

**STATEMENT OF ED BOLEN**  
**PRESIDENT AND CEO**  
**NATIONAL BUSINESS AVIATION ASSOCIATION**

**JOINT HEARING**

**SUBCOMMITTEE ON AVIATION**

**SUBCOMMITTEE ON COAST GUARD  
AND MARITIME TRANSPORTATION**

**COMMITTEE ON TRANSPORTATION AND  
INFRASTRUCTURE**

**U.S. HOUSE OF REPRESENTATIVES**

**JUNE 23, 2011**

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**President and CEO**  
**National Business Aviation Association**

On behalf of the over 8,000 members of the National Business Aviation Association, I would like to commend the leaders and members of the House Aviation Subcommittee and the Coast Guard and Maritime Transportation Subcommittee for holding this important joint hearing on "GPS Reliability: A Review of Aviation Industry Performance, Safety Issues, and Avoiding Potential New and Costly Government Burdens."

First, we would like to acknowledge and thank Aviation subcommittee Chairman Petri and Ranking Member Costello for joining with over 60 Members of the House of Representatives in sending a letter to the Chairman of the Federal Communications Commission (FCC) expressing concerns about the possible interferences from the proposed LightSquared system on the Global Positioning System (GPS) frequencies. In addition, thirty-three Senators signed a similar letter to the FCC expressing their respective concerns on this issue.

General aviation operators were early adopters of Global Positioning Satellite (GPS) technologies. Prior to GPS availability aircraft operators were limited to navigation either by map reference--when the visibility was good enough--or, point- to-point electronic navigation using World War II ground-based navigation aids. These en route navigation aids (NAVAID), (non-directional radio beacons [NDBs], Very High Frequency Omni Directional Radio Ranges [VORs] and Distance Measuring Equipment [DMEs] and others) resulted in indirect air navigation routing. This early rudimentary system provided a high level of dependable but inefficient flight, with greater fuel burn and more time en route because aircraft had to pass over the same geological point in space above a NAVAID location.

GPS is now one of several international satellite-based navigation systems, either operating or in the process of implementation. They are known collectively and generically as Global Navigation Satellite Systems (GNSS).

When the GPS became available for civil use in the 1980s it was almost immediately recognized by the general aviation community as providing higher levels of safety, precision and efficiency. With time, the sophistication of on-board equipment evolved and provided even more accurate positioning. The technology allowed instrument approaches that were user friendly, and the adoption of GPS became more universal. Today, more than 60% of the 11,000 business aircraft operating in the US are equipped with various GPS capabilities required for instrument approaches at over 5000 airports in the US. Even more have en route GPS capability.

Following action earlier this year by the FCC to issue a waiver to LightSquared to permit the re-purposing of radio spectrum to deploy its wireless broadband initiative, NBAA joined with a diverse group of over 200 concerned parties to urge the FCC to carefully review and monitor progress on this issue to insure that there would be no adverse impact on current GPS users. This advocacy group includes local, state and federal agencies (including the Department of Defense, Department of Homeland Security, and Department of Transportation); first responders, agricultural users as well as members of the general public concerned about the potential impact on their auto and personal communication devices.

For more than three decades, the GPS, as administered by the U.S. Department of Defense (DOD), has been integral part of our nation's infrastructure. We have been carefully monitoring the field testing of the LightSquared system and initial results do indicate the potential for interference with the satellite transmissions to hundreds of millions of GPS receivers.

These concerns are highlighted in the FY2012 House Agriculture Appropriations legislation. The current bill expresses concern about the potential impact of the LightSquared technology on the GPS used by agricultural interests. It calls on the Department of Agriculture to collaborate with the Defense and Transportation Departments to further address the possible national impact on GPS usage.

In addition, both the House and Senate FY2012 Defense Authorization bills include language regarding potential GPS interference. Last week, the Senate Armed Services Committee included a provision directing the

Secretary of Defense "to review and access the ability of national security Global Position Systems (GPS) receivers to receive GPS signals without interruption or interference over the next 2 years."

We greatly appreciate these strong Congressional expressions of interest and concern about the safety and efficiency of the GPS network and the potential impacts of LightSquared on the nation's GPS safety and security infrastructure.

This concern extends beyond the U.S. The global aviation community has strong concerns over the potential impact on GPS signals from LightSquared. In a June 13 letter to U.S. officials, the International Civil Aviation Organization (ICAO) expressed the group's "grave concern" over the conditional waiver provided by the Federal Communications Commission to wireless provider LightSquared. ICAO went on to state that, "ongoing aviation developments, such as those being undertaken in the framework of United States NextGen programme and the European SESAR programme, will place even more emphasis on the central role of GPS and other satellite navigation systems in aviation operations."

Concerned about potential impact on aviation safety, the Federal Aviation Administration (FAA) recently warned pilots of possible GPS anomalies in areas where LightSquared testing is occurring and requested that any such events be reported directly to the FAA. In fact, a sub-group of the Radio Technical Commission for Aeronautics (RTCA)--the primary federal advisory panel on navigation and air-traffic management policy--recently issued a preliminary study finding that the LightSquared system is incompatible with GPS.

There are also initial indications that it could pose system integrity problems for the ongoing FAA deployment of the Automatic Dependent Surveillance-Broadcast (ADS-B) which serves as the foundation for the satellite-based Next Generation Air Transportation System. These obviously are concerns of vital importance to the safety and security of our national air transportation system, and we commend the Transportation and Infrastructure Committee for exercising the necessary Congressional oversight to address these concerns.

As previously noted, the general aviation community has historically been a leader in new navigation and communication technology. Obviously, the introduction of such technology enhancements has the potential to provide welcome and needed benefits to the public. Our members are not opposed to the development and deployment of new or improved technology systems like LightSquared—as long as it is conclusively proven that it WILL NOT result in radio interference with GPS systems or pose any threat to the global aviation transportation system.

We appreciate the opportunity to share these observations and concerns with both subcommittees. Again, our members thank you for holding this important hearing to examine this possible threat to the global GPS system. We look forward to working with you to preserve the integrity of our national GPS infrastructure.

Thank you.