Air and Space Features WAAS Experts

On September 25, 2013, the Time and Navigation exhibit at the National Air and Space Museum on the National Mall in Washington, DC featured experts on the Wide Area Augmentation System (WAAS) to answer questions about the benefits of WAAS and explain the workings of satellite navigation. WAAS, which increases the accuracy and integrity of GPS positioning signals, is observing its Tenth Anniversary this year. The service became operational on July 10, 2003.

Roger Connor, Aviation Curator for the Time and Navigation Exhibit, demonstrated some cockpit navigation equipment at the exhibit's entrance, next to a monitor showing The WAAS Experience, a video about the benefits of WAAS as described by users of the system.

Todd Walter, Ph.D., a senior research engineer in the Department of Aeronautics and Astronautics at Stanford University, and Per Enge, Professor, also in Department of Aeronautics & Astronautics at Stanford, were on hand to describe the various applications of WAAS. While originally conceived as a way to ensure reliable positioning data for aviation, WAAS has found many additional applications in agriculture, surveying, mining, maritime shipping, and everyday recreational activities such as hiking. Todd and Per each explained how WAAS is utilized by these diverse industries and groups to improve performance.

Bill Wanner, Navigation System Verification & Monitoring Branch Manager at the William J. Hughes Technical Center of the Federal Aviation Administration (FAA), manned another information station. He explained the revolutionary nature of WAAS technology and how its ground-based installations interact with geostationary satellites to make it all happen.

Eric Young, a pilot with Pegasus Flight Operations, University of Virginia Medical Center, Air Methods, was also on hand to explain how new WAAS approaches to sites in the Charlottesville, Virginia area will provide quicker HEMS response and enable more missions to be completed in overcast weather and mountainous terrain. Pegasus is a hospital-based air and ground transport service providing care to critically ill or injured patients. Mike Webb of the FAA's Flight Standards group, working with Helicopter Instrument Criteria, was with Eric to talk about the nature of helicopter approaches and the FAA's plans to increase their number.

Tom Kramer, Manager of Airspace and Modernization for the Aircraft Owners and Pilots Association (AOPA), and Luz Beattie, one of AOPA's corporate pilots talked about how WAAS has been enthusiastically embraced by General Aviation (GA) pilots who often utilize small airfields that do not have expensive Instrument Landing System (ILS) installations to guide approaching planes.

Visitors included many FAA personnel who walked over to the museum during their lunch break to find out more about this highly beneficial and cost-effective service provided by their agency. Further information about the Time and Space Exhibit can be found at the following web address: https://timeandnavigation.si.edu/research/waas-meet-the-expert-educational-event