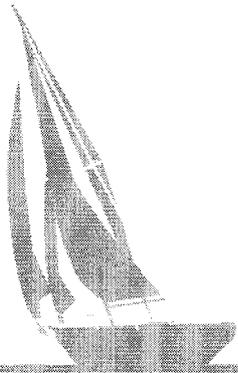




U.S. FEDERAL RADIONAVIGATION PLAN (FRP)

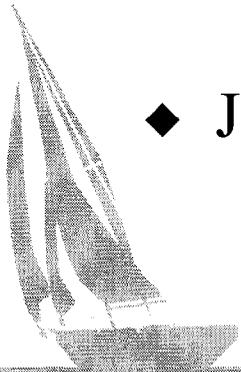
U.S. DEPARTMENT OF TRANSPORTION
Washington, D.C.





FEDERAL RADIONAVIGATION PLAN

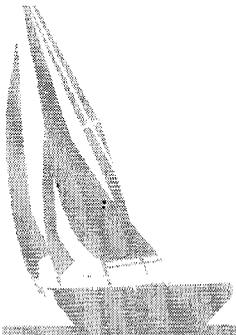
- ◆ Official U.S. Operating Plans and Policies for All Common-Use (Military and Civil) Radionavigation Systems
- ◆ Mandated by the INMARSAT ACT of 1978
- ◆ Jointly Published by DOT and DOD Biennially





WHAT'S IN THE FRP?

- ◆ Current Federal Government Roles and Responsibilities
- ◆ Policies and Operating Plans
- ◆ System User Requirements
- ◆ Research and Development Plans
- ◆ Technical System Descriptions

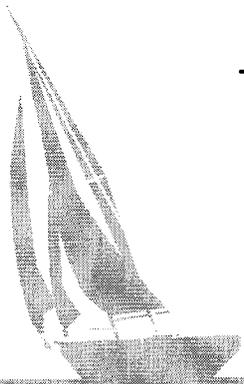




SYSTEMS POLICY - 1996 FRP

- ◆ GPS: Two Levels of Service
 - SPS: Available Worldwide Free of Direct User Charge
 - PPS: Available Only to Authorized Users

- ◆ GPS: Second Civil Frequency Planning
 - DOD/DOT to develop implementation plan
 - DOD not to interfere with civil use of the L2 Carrier Phase signal





SYSTEMS POLICY - 7996 FRP

◆ Augmentations to GPS:

– *Maritime DGPS:*

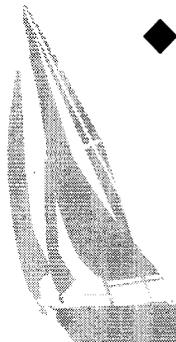
- IOC Declared January 30, 1996

– *Aeronautical Augmentations (WAAS/LAAS):*

- GPS WAAS Cat 1: IOC 1999, FOC 2001
- GPS LAAS CAT II/III: Available by 2005

◆ Precision Landing Svstems

- ILS CAT I: Phaseout Start 2005, Complete 2010
- ILS CAT II/III: Phaseout Start 2005, Complete 2010
- MLS CAT I: Phaseout Start 2005, Complete 2010





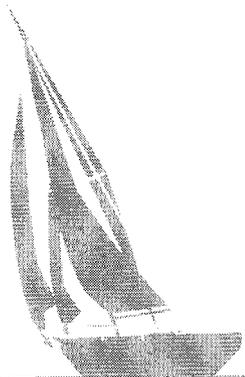
SYSTEMS POLICY- 1996 FRP

- ◆ Loran-C

- Plan to Terminate on December 31, 2000
- Loran-C Report

- ◆ Omega

- System Will Terminate on September 30, 1997





AUGMENTATIONS TO GPS

The 1996 FRP states that “When augmented to satisfy civil requirements for accuracy, coverage, availability, and integrity, GPS will be the primary Federally-provided radionavigation system for the foreseeable future.”





SYSTEMS POLICY- 1996 FRP

- ◆ **VOR/DME**
 - Phaseout: Start in 2005, Completion in 2010
- ◆ **Marine Radiobeacons**
 - Non-DGPS Marine Radiobeacons Expected to Be Phased Out by 2000
- ◆ **Aeronautical Nondirectional Beacons**
 - Phaseout: Start in 2000, Rapidly Completed After 2005
- ◆ **TACAN**
 - Target Date to Begin Phaseout is 2005.
- ◆ **Transit**
 - Ceased Operation as a Positioning and Timing System on December 31, 1996





USER CONFERENCES

- ◆ Two Conferences held -- January 20 in Long Beach, CA and February 11 in Washington, D.C.
- ◆ Approximately 100 attendees at each conference
- ◆ User concerns included:
 - Reliance on GPS and its augmentations as sole means because of vulnerability to interference and jamming.
 - Spectrum allocation -- especially close call at WRC 97 regarding L1 bandwidth and MSS proposal.
 - Organization of user meetings and participation in FRP process.

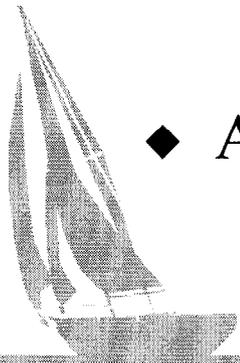




AVAILABILITY OF 1996 FRP

- ◆ Free copies available from:

Volpe National Transportation System Center
Kendall Square
Cambridge, MA. 02142
Tel: 617-494-2908



- ◆ Also on the Internet at *<http://www.navcen.uscg.mil/frp>*