

**34<sup>th</sup> 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 134<sup>th</sup> 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, Reelelektronika

***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    135<sup>th</sup> 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?"*