

34th Annual Convention and Technical Symposium
Fess Parker's DoubleTree Resort, Santa Barbara, CA

Sunday, October 16, 2005

5:00 -7:00 pm Early-arrival reception at the Lilleys' home, 741 Cathedral Pointe Lane

Turn right out of Fess Parker's DoubleTree Resort to Cabrillo Blvd. Turn right on Cabrillo and right again on Garden Street, to US 101 North. Travel 8 miles on 101 to the Patterson Avenue exit. Turn north on Patterson Avenue (right, toward the mountains) and travel ½ mile. Turn left into Cathedral Pointe, and turn right on Cathedral Pointe Lane after the stop sign. Number 741 is on the right. Lost? Call 805-967-9394.

Monday, October 17, 2005

9:00 am GAUSS Standardization Committee Meeting – Vineyard Board Room

2:00 pm 134th ILA Board of Directors Meeting – Vineyard Board Room

6:00 – 8:00 pm Icebreaker Reception – Rotunda, 3rd floor – Note: part of the reception event is out-of-doors; wear layers for comfort. Temperatures in the mid-50s are not uncommon in the evenings. The view is well worth it!

Tuesday, October 18 – General Sessions - All general sessions are in the San Rafael Ballroom

8:00 - 8:30 am Welcome Remarks and Keynote Address

Robert Lilley, Conference Chairman
Gregory Johnson, Technical Chairman
Langhorne Bond, ILA Vice-President and President-Elect

8:30 -10:00 am **Session 1 – Status Reports and Updates** – Chair: Robert Lilley, Northrop-Grumman

2005 RTCM Conference: Loran summary, Erik Johannessen, Megapulse
The National Boating Federation: Loran Update, Margot Brown, Executive Director (invited)
The Institute of Navigation, James Doherty, incoming President
The European Navigation Plan, and UK News, Paul Williams, Trinity House
The US Coast Guard LSU: Our World of Work, CDR Christopher Nichols, C.O.
The US FAA e- Loran program: A Quick-Look, Mitchell Narins, US Federal Aviation Administration
Loran and The Royal Institute of Navigation, Prof. David Last, incoming RIN President

10:30 -12:00 n **Session 2 – Programs and Plans** – Chair: William Roland, PVT Associates

Status of FERNS, Seung-Gi Gug, Korea Maritime University
Status of Loran in Europe and France, Jacques Manchard, Dir. Lighthouses and Buoys Div.,
Directorate for Maritime Affairs and Seafarers, Ministry of Infrastructures, Transport, Housing, Tourism and the
Sea; France
Road to a Stronger Business Case for eLoran, Durk van Willigen, Reelektronika
The US FAA e-Loran Program, Mitchell Narins, US Federal Aviation Administration

12:00 - 1:30 pm **Lunch** – Sierra Madre North
Speaker: Michael Edwards, Vice President; Venoco, Inc.

1:30 - 3:00 pm **Session 3 – Loran System Management** – Chair: LT Anthony Hawes, USCG

U.S. Loran Operations FY 2005 - LT James Bailey, USCG Navigation Center
Introduction to the Loran Integrated Command and Operations (LICOS) Project
LT Ronald Wright, USCG Loran Support Unit
Tools to Effectively Manage Loran System Equipment - LCDR James Betz, USCG Loran Support Unit
Introduction to the Loran Enhanced Monitor System (LEMS) Project
Wayne Wawrzyniak, USCG Loran Support Unit

3:30 – 5:00 pm **Session 4 – Timing, Differential Loran** – Chair: Durk van Willigen, Reelektronika

Modernized LORAN-C Timing Test Bed Status and Results

LTJG Kevin Shmihluk, USCG LSU, Tom Celano, Casey Biggs; Timing Solutions Corp., Benjamin Peterson, PIG

The Potential Role of Enhanced LORAN-C in the National Time and Frequency Infrastructure

Michael A. Lombardi, NIST; Thomas P. Celano, Timing Solutions Corp.; Edward D. Powers, USNO

Implementation of a UTC Service on the NELS Eurofix Transmitters

Arthur Helwig, Gerard Offermans, Rene Kellenbach and Durk van Willigen; Reelektronika

eLoran for Time and Frequency Applications

Linn Roth, Paul Schick, Dean Gervasi, Eric Wiley, and Chad Schweitzer; Locus Inc.

6:00 -8:00 pm - **Santa Barbara Tours de Arte Reception** – *Carpool Transportation; Maps will be provided*

Wednesday, October 19 – General Sessions - *All general sessions are in the San Rafael Ballroom*

8:30 -10:00 am **Session 5 – Signals, Propagation** – Chair: Paul Williams, Trinity House

Early Skywave Detection Network: Preliminary Design and Analysis

Sherman Lo, Per Enge; Stanford University, Peter Morris; Raytheon, Inc.

Loran-C Additional Secondary Factors: Implications for Meeting Required Navigation Performance (RNP) 0.3

David W. Diggle, Curtis Cutright; Ohio University, G. Linn Roth, Chad Schweitzer; Locus Inc., Mitchell Narins, US FAA

Airport ASF Mapping Methodology

Gregory Johnson, Alion Science & Technology; Peter Swaszek, Univ. Rhode Island; CAPT Richard Hartnett, USCG Academy

Altitude Effect on ASFs - Gregory Johnson, Alion Science & Technology; Peter Swaszek, Univ. Rhode Island; CAPT Richard Hartnett, USCG Academy

10:30 -12:00 n **Session 6 – Interference, Noise** – Chair: David Diggle, Ohio University

Analysis of the Effects of Atmospheric Noise on Loran-C

Curtis Cutright, Jonathon Sayre, Frank van Graas; Ohio University

Significant Space Weather in 2005 - Joe Kunches, NOAA Space Environment Laboratory

Atmospheric Noise Measurement and Mitigation - Lee Boyce, Sherman Lo, J. David Powell, Per Enge; Stanford University

Noise – From a Receiver Perspective - Wouter Pelgrum, Reelektronika

12:00 - 1:30 pm **Lunch** – *Sierra Madre North*

ILA Annual Membership Meeting – Langhorne Bond

Remarks - from former ILA President John D. Illgen, representing Northrop-Grumman Simulation

1:30 - 3:00 pm **Session 7: eLoran Applications** – Chair: John Kirk, Northrop-Grumman

The Saudi Positioning System - Measurement Results

Arthur Helwig, Gerard Offermans; Reelektronika, Brian Goodsir; Saudi Ports Authority

Performance Analysis of an Integrated GPS/Loran-C Tracking System

James Carroll, Henry Wychorski, and David Phinney; Volpe National Transportation Systems Center

Loran-C Trials in the United Kingdom

Paul Williams, Trinity House; Dean Furber, General Lighthouse Authorities

System Integration for Enhanced Loran – LT Anthony Hawes, USCG;

Benjamin Peterson, and Kenneth Dykstra; Peterson Integrated Geopositioning (PIG)

3:30 - 5:00 pm **Session 8: Receiver Development** – Chair: Gregory Johnson, Alion Science & Technology

Getting aHead(ing) with eLoran – Erik Johannessen, Megapulse

GPS/WAAS/Loran Prototype System – Chad Schweitzer, Paul Schick, Dean Gervasi, Eric Wiley, and Linn Roth, Locus, Inc.

(Integrated GPS/eLoran Receiver) – James Davis, Free Flight Systems (invited)

5:00 – 5:30 pm 135th ILA Board of Directors Meeting – *Vineyard Board Room*

6:30 - 7:00 pm **Reception** – *The Reagan Patio*

7:00 - **Banquet** – *The Reagan Room*
ILA Awards Presentation
Speaker: Neal Graffy, Santa Barbara History Consortium; "Why Santa Barbara?"