

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 EOTGPDA.

The certification EOTGPDA 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) UHF (403 MHz-512MHz) Transceiver with the Dataradio Inc Gemini Modem. Dataradio Inc does the final assembly and markets the Gemini/PD unit. The EOTGPDA certificate has been granted for several bit rates at 2, 4 and 8-level FSK type of modulation scheme with a total of 11 emission designators. The change intends to add a 16-FSK modulation scheme with two new bit rates of 64kbps and 57.6kbps along with their emission designators emission of 16K4F1D and 16K9F1D. This change involves the firmware only, with no change whatsoever occurring in the hardware of the MDP transceiver. A new modem board to generate the proposed modulation scheme is also presented in this report along with a notification about a Class I permissive change.

EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a prototype built from production EOTGPDA with variant modulation source (prototype board and firmware) used to create the modulation scheme. The transceiver operates on frequencies ranging from 403.000 MHz to 512.000 MHz. The frequency tolerance of the transceiver is .00015% or 1.5 parts per million as granted in EOTGPDA.

PROPOSED CONDITIONS

It is proposed to accept the request for the GEMINI/PD, 403-512 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.2-165, Mar 15,2003. 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 Apr 12, 2001 and Apr 23,2004

CONCLUSION

Given the results of the measurements contained herein, the applicant requests to be applied a Class II Permissive Change for the Certificate EOTGPDA to add the 16K9F1D to the existent list and to accept the use of the emission designators 16K4F1D for 64.0kbps data rate.



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Constantin Pintilei
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