



***1999 FEDERAL
RADIONAVIGATION
PLAN and
DEVELOPMENT OF
THE 2001 EDITION***

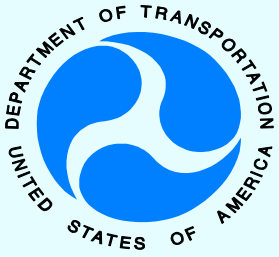
ILA Conference

November 13, 2000

Mr. Heywood Shirer

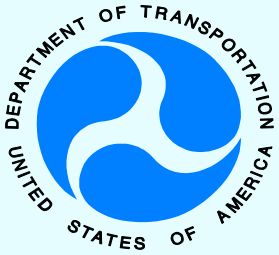
**Office of Radionavigation and
Positioning**

US Department of Transportation



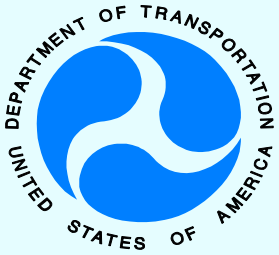
Overview

- **1999 Federal Radionavigation Plan (FRP)**
- **Schedule for 2001 FRP**
- **Structure of 2001 FRP**
- **Systems Policy/Plan in 2001 FRP**



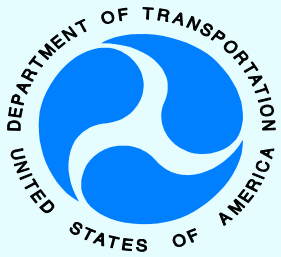
Background

- **The Federal Radionavigation Plan is source for U.S. radionavigation policies & plans**
 - **Common-Use Systems (Military/Civil)**
 - **Mandated by the INMARSAT ACT of 1978**
 - **Recodified in 1998 National Defense Authorization Act**
 - **Jointly Published by DOT and DOD Biennially**
- **1999 FRP Published in February 2000**



1999 FRP

- **GPS - Reiterates U.S. Commitment**
 - **SPS Available Free of Direct Charge**
 - **PPS Available Only to Military & Civil Users Authorized by Department of Defense**
 - **Additional Civil Signals**
 - **2nd C/A coded Civil Signal at 1227.6 MHz (L2)**
 - **3rd Civil Signal at 1176.45 MHz (L5) for Safety-of-Life Applications**



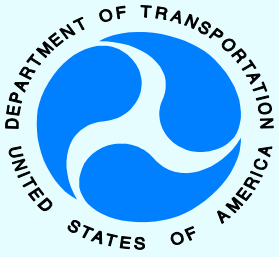
1999 FRP

- **Maritime DGPS**
 - **FOC achieved on March 15, 1999**
- **Nationwide DGPS**
 - **Expanding Maritime DGPS to cover entire U.S.**
 - **Single Coverage in 2002 (IOC)**
 - **Double Coverage in 2003 (FOC)**
- **Aeronautical Augmentations (WAAS/LAAS)**
 - **WAAS: Initial Capability by end of 2000**
 - **LAAS: CAT I Specifications completed**



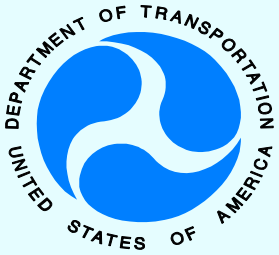
1999 FRP

- **Marine Radiobeacons**
 - **Non-DGPS have been Phased Out**
- **VOR/DME**
 - **Phasedown expected to begin in 2008**
- **TACAN**
 - **Target Date to begin Phasedown is 2008**
- **Aeronautical Nondirectional Beacons (NDBs)**
 - **Stand-alone NDBs to be Phased out after 2008**
 - **Separate transition plan for Alaska**



1999 FRP

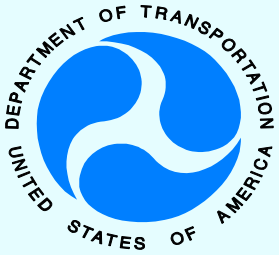
- **Precision Approach Systems**
 - **Instrument Landing System (ILS)**
 - CAT I expected to begin Phasedown in 2008
 - CAT II/III Phasedown not expected before 2015
 - **Microwave Landing System (MLS)**
 - CAT I Phasedown expected to begin in 2008
 - CAT II/III development program canceled



1999 FRP

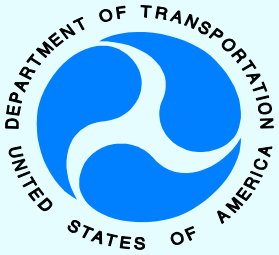
- **Loran-C**

- **Will be operated in the short term**
- **The Administration will continue to evaluate the long-term need for Loran-C**
- **Users will be given reasonable notice if USG concludes that Loran-C is not needed nor cost effective**



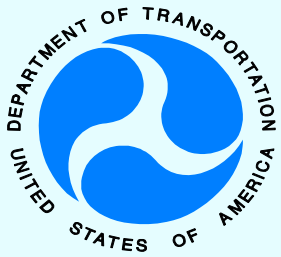
More on Loran-C

- **Received \$25M in FY01 Appropriations to continue maintenance and upgrade**
- **Recapitalization Underway to:**
 - **Replace aging, unsupportable equipment**
 - **Reduce recurring operating expenses**
 - **Increase equipment reliability**
 - **Automate & remove Loran station personnel**
 - **Explore contracting out support infrastructure**
- **C.G. partnering with FAA on projects/studies to improve Loran-C technology.**

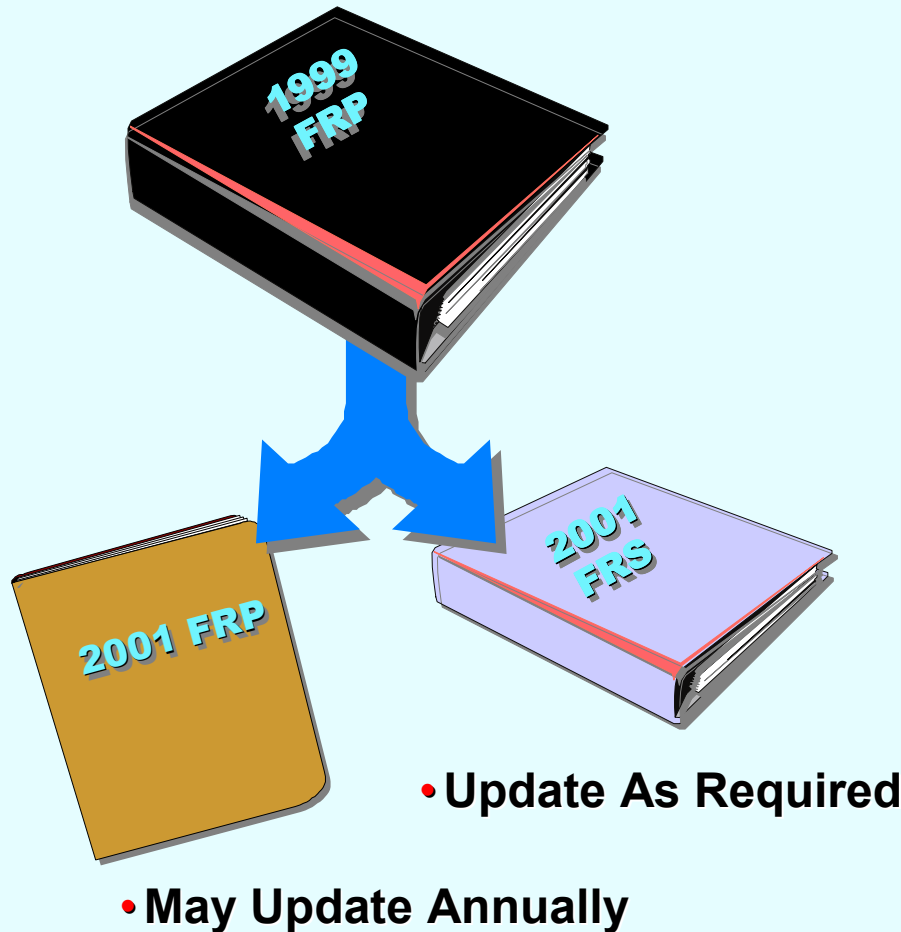


2001 FRP

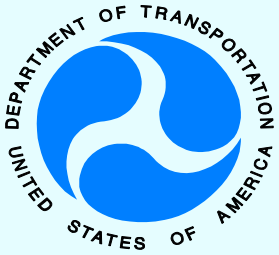
- **User Conferences held in March and June**
- **Began drafting 2001 FRP in April 2000**
- **Will complete draft document in Jan 2001**
- **Begin Formal Clearance in Jan/Feb 2001**
- **SECDOT/SECDEF Signatures by July 2001**
- **Publish 2001 FRP in July/August, 2001**



2001 FRP

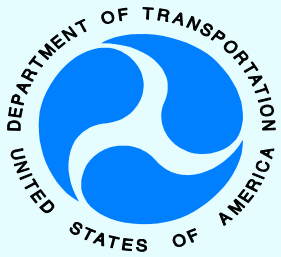


- Convert 1999 FRP into 2 documents
- FRP 2001
 - Focus on Policy and Operating Plans
- FRS (Federal Radionavigation Systems)
 - Descriptive



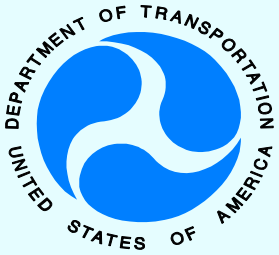
2001 FRP

- **Concise statement of Federal policy**
- **Short enough to permit annual review/update**
 - **Maintain current**
 - **Track any changes in policy**
- **Secretary Signature**



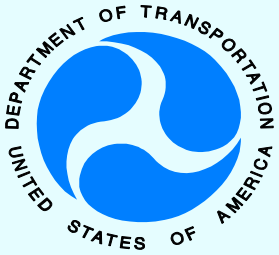
FRS

- **Relatively static**
- **System descriptive material**
- **Describe Federal organizations and processes**
- **Update only as required**
 - **Less often than FRP**
- **Possible Assistant Secretary Signature**



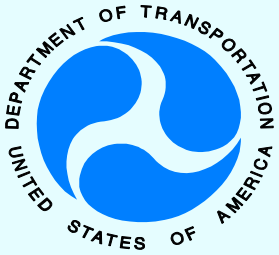
SYSTEMS POLICIES/PLANS IN 2001 FRP

- **New Signal Specifications for SPS (without SA)**
- **First launch of Blk II F satellite may be extended to 2006**
- **Service date for NDGPS FOC may need to be extended to end of 2004**
- **Service date for WAAS extended to end of 2002**
- **Date to begin phase down of VOR/DMEs, CAT I ILSs and land-based TACANS extended to 2010**
- **Decommissioning of stand-alone NDBs extended to 2010**



Loran-C in the 2001 FRP)

- **The Government will continue to operate and modernize Loran-C**
- **The Administration will continue to evaluate the long-term need for Loran-C**
 - **Capabilities of GPS and its augmentations, including interference mitigation.**
 - **User equipment availability, cost & acceptance,**
 - **International commitments,**
 - **Outcome of investigations by FAA on improved Loran-C technology.**



Summary

- **1999 FRP reiterates commitment to GPS**
 - **SPS Available Free of Direct Charge**
 - **GPS Modernization proceeding with two additional Civil Signals**
 - **Fielding of GPS Augmentations proceeding**
 - **Continue evaluating the need for Loran-C**
- **Next Plan will be Published in 2001**
 - **Two Documents**
 - **FRP Updated Annually**
 - **FRS Updated as needed**
 - **Revised schedules for operating plans**