



Global Positioning System Status

**ICG WG-A Meeting
Olsztyn, Poland**

23-27 July 2012

**Lt Col Devin O'Dowd
Chief, GPS Plans and Architectures Branch
Global Positioning Systems Directorate**



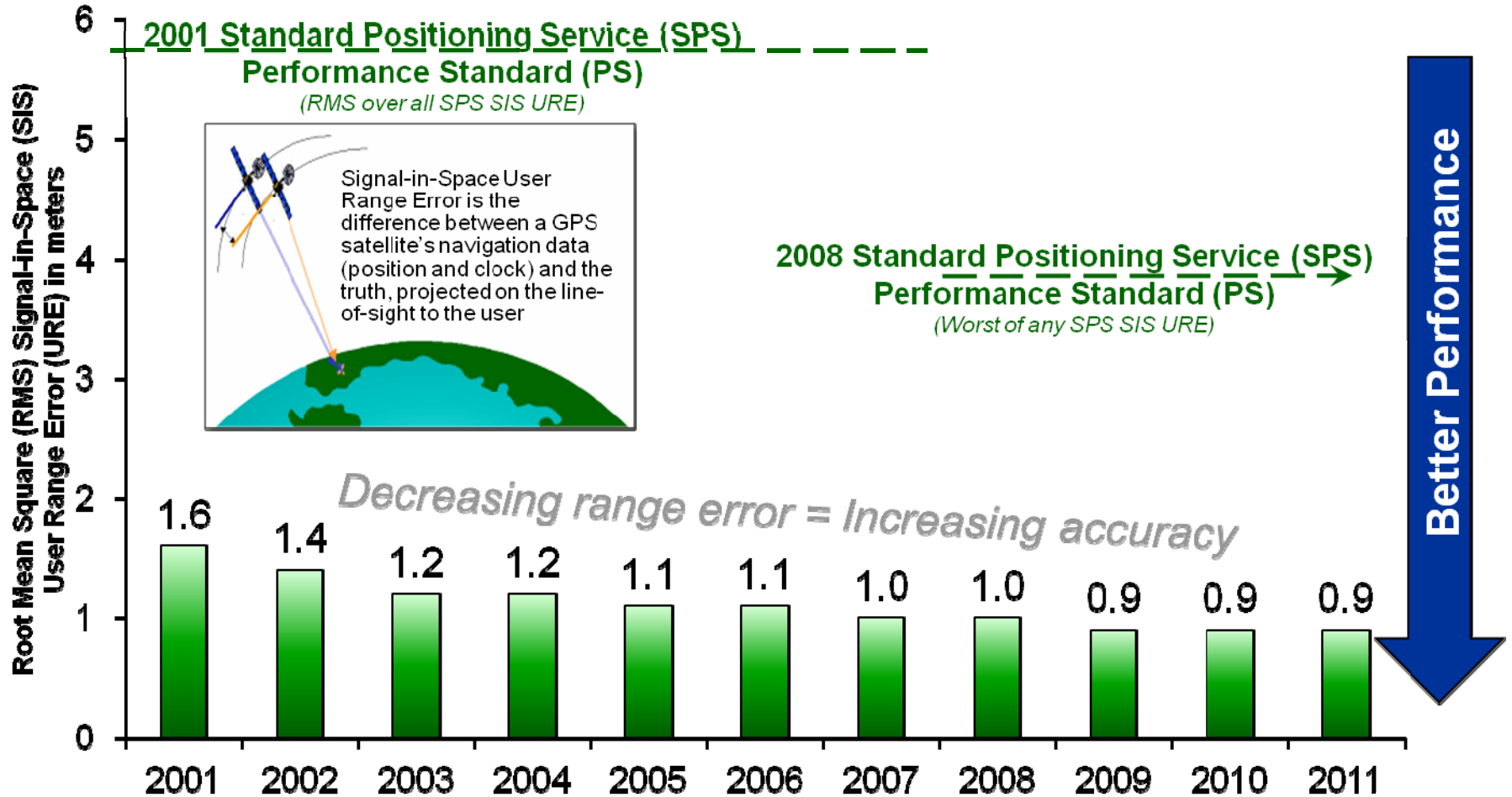
GPS Constellation

- **Very robust constellation**
 - 31 space vehicles (SVs) currently in operation
 - 10 GPS IIA
 - 12 GPS IIR
 - 7 GPS IIR-M
 - 2 GPS IIF
 - 3 additional satellites in residual status
- **Next GPS IIF Launch scheduled for Oct 2012**





Standard Positioning Service (SPS) Signal in Space Performance





GPS Modernization Program



Increasing System Capabilities ♦ Increasing User Benefit

Block IIA/IIR

Basic GPS

- Standard Service
 - Single frequency (L1)
 - Coarse acquisition (C/A) code navigation
- Precise Service
 - Y-Code (L1Y & L2Y)
 - Y-Code navigation

Block IIR-M, IIF

IIR-M: IIA/IIR capabilities plus

- 2nd civil signal (L2C)
- M-Code (L1M & L2M)

IIF: IIR-M capability plus

- 3rd civil signal (L5)
- 2 Rb + 1 Cs Clocks
- 12 year design life

Block III

- Backward compatibility
- 4th civil signal (L1C)
- 4x better User Range Error than IIF
- Increased availability
- Increased integrity
- 15 year design life



Public Interface Specifications

- **Next public Interface Control Working Group**
 - 5-6 Sep 2012 in El Segundo, CA
- **Current versions of the public GPS Signal-in-Space (SIS) and user support Interface Specifications:**
 - IS-GPS-200 – L1 (P(Y) , C/A), L2 (P(Y), L2C)
 - IS-GPS-705 – L5
 - IS-GPS-800 – L1C
 - IS-GPS-870 – OCX Data Transfer
- **These and other key IS/ICD documents available at:**
 - <http://www.navcen.uscg.gov/index.php?pageName=gpsReferenceInfo/>
 - <http://www.gps.gov/technical/icwg/>



Summary

- GPS has continuously met its commitments to all users
- Modernization of all GPS Segments is on track
- Striving to continually improve navigation and timing services while maintaining backward compatibility with legacy equipment
- GPS is committed to open and transparent cooperation with the international GNSS community

The screenshot shows the GPS.gov website with a navigation menu including HOME, WHAT'S NEW, SYSTEMS, APPLICATIONS, POLICY & FUNDING, MULTIMEDIA, and SUPPORT. A search bar is located in the top right corner. The main content area features a large banner with the text "Bienvenidos Welcome أهلا وسهلا 歡迎光臨 Bienvenue" and an illustration of people holding hands around a globe. Below the banner, there is a section for "Multilingual Content" with links for Spanish, French, Chinese, and Arabic. To the right, there is a section for "GPS Cooperation with Other Nations" listing countries like Australia, China, Europe, India, Japan, Russia, and the International Committee on GNSS. At the bottom, there is a section for "International GPS User Support" with a logo for the U.S. Coast Guard Navigation Center (NAVCEN) and text explaining its role in providing support to international users.

Maintaining And Improving GPS Services For All Users Is Job #1

GLOBAL POSITIONING SYSTEMS DIRECTORATE

Questions?

