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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

July 17, 2002

Via Hand Delivery

Ms. Marlene H. Dortch
Secretary
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

Re: Ex Parte Notice
IB Docket No. 01-185
File No. SAT-ASG-20010302-00017 et al.

Dear Ms. Dortch:

We are pleased to inform you that the U.S. GPS Industry Council ("Council") and Mobile Satellite Ventures L.P. ("MSV") have agreed on specific out-of-band emission ("OOBE") limits into the entire GPS band for the ancillary terrestrial component ("ATC") base stations and terminals that MSV will deploy in connection with its proposed next-generation Mobile Satellite Service system as described in the attached document. These OOBE limits are intended to protect GPS receivers.

These limits are -100 dBW/MHz for ATC base stations and initially -90 dBW/MHz for terminals operating in an ATC mode. For new terminals, the limit will be tightened to -95 dBW/MHz within five years from the date MSV service commences. This increase in protection is to account for a greater density of users and the need to protect GPS receivers from the aggregation of interference from multiple sources. MSV currently plans that all MSV terminals will include GPS chipsets and process GPS signals.

These OOBE limits are appropriate considering that MSS services, technical characteristics, operational interference scenarios, and expected density are published and understood. MSV's proposed terrestrial augmentations are also well known. Consequently, these OOBE limits developed for the MSV service are unlike the OOBE limits required to address emerging novel communication techniques with 1) poorly documented technical and operational characteristics; 2) ubiquitous deployment in a broad range of electronic devices; and 3) deployment in large-scale, overlapping networks.

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MSV and the Council therefore urge the Commission to adopt in the referenced proceedings the OOBE limits set out in the attached document and as described above.

Please direct any questions regarding this matter to the undersigned.

Respectfully submitted,

MOBILE SATELLITE VENTURES L.P.

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A More Restrictive Emission Limit in GPS Band Is Appropriate for ATC Operations

- Current MSS emission limit (-70 dBW/MHz) was derived to protect aviation GPS from satellite-based services
  - 100 feet separation, -10 dB GPS antenna gain towards emitter, resulting in 76.1 dB emission attenuation
- There is likely to be a greater density of users operating in the ATC mode than in the satellite mode
- Users operating in the ATC mode are more likely to be in close proximity to terrestrial GPS users
  - Indoor users include FCC mandated E-911 terminals
  - At 2 meters, attenuation is only 42.4 dB
    - -70 dBW/MHz results in interference that is 29 dB above the thermal noise floor

MSV Emission Limits

- For Base Stations
  - Use filtering to achieve -100 dBW/MHz, or lower
  - Achievable with larger envelope filters
- For Terminals
  - Use filtering to achieve -90 dBW/MHz, or lower, in short-term
  - Migrate to -95 dBW/MHz, or lower, for new terminals in 5 years (from the date MSV service is operational)
  - Either limit is still above thermal noise at 2 meters
- All limits are applicable from 1559 MHz to 1605 MHz to protect modern GPS receiver multipath mitigation technology

Agreement on the Out-of-Band Emissions Limits

Mobile Satellite Ventures L.P.

The U.S. GPS Industry Council

17 July 2002