

**Institute of Navigation
DC Section Meeting Summary
Wednesday, July 22, 2015
1800 to 2145
Location: U.S. Naval Observatory
3450 Massachusetts Ave, NW,
Washington, DC 20392-5420**

Summary: The first meeting of the revitalized DC Section of the Institute of Navigation was held at the U.S. Naval Observatory (USNO) on the evening of July 22, 2015. In attendance were 80+ current and past ION members and their guests. The evening's event consisted of a social hour (1800-1900), a program which was titled "Keeping and Sharing Time, Policy and Demonstrations" (1900 -2030) and a tour of the USNO facility including the Master Clock Building, 26 inch telescope, Library and 12 inch telescope (where Saturn was observable). Section Chairman and acting Treasurer, Doug Taggart, was the master of ceremonies for the program and introduction of the speakers. The section secretary Ron Beard was also in attendance.

Program Highlights: The program was entitled "Keeping and Sharing Time, Policy and Demonstrations", and included the following speakers. Their remarks and topics are summarized below:

- CAPT Brian D. Connon - Superintendent USNO – Provided a welcome presented a very interesting summary of the USNO's history and overview of their current mission and capabilities.
- Ms. Sarah Mahmood – Department of Homeland Security (DHS) Science & Technology Program Manager – Spoke on DHS awareness and educational activities concerning U.S. critical infrastructure sector dependencies on the precise time disseminated by GPS which has become the primary source of this critical capability. This dependence then increases the importance of considering a complementary means to mitigate the vulnerabilities of dependence upon a single source for this critical information and its possible disruption.
- Dr. Ron Bruno – Chief Engineer, Exelis Corp – Addressed the criticality of precise timing requirements in the FAA's Automatic Dependent Surveillance-Broadcast (ADS-B) network. The needs of this sector are increasing in accuracy and availability.
- Mr. Charles Schue - UrsaNav, President & CEO – Spoke about the capabilities of eLoran timing. He demonstrated equipment providing real-time data that was being received from a dual antennas arrangement both indoors and outdoors at USNO from an actual on-air eLoran signal being transmitted from a Coast Guard test facility in Wildwood, New Jersey. The Wildwood site is part of a recently DHS approved Cooperative Research and Development Agreement (CRADA) involving Harris and UrsaNav.
- Congressman John Garamendi – **Key Note Speaker** - California's 3rd Congressional District, House Armed Services and Transportation & Infrastructure committees. Congressman Garamendi spoke on the criticality of the capabilities provided by GPS and in particular its time dissemination aspects. GPS's unique capabilities have become so incorporated into virtually every aspect of the National infrastructure that our dependence upon the services it provides is becoming critical. In answer to the situation he described H.R. 1678, the National Positioning,

Navigation, and Timing (PNT) Resilience and Security Act of 2015 which he introduced on March 26, 2015. H.R. 1678 proposes that, "the Secretary of Defense, in consultation with the Commandant of the Coast Guard and the Secretary of Transportation, shall provide for the establishment, sustainment, and operation of a reliable land-based positioning, navigation, and timing system to provide a complement to and backup for GPS to ensure the availability of uncorrupted or non-degraded positioning, navigation, and timing signals for military and civilian users if GPS signals are corrupted, degraded, unreliable, or otherwise unavailable. There was some discussion following the talk about the probabilities of action being undertaken during the current Congressional environment.

- Mr. Ed Powers – Division Chief, GPS & Time Transfer – The USNO host for the evening organized three simultaneous, rotating USNO tours to the Master Clock Building, 26 Inch Telescope, USNO Library and 12 inch telescope which provided a good view of Saturn. Most of the attendees remained for the tours and enjoyed a delightful evening with good “seeing” through the telescopes.

Some pictures from the meeting are included below.



Doug Taggart (at podium) kicking off the meeting



**CAPT Connon
USNO**



**Charles Schue
CEO UrsaNav**



**Sarah Mahmood
DHS S&T**



**Saturn through the 12
inch telescope**



Congressman Garamendi



Rubidium Fountain Clock

The next meeting of the DC Section will be held in October (date TBD) at the U.S. Coast Guard's Navigation Center (NAVCEN) located on Telegraph Road in Alexandria, VA.

Submitted by

Ron Beard
DC Section Secretary