

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 mobile radio modem, which 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 completed unit as Gemini. The EOTGPDA unit certificate has been granted for a 2-level FSK (DGMSK) and a 2^N-level FSK (xRC4/8/16FSK) types of modulation scheme together with associated maximum deviation levels at various rates. The change consists of the addition of a 16-level FSK with 2 new proposed rates. The change intends to add another 16-FSK modulation scheme with two new bit rates of 32kbps and 28.8kbps along with their emission designators emission of 8K42F1D and 7K92F1D. This change involves the firmware only, with no change whatsoever occurring in the hardware.

EXISTING CONDITIONS

The unit utilized for these occupied bandwidth and mask-compliance measurements was a prototype built from production EOTGPDA with a beta (prototype) firmware. 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, 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 Oct 12, 2004 and Oct 19, 2004

CONCLUSION

Given the results of the measurements contained herein, the applicant requests to have appended the new emission designator 8K42F1D and 7K92F1D in the list of the Certificate EOTGPDA and to have accepted the use of with a 16-FSK modulation following the Class II Permissive Change, as per FCC part 2.1043(b)(2).



20/10/04

Constantin Pintilei
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