

## **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 EOTGPDB.

The certification EOTGPDB has been granted to Dataradio Inc for its Gemini/PD radio modem. Gemini/PD is comprised of the Dataradio COR Ltd. (DRL) Mobile Data Platform (MDP) 800 MHz Transceiver with the Dataradio Inc Gemini Modem. Dataradio Inc does the final assembly and markets the Gemini/PD unit. The EOTGPDB certificate has been granted for a 2-level FSK (DGMSK) and a 4-level FSK (SRRC4FSK) types of modulation scheme. The proposed digital filtering (RC4FSK) scheme will allow a 32kbps/16ksps data rate. This change involves the firmware only, with no change whatsoever occurring in the hardware. The opportunity will also be used to correct the text of the certification note.

### EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a prototype built from production EOTGPDB with beta-level firmware used to create the modulation scheme. The transceiver operates on frequencies ranging from 806.000 MHz to 824.000 MHz. The frequency tolerance of the transceiver is .00015% or 1.5 parts per million as granted in EOTGPDB.

### PROPOSED CONDITIONS

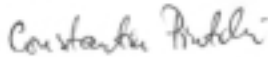
It is proposed to accept the request for the GEMINI/PD, 806-824 MHz Transceiver/Modem/GPS for operation in the band of frequencies previously outlined. The applicant anticipates marketing the device for use in wireless transmission of data.

### 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 2.1041 and 2.1049 of Rules Service Co rev.2-158, Mar 15,2001. Equipment performance 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 performance measurements were made between Oct 19, 2001 and Oct 23,2001

### CONCLUSION

Given the results of the measurements contained herein, the applicant requests to have accepted the Class II Permissive Change for the Certificate EOTGPDB, as per FCC part 2.1043(b)(2), in order to market the new digital speed of 32kbps. The note on the certificate should read "Device must operate with a maximum transmission duty factor not exceeding 25%, controlled by protocol firmware." to be correct.



10/24/01

Constantin Pintilei, Eng  
R&D Test Engineer, Dataradio Inc.