Dataradio Inc., Montreal, Canada

ENGINEERING STATEMENT
OF CONSTANTIN PINTILEI

The application consisting of the attached engineering exhibit and associated FCC form 731 has been prepared in support of a request for a Class II Permissive Change for EOTBDD4T85-2. All changes involved fall under Class II Permissive Change types and they are entirely detailed within the current report.

The certificate EOTBDD4T85-1 was originally granted to Dataradio for the transmitter of its UHF base station following a change in ID on 11/16/2000. Three more class II permissive changes were subsequently granted (07/12/2001,01/02/2002 and 01/21/2003) for 4FSK and 8FSK digital modulations. The transmitter is comprised of the Exciter and PA modules, both belonging to the T85M-XY (see page 7 for part# description) UHF base station. Dataradio Inc. buys this UHF base station from Tait Electronics, fits the source for the proposed digital modulation scheme, does the final assembly of transmitter and controller and markets the completed UHF base station.

The Class II Permissive type of change demonstrated with this filing relates to the emission designator list. The certificate EOTBDD4T85-1 is granted for the following list of emission designators: 10K7 and 15K7F3E, and 14K3, 15K9, 7K17, 8K00, 16K5, 16K7, 14K9, 8K33 F1D. This change asks for the addition of a new digital modulation source that provides DRCFSK with two rates of 9.6kbps and 19.2kbps on 25kHz and 12.5kHz channels. Their associated emission designators yield three new values on the list. For both claims the compliance has been demonstrated for mask 90.210C or D as required. This Class II permissive change involves the modulation source only and it is completely described in the current report.

EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a prototype built from a production EOTBDD4T85-2 and a prototype IVIS controller used to create the modulation scheme. The exciter operates on frequencies ranging from 440.000 MHz to 480.000 MHz. The frequency tolerance of the exciter is .0001% or 1.0 parts per million and the output power of the PA is 100W as granted in EOTBDD4T85-2.

PROPOSED CONDITIONS

It is proposed to accept the Class II permissive change request for the EOTBDD4T85-2 certificate for operation in the band of frequencies previously outlined. The applicant anticipates marketing the device for use in wireless transmission of data.

PERFORMANCE MEASUREMENTS

All measurements for Occupied Bandwidth and mask compliance as per 2.1043 (b)(2) were conducted in accordance with the Rules and Regulations Section 2.1041and 2.1049 of Rules Service Co rev.2-154, Mar 15,2000. The measurements were made in the engineering laboratory located at 5500 Royalmount Ave, Montreal, Canada. All measurements were made and recorded by myself or under my direction. The measurements were made between Dec 15, 2003 and Dec 24, 2003.

CONCLUSION

Given the results of the measurements contained herein, the applicant requests a Class II Permissive Change for the Certificate EOTBDD4T85-2 to accept the use of 15K9F1D as the emission designator for another digital modulation and to add two new emission designators 11K4F1D and 8K84F1D to the existing list for two new proposed digital modulations.

01/12/04

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