiliary equipment), WS4HETMETM S/N 5, WS4HETC S/N 1, WS4IPR S/N 7, and WS4ITMIHM S/N 6, and WS4HITMIHM S/N 8, using:

- ANSI C63.4-2003 to determine their compliance with the US's FCC 47 CFR Part 15-2008.
- CAN/CSA-CEI/IEC CISPR 22:02 to determine their compliance with Canada's Industry Canada (IC) ICES-003:2004.

To get the TVRFL4 and ThermaViewer RF to comply with these standards, we had to put a Steward 28A0640-0A2 snap-on ferrite on the ThermaViewer RF's Data Cable. *With this modification*, the data in the attached report shows that these units comply with all of the:

- FCC 47 CFR Part 15-2008 Class B requirements for unintentional radiators.
- IC ICES-003 Class B requirements for unintentional radiators.

Therefore all of these units—including the ThermaViewer RF— may be considered FCC/IC Class B Verified.

We evaluated WS4TX Transmitter Module S/N 11, using:

- ANSI C63.4-2003 to determine its compliance with the US's FCC 47 CFR Part 15-2008.
- RSS-Gen Issue 2 (June 2007) to determine its compliance with Canada's Industry Canada (IC) RSS-210 Issue 7 (June 2007).

To get the WS4TX to comply with these standards, we had to make R14 = 39 kohms, C1 = 0.1uF, and C19 = 330pF. With these modifications, the data in the attached report shows that the WS4TX meet all of the requirements for:

- FCC Certification under FCC 47 CFR Part 15-2008 section 15.231(e).
- IC Certification under RSS-210 Issue 7 (June 2007) section A1.1.5.

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Test report 10dBi030a contains:

- Administrative information for the TVRFL4, WSHETMETM, WS4HETC, WS4IPR, WS4ITMIHM, WS4HITMIHM, and WS4TX.
- A sample FCC/IC Declaration of Conformity (DoC) for the TVRFL4, WSHETMETM, WS4HETC, WS4IPR, WS4ITMIHM, and WS4HITMIHM.
- Information relating to product RF Interference for the TVRFL4, WSHETMETM, WS4HETC, WS4IPR, WS4ITMIHM, WS4HITMIHM, and WS4TX.
- Radiated and conducted interference test results for the TVRFL4, WSHETMETM, WS4HETC, WS4IPR, WS4ITMIHM, WS4HITMIHM, and WS4TX.
- Descriptions of the test and measuring equipment used.

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• Pictures of the test setups.

If you need any additional information or explanations, please contact me directly.

Sincerely,

John R. Barnes KS4GL, PE, NCE, NCT, ESDC Eng, ESDC Tech, PSE, SM IEEE

President, dBi Corporation