

APEC GNSS Implementation Team

September 17, 2012

APEC GNSS Implementation Team (GIT)



- APEC GIT established in 2002; Currently Co-Chaired By U.S. and Thailand
- Promotes implementation of regional GNSS augmentation systems to enhance inter-modal transportation and recommend actions to be considered in the Asia Pacific Region
- Reports to Transportation Working Group (TPT-WG) through the ITS and Inter-modal Experts Group (IEEG)
- Adopted a 2010-2015 GNSS Strategy designed to promote adoption of GNSS technologies throughout the Asia Pacific region, especially with regard to transportation

GPS is Critical to Major Transportation Initiatives



Aviation – NextGen

- Reliable and accurate positioning worldwide
- Reduced delays
- More fuel-efficient routes
- Increased system capacity with enhanced safety



Rail – Positive Train Control

- Reduced probability of collisions
- Increased efficiency and capacity
- Rapid rail structure and conditioning mapping



Crossmodal – ITS

- Enable crash prevention among vehicles and between vehicles and infrastructure
- Increased mobility and reduced environmental impact



- Efficient ocean traffic routing
- Rapid emergency response and search operations
- Precision buoy positioning
- Efficient dredging

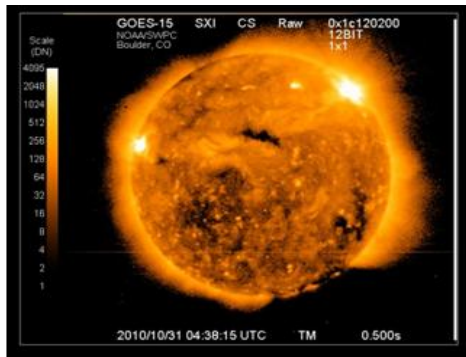
Maritime



U.S. Department of Transportation
Research and Innovative Technology Administration

GPS/GNSS Challenged Environments

Ionospheric Disturbances



Underground/Indoors



Dense Canopy



Urban Environment



Inaccurate/Out-of-Date Maps



Electromagnetic Disturbances



APEC GIT Terms of Reference

- **TERMS OF REFERENCE:**

- Facilitate GNSS applications to support seamless intermodal transportation to enhance safety, security, and sustainability.
- Identify actions to facilitate and collaborate on implementation of GNSS applications for transportation in the APEC region, complementing the work of international organizations.
- Provide a public/industry forum to address GNSS technologies related to transportation issues that will benefit the APEC region.

APEC GIT Projects/Activities

PROGRESS OF THE PROJECTS/ACTIVITIES

Performance-Based Navigation Regulatory Review and Evaluation Program (PBNRREVP) – United States

Malaysia and the Philippines will be the 1st and the 2nd economies to have site visits, respectively.

Regional RAIM Prediction System – Thailand

Regional RAIM Prediction System to support ABAS. Initial operation is expected to start by the end of 2012.

APEC GIT Projects/Activities (cont.)

PROGRESS OF THE PROJECTS/ACTIVITIES (cont.)

Joint Multi-GNSS Demonstration for the applications on transportation field in the Asia-Pacific region - Japan

To promote the demonstration campaign activities, Multi-GNSS Asia (MGA) was established. JAXA, Japan is seeking a possibility for a joint demonstration project between the MGA and the APEC GIT.

APEC GIT website (www.apecgit.org)

- Republic of Korea
 - The website design and functionality are updated.
 - All presentations and previous project outcomes are now downloadable from the web site.

Summary

- The APEC forum provides an excellent opportunity to interact with Asia Pacific economies on GNSS
 - Identify areas where greater GNSS interoperability and compatibility could enhance multi-modal transportation applications
 - Increase energy efficiency
 - Reduce congestion
 - Improve infrastructure development

- Most recent meeting held in conjunction with the APEC Transportation Working Group (TPTWG) in St. Petersburg, Russia