

Dataradio Inc.
Montreal, Quebec, Canada

ENGINEERING STATEMENT
OF Constantin Pintilei

This 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 certificate EOTGPDB has been granted to Dataradio Inc for its Gemini radio modem which is comprised of the Dataradio COR Ltd. (DRL) Mobile Data Platform (MDP) Transceiver and the Dataradio Inc Gemini Control Unit (GCU) Modem. Dataradio Inc does final assembly and markets the finished Gemini product. The EOTGPDB certificate has been granted for 806.000-824 MHz Tx and 851-869MHz Rx bands. Dataradio also manufactures a 700 MHz version of this product, certificated under FCCID EOTGPD7, which differs only in its receiver circuitry. We wish to extend the Tx frequency range from 806.000-824 MHz to 794-824.000 MHz and to add the range 764-776MHz to the receiver in order to manufacture a single model for both bands in future. This application documents this increase of the Tx frequency range and covers the related modulation restrictions and spurious emissions. This change involves a different programming firmware of the radio and some redesigning on the receiver side of the transceiver, with no change whatsoever occurring in the frequency determining circuitry or the maximum power rating of the MDP transmitter.

EXISTING CONDITIONS

The units utilized for these RF spurious measurements were prototypes built from pilot MDP dual band radios and pilot GCU modems used to create the modulation scheme.

PROPOSED CONDITIONS

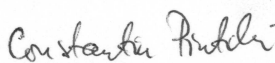
It is proposed to accept the request for the GEMINI. Gemini will be a Transceiver/Modem/GPS device for operation in the band of frequencies allowed by Part 90 subpart R (wideband 794-806MHz Tx and 764-776MHz Rx) and Part 90 subpart C (806-824MHz Tx and 851-869 MHz Rx). The applicant anticipates marketing the device for use in wireless data transmission for Public Safety services or other eligible users.

AFFIDAVIT

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.2-172, Mar 15,2005. Equipment performance measurements were made in the R&D laboratory of Dataradio Inc and on the FCC certified Open Area Test Site of Dataradio COR located at 299 Johnson Avenue in Waseca, Minnesota. All measurements were made and recorded by myself or under my direction. The performance measurements were made between Mar 15-Mar 30, 2006 for spurious and conducted requirements and between May 1 and May 9, 2007 for modulation characteristics. To the best of my knowledge, all of the data is true and correct.

CONCLUSION

Given the results of the measurements contained herein, the applicant requests a Class II Permissive Change for the Certificate EOTGPDB to accept the extension of functional bands over 700MHz band.



05/10/2007

Constantin Pintilei, PE
Dataradio Inc