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Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, DC 20554

Attention: Marlene Dortch

Subject: Comments to Federal Communications Commission's Report & Order,
FCC 03-324

Reference: SSD-PL-03-0164, Comments to Federal Communications Commission's Notice
of Proposed Rulemaking, FCC 02-302, 14 March 2003

Enclosure: Public Comment to FCC 03-324

Dear Ms. Dortch:

As an active member of the Dedicated Short Range Communications (DSRC) Standards Writing Group, The Johns Hopkins University Applied Physics Laboratory (JHU/APL) would like to comment on specific decisions made by the Commission in Report and Order 03-324 for Dedicated Short Range Communication Services and Mobile Service for Dedicated Short Range Communication of Intelligent Transportation Service in the 5.850-5.925 GHz Band (5.9 GHz Band). Our public response includes conclusions drawn from studies subsequent to those initiated by the NTIA¹, and additional recommendations to facilitate the licensing and coordination of DSRC equipment with the incumbent, co-primary band users. Specifically, as lead to a joint committee including members of both the DSRC Standards Writing Group and Satellite Industry Association (SIA)² to investigate interference issues raised by the SIA regarding the preceding Notice for Proposed Rulemaking, NPRM 02-302³, we have determined that there is a potential for interference to the DSRC service from existing Fixed Satellite Service

¹ Frank H. Sanders, "Measured Occupancy of 5850-5925 MHz and Adjacent 5-GHz Spectrum in the United States", NTIA Report 00-373 to U. S. Department of Commerce, William M. Daley, Secretary, December 1999.

² SIA includes Executive Members The Boeing Company; Globalstar, L.P.; Hughes Network Systems, Inc.; ICO Global Communications; Intelsat; Lockheed Martin Corp.; LoralSpace & Communications Ltd.; Mobile Satellite Ventures; Northrop Grumman Corporation; PanAmSat Corporation, SES Americom, Inc., and Verestar, Inc. and Associate Members Inmarsat, Eutelsat, and New Skies Satellites Inc.

³ Henry Goldbert, Joseph A. Godles and Brita Dagmar Strandbert, "Comments of PanAmSat Corporation", March 17, 2003 and Richard DalBello, President, "Reply Comments of the Satellite Industry Association", April 15, 2003.

(FSS) earth stations. Assumptions made by the Commission regarding the way in which DSRC channels can be used and the protections that they are afforded from other co-primary users may require reconsideration. In addition, the licensing of Roadside Units (RSU), in the manner described in the Report and Order, could be monopolized by large consortiums. For these reasons, we recommend interference assessment as well as channel allocation via third party coordination rather than the proposed “non-exclusive geographic area licensing” scheme. This change will make licensing more compatible with both the Spectrum Policy Task Force and DSRC channeling plans.

Specifically, our studies show that:

- Interference from FSS earth stations is a potential problem whose solution can be addressed by defining “interference contours” for each of the limited number of FSS sites within band. RSU license requests within these zones shall require detailed interference assessments, whereas those falling outside of these zones can be assured of tolerable interference from the specific sites.
- Depending on earth station channel assignments, the DSRC channeling plan offers insignificant protection as earth station transmit masks⁴.
- Interference from co-primary, in-band point-to-point microwave operations is not foreseen as a problem as a result of their relative antenna heights and non-usage of this band.
- DSRC licensees will experience interference from adjacent band FSS earth station operations. Screening for which candidates will be affected should be handled by automated analysis and third party investigations in the same fashion as recommended above for in-band licensing.
- The FCC database on existing FSS earth station sites is inadequate to fully define their interference potential. Data recorded by third party investigators for Part 25 and Part 101 licensing are necessary for DSRC interference assessments.
- Methods exist to severely attenuate/mitigate the potential interference from incumbent FSS earth station sites to DSRC RSUs as well as permit co-primary band licensing of future earth station sites to then existing RSUs. These include channel usage limitations, and/or the installation of radar fences or berms.

In addition, we would like to make the following recommendations:

- Assign and limit DSRC channels to RSU licensees to preclude interference within overlapping communication zones.
- Implement an automated, web-based licensing process using a shared database similar to the ones proposed for the 70-80-90 GHz band and managed by third parties.
- Instate, handle and license a third category of DSRC platform, the Public Safety Onboard Unit (PSOBU) in the same fashion as radios employed by Public Safety services.

⁴ Code of Federal Regulations – Title 47 – Telecommunications, Chapter 1 – Federal Communications Commission (Continued), Part 25 – Satellite Communications.

Please direct any questions or comments on this document to Mr. Robert Soranno at 240-228-8947 or Mr. Ronald Char at 240-228-7037.

Sincerely,

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RKC/RTS/lfm

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