December 23, 2010

U.S. GPS Industry Council Issue Paper

Issue: The Federal Communications Commission (FCC) appears to be moving expeditiously (letter filed by applicant Nov 18; FCC public notice Nov 19 with an abbreviated period for public comment) on a LightSquared letter seeking modification of its operating license to effectively reallocate the radiofrequency L- band from space-service use, *i.e.*, mobile-satellite service (MSS) with an ancillary terrestrial component to a primary terrestrial wireless broadband service adjacent to space-based Global Positioning System (GPS) operations in the L-band. This proposed reallocation of adjacent band use is a radical change in the spectrum environment for GPS. If granted as filed, this application has the strong potential to cause harmful interference to GPS users by adversely affecting the reception of GPS signals in urban areas where this FCC applicant proposes to operate its newly proposed high-capacity, densely populated strong signal terrestrial transmitters.

Action: Please participate in the coalition by signing the attached letter(s) to:

1) **the FCC to request the Commission to consider this application for reallocation of L-band spectrum use from space (MSS) to terrestrial (wireless network) under a Notice of Proposed Rule-Making (NPRM) to allow for the development of a robust public record and adequate interference analysis to protect the GPS installed user base and**
2) **the Federal agencies to request that they ask the National Telecommunications Information Administration (NTIA), Co-regulator of the radiofrequency bands allocated to GPS use, to conduct a study of the potential interference to the broad installed GPS user base in the public and private sector from the newly proposed reallocation of adjacent band spectrum to terrestrial wireless operations.**

Reference: LightSquared application request for Modification of its Authority for Ancillary Terrestrial Component (ATC) [FCC File No. SAT-MOD-20101118-00239]

Background: In 2002, the FCC authorized Ancillary Terrestrial Component (ATC) base stations, on a secondary basis, to the radiofrequency bands allocated to primary space-based MSS operations in the L-band (1525-1559 MHz and at 1626.50-1660.50 MHz). These MSS operations bracket the GPS L1 signal operating in the L-band at 1559-1610 MHz. In 2002, a single operator of both MSS and ATC, Mobile Satellite Ventures (MSV) planned to operate its ATC as a gap filler augmenting its MSS service in urban areas. MSV planned to offer integrated handsets (MSS/ATC) exclusively. Out-of-band emissions (OOBE) to protect GPS use were developed based on these operating conditions. Last month, LightSquared (successor to MSV), submitted a letter to the FCC reporting on its evolved business plan and reinterpretation of its integrated MSS/ATC service to operate a high-capacity, densely populated terrestrial wireless service deploying strong signal, high power transmitters in select urban areas. It intends to be a wholesale provider of network capacity to retailers who will take an integrated MSS/ATC service, but who can choose to sell terrestrial only handsets to end users. This FCC applicant effectively is seeking a primary spectrum allocation for its terrestrial service that results in a reallocation of spectrum use and the opposite of the originally proposed MSS/ATC operations in 2002. *Reallocation of spectrum use from space to terrestrial introduces a significant interference problem for adjacent band GPS operations*. Additional mitigation measures need to be taken to protect adjacent GPS operations. Adequate technical interference analysis needs to be undertaken by NTIA similar to the NTIA study for Ultrawideband (UWB) in 2001.

Your timely action is needed to urge the FCC not to grant the application, as filed, until the necessary interference analysis has been conducted. Questions can be directed to either Mike Swiek, Executive Director, U. S. GPS Industry Council (mswiek@mike-intl.com; (202) 416-6282) or Raul Rodriguez, Legal Counsel, U.S. GPS Industry Council (rrodriguez@lermansenter.com; (305) 456-7378).