

# FAA: LightSquared Not Compatible With Aviation



The Federal Aviation Administration (FAA, USA) has assessed the impacts of LightSquared's planned deployment on FAA infrastructure and the aviation community. A paper addresses specific questions asked by the PNT NCO. Conclusions are that LightSquared's initial operations at the lower

10MHz channel even at 'reduced' power levels would impact the aviation use of high-precision GPS receivers and that the FAA would be compelled to return to dependency on ground-based navigation aids, making billions of dollars in existing FAA and GPS user investments a loss.

LightSquared's proposal of 30<sup>th</sup> June 2011 includes: use the lower 10MHz channel starting in 2012; operate at "reduced" power; and agree to a "standstill" in terrestrial use of the upper 10MHz channel. LightSquared would begin full use of both bands in 2014.

All aircraft operation in the US would be needed to be retrofitted with equipment facilitating the new situation. The FAA estimates it would take ten years to design, develop, certify and install modified equipment in the civil aviation fleet. The report estimates that the the FAA would also need to replan Next Generation Air Transportation System(NextGen) investments, which would result in additional development costs and delays. The LightSquared proposal would severely impact NextGen, which relies heavily on GPS-based technologies. In the next ten years, it would result in an estimated impact to the aviation community of at least USD70 billion and an additional 30 million tons of CO2 for loss of benefits from delayed NextGen technologies and procedures; loss of existing GPS efficiency benefits; loss of existing GPS safety benefits and aircraft retrofit costs.

The FAA raises a final consideration: the expected international impact of the proposal. This proposal could adversely affect US international leadership in aviation. Air carriers and other users could lose confidence in GPS, despite Presidential commitments to the International Civil Aviation Organization on its continued safety and availability. The international market for US satellite navigation technology could be damaged. Demand for non-US systems such as Russia's GLONASS in lieu of GPS, could be stimulated.