

FY05 US LORAN Performance Review

Prepared for ILA 34

Santa Barbara, CA

Presented by:

LT James Bailey

COCO South

U.S. Coast Guard Navigation Center

18 Oct 2005



Homeland
Security

Overview

- Overview of US Loran System
- Detailed Review of FY05 Loran Performance
- Brief Look Ahead to FY06



**Homeland
Security**

US Loran Overview

24 Loran Stations

24 Monitor Sites

2 Control Stations (Alexandria, VA & Petaluma, CA)

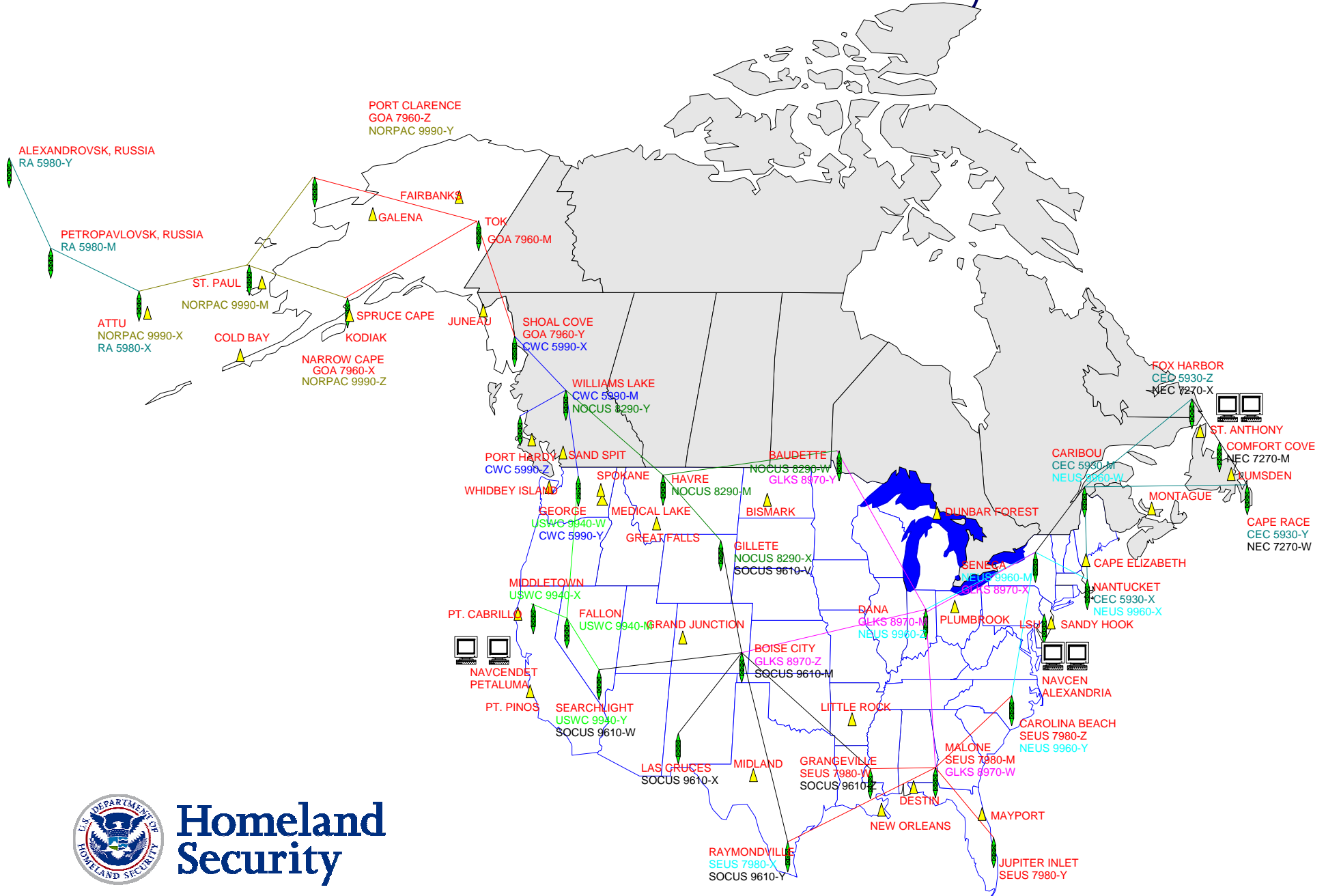
2 Shared Chains with Canada

1 Shared Chain with Russia



**Homeland
Security**

North American Loran-C System



Homeland
Security

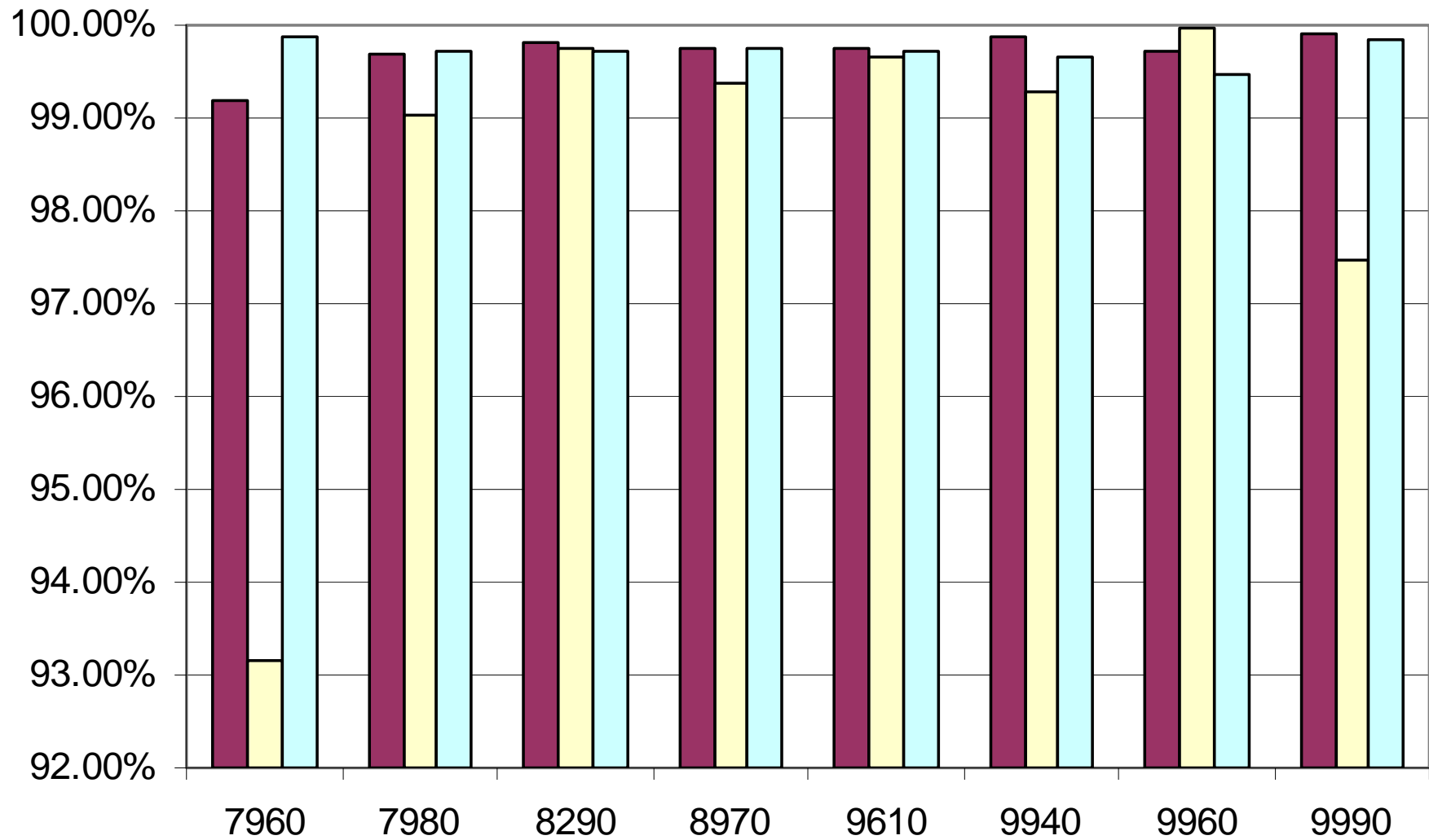
FY05 Review

- Major solar impacts:
 - Total solar unusable time for 7960 in FY05: > 10,000 min
- Continued system improvements:
 - Improved timing suite
 - New solid state transmitters
 - New Consolidated Control System installed
 - Prototyping
 - Loran Data Channel (LDC)
 - Time of Transmission (TOT)



**Homeland
Security**

Loran-C Availability FY03-FY05



**Homeland
Security**

■ FY03 ■ FY04 ■ FY05

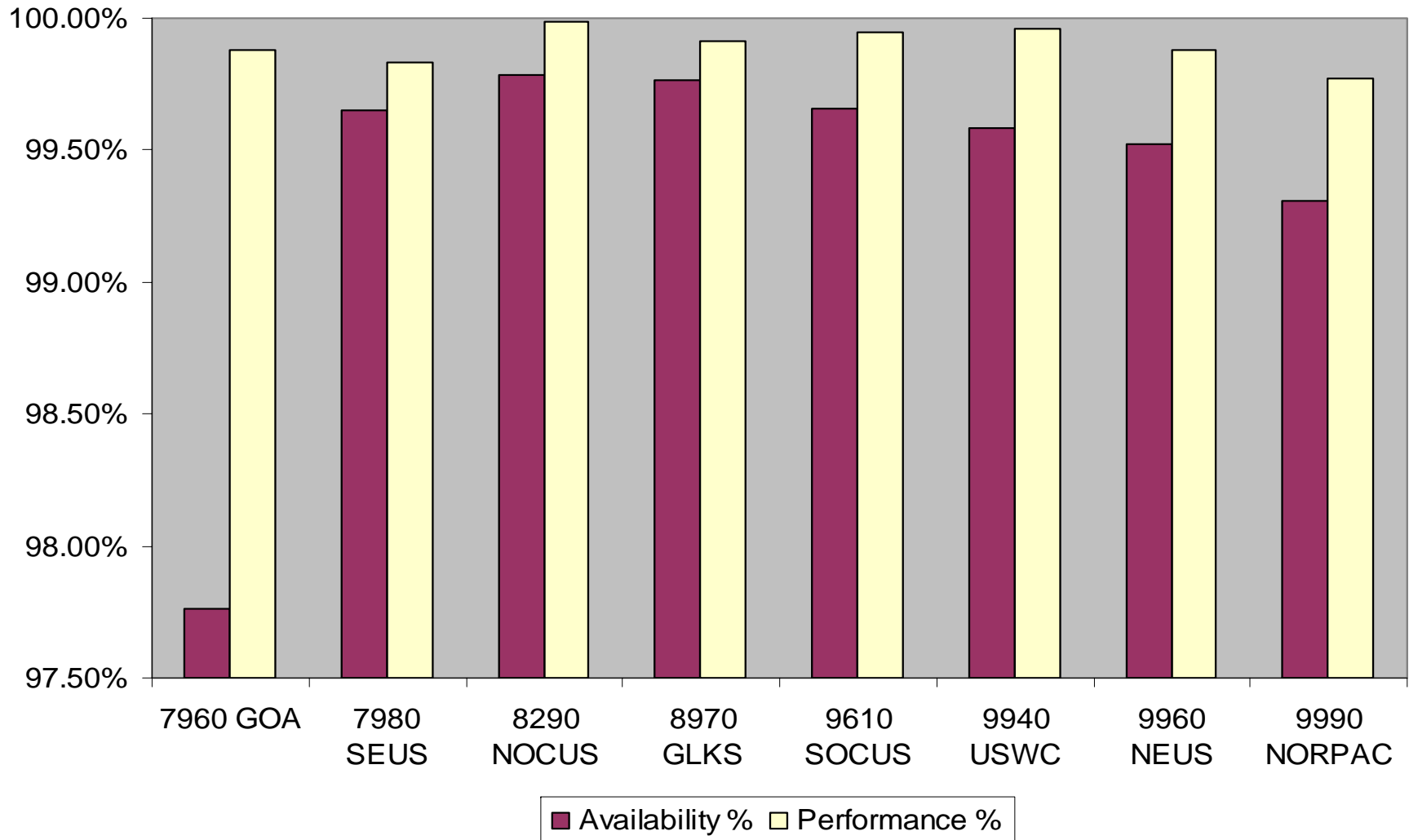
FY05 Review

- Chain / baseline availability : **99.38%**
 - Authorized unusable time due to TFE installs
 - Solar events
 - Discounting AUTM and Natural Causes – 99.86%
- Modernization of all CONUS LORSTA's now completed and work starting in AK.
- New Control Station System install completed (LCCS)
- Satellite Backup Communications system for Loran Command and Control installed



**Homeland
Security**

U.S. Loran Chain Availability FY05



**Homeland
Security**

Looking ahead to FY06

- Continued system improvements:
 - Facilities improvements at Kodiak and Saint Paul
 - Improved timing suite (TFE) for Alaska.
 - New solid state transmitters (nSSX) scheduled for install in Alaska (Kodiak in January and Saint Paul in early fall 2006).
 - Port Clarence to Nome preparations



**Homeland
Security**

Looking ahead to FY06

- Continued support of FAA enhanced LORAN:
 - Loran Data Channel testing at LORSTA Jupiter FL, LORSTA Las Cruces NM, and LORSTA Seneca NY, broadcast
 - TOT control of Great Lakes Chain evaluation



**Homeland
Security**

Summary

- U.S. Loran System continues modernization
- FY05 Operations were a success, despite:
 - Many station equipment upgrades and solar events
- Future plans are for continued system improvements
 - TOT Control, LDC operations, continued system upgrades
- Thank you for your attention ... your questions?



**Homeland
Security**



Homeland
Security

U.S. COAST GUARD NAVIGATION CENTER

