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 EOTBDD4T85-1. All changes involved fall under Class II Permissive Change types and they are entirely detailed within the current report.

The certificate EOTBDD4T85-1 has been granted to Dataradio for the transmitter (Exciter+PA modules) part of its UHF base station. They both belong to the T85M-XY (see page 6 for part# description) UHF base station which is itself part of Paragon/PD, a wireless data base station. Dataradio Inc. buys this UHF base station from Tait Electronics, modifies the exciter for the proposed digital modulation scheme, does the final assembly and markets the Paragon/PD unit. The Paragon/PD data base station serves the Dataradio Gemini/PD mobile family.

The Class II Permissive type of change demonstrated with this filing relates to the emission designators list. The certificate EOTBDD4T85-1 is granted for the following list of emission designators: 10K7 and 15K7F3E, and 14K3, 15K9, 7K00, 7K50 and 16K5F1D. The change has two parts. One consists in modification of the emission designators corresponding to 12.5kHz channel due to a higher attainable maximum deviation on the modulating input. The other asks for the addition of several new emission designators for another 8-FSK digital modulation source. For both claims the compliance has been demonstrated for mask 90.210C or D as required. Following this permissive change the emission designator list should be : 10K7 and 15K7F3E, and 14K3, 15K9, 7K17, 8K00, 16K5, 16K7, 14K9, 8K33 F1D . 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 production EOTBDD4T85-1 with beta-level firmware used to create the modulation scheme. The exciter operates on frequencies ranging from 400.000 MHz to 440.000 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 EOTBDD4T85-1.

PROPOSED CONDITIONS

It is proposed to accept the Class II permissive change request for the EOTBDD4T85-1 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 Nov 15, 2002 and Dec 30, 2002.

CONCLUSION

Given the results of the measurements contained herein, the applicant requests a Class II Permissive Change for the Certificate EOTBDD4T85-1 to modify the emission designator list as shown above.

07/01/03

Constantin Pintilei
R&D Test Engineer, Dataradio Inc.