

**STATEMENT FOR THE RECORD**

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**BEFORE THE**

**COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE**

**SUBCOMMITTEE ON AVIATION**

**SUBCOMMITTEE ON COAST GUARD AND MARITIME**

**TRANSPORTATION**

**ON**

**GPS RELIABILITY: A REVIEW OF AVIATION INDUSTRY  
PERFORMANCE, SAFETY ISSUES, AND AVOIDING POTENTIAL NEW  
AND COSTLY GOVERNMENT BURDENS**

**June 23, 2011**

Good morning Mr. Chairmen and distinguished Subcommittee members. Thank you for the opportunity to testify before the Subcommittees on Aviation and on Coast Guard and Maritime Transportation regarding the vital importance of the Global Positioning System (GPS) to U.S. national defense capabilities. My name is Teri Takai and I am the Acting Assistant Secretary of Defense for Networks and Information Integration (ASD(NII)) and the Department's Chief Information Officer (CIO).

My testimony today will focus on the importance of GPS reliability to the Department of Defense (DoD) in ensuring that our warfighters and mission partners have the critical capabilities they need and which only GPS can effectively deliver.

**Importance of GPS:**

GPS is vital to national security and is relied upon by our service-men and –women for a wide array of capabilities. Simply put, GPS is integrated into almost every aspect of U.S. military operations. To provide but a few examples, GPS signals are used to ensure the accuracy of precision-guided munitions, to guide troop movements, to synchronize communications networks, to enable battle-space situational awareness and to conduct search and rescue operations.

I want to assure the Subcommittee that DoD takes its stewardship role for GPS very seriously. We do so for the sake of our soldiers, sailors, marines, and airmen who use the system daily and rely upon its essential military capabilities for our national defense and preparedness. We know also that the civil and commercial sectors have long

embraced GPS for its public safety capacities and economic advantages. Consequently, we have developed a partnership with the civil and commercial sectors where we share our GPS knowledge and expertise, as much as possible. DoD continues to upgrade GPS to deliver a more robust signal, with increased accuracy and greater integrity.

### **Importance of Radiofrequency Spectrum to the Department of Defense**

Spectrum access is critical to DoD not only for GPS operations, but for all U.S. military operations. DoD uses spectrum for command and control, communications, computing, and intelligence (C4I), surveillance, target acquisition, and reconnaissance on land, sea, undersea, airborne and in space. Military spectrum requirements are diverse and complex given the variety of different missions the Department must support around the world. In theater, our warfighters often require a rapidly deployed, but fully-formed mobile C4I infrastructure to provide secure communications and support combat operations in austere environments, for very large numbers of users, and over extended distances. DoD spectrum access requirements are global and must be interoperable with U.S. military allies. Each of these factors are driving DoD spectrum requirements to increase much in the same way as consumer mobile broadband demand, but with a much different mission to support war-time operational requirements, to include GPS.

### **GPS Considerations regarding the proposed LightSquared broadband service**

Prior to the January 26, 2011 Federal Communications Commission (FCC) order that granted LightSquared a conditional waiver for its terrestrial network, the National Telecommunications and Information Administration (NTIA) Administrator in a letter

to the FCC Chairman on January 12, 2011, and the Deputy Secretary of Defense in a similar letter on that same date, raised concerns regarding the potential interference effects to GPS presented by the LightSquared terrestrial only service. To that end, the Deputy Secretary strongly recommended deferral of final action on this ruling until the proper interference analysis and mitigation studies could be conducted based on the new business model. However, the FCC granted LightSquared a conditional waiver with the direction that LightSquared & U.S. GPS Industry Council would establish a Working Group to study the potential interference to GPS. The LightSquared Working Group study was required to be filed with the FCC by June 15, 2011. LightSquared has since been granted a two-week extension to file the results of this study.

Additionally, U.S. Air Force Space Command and the National Positioning, Navigation & Timing (PNT) Engineering Forum (NPEF), independently conducted both laboratory and operational testing at White Sands Missile Range in April 2011. The report of those test results was submitted to our spectrum regulator for federal agencies, NTIA, on June 15, 2011. The test data and results collected over the last four months via a series of laboratory and field environment testing of a sampling of both military and civilian GPS receivers indicates the proposed LightSquared terrestrial operations will cause harmful interference to GPS operations

The potential for interference to GPS from the proposed LightSquared terrestrial network exemplifies the technical, policy and regulatory challenges in repurposing

long-standing spectrum allocations to facilitate new broadband services. DoD is currently working with the FCC, NTIA and industry to resolve this issue.

## **Summary**

In general, the Department is continuing to work with NTIA on behalf of the Administration and with other Administration Partners, as well as with the Congress to address long-term solutions regarding a balance between Federal spectrum requirements and the expanding demand for mobile broadband services. DoD will remain an active participant in the process to find appropriate solutions for LightSquared without undue interference to GPS receivers, or other military spectrum requirements. However, the ability of GPS to operate without harmful interference remains of paramount importance to the Department. The Department will continue to support the FCC proceedings on this matter and will respond in earnest to further guidance from FCC and NTIA after their review of the findings from the LightSquared Working Group and the interagency reports.

I want to thank you for your interest in our efforts and I would be pleased to answer any questions you may have.