Dataradio Inc., Montreal, Canada

Engineering Statement

OF CONSTANTIN PINTILEI

The application consists of the attached engineering exhibit and associated FCC form 731 which were prepared in support of a request for a Class II Permissive Change for CAS2000-5231. All changes involved fall under the Class II Permissive Change type and they are entirely detailed within the current report.

The certificate CAS2000-5231 has been granted to Tait Electronics Ltd. for the T2015-5xx mobile transceiver. The Class II Permissive type of change is demonstrated with this filing. The original certificate has been granted for F3E and F2D type of modulations. The change consists of adding the digital modulation emission designator F1D. It was demonstrated that several sources of DGMSK and 4RCFSK digital modulation comply with the mask 90.210 (D). For those modulation sources their emission designator was found. This Class II permissive change involves the digital modulation source only and it is completely described with the current report. At the same time this submission updates the frequency stability value to 0.00025% (2.5ppm) in order to follow the update of the rules 90.213 that occurred in 02/14/1997.

EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a regular production sample. The test pin input provided on the TSP910 of "TCXO series 2" board was fed for the tests. A Dataradio MobilPacII modem was used to create the digital modulation scheme and test sequence.

The transmit frequencies of the unit are 400-470MHz. The frequency tolerance of the exciter is .00025% or 2.5ppm (parts per million) and the output power is 25W down to 5W as granted in CAS2000-5231.

PROPOSED CONDITIONS

It is proposed to accept the Class II permissive change request for the CAS2000-5231 grant for F1D operations 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.2-164, Jan 15,2003. 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 May 5th and May 15th, 2003.

CONCLUSION

Given the results of the measurements contained herein, the applicant requests to be applied a Class II Permissive Change for the Certificate CAS2000-5231 to add the new emission designators 8K00F1D and 9K00F1D to the existing ones, 9K60F2D and 11K0F3E.

Constantin Pintilei

05/22/2003

Constantin Pintilei
R&D Test Engineer, Dataradio Inc.