

International Loran Association

34th Annual Convention and Technical Symposium of the International Loran Association 2005

October 17-19, 2005
Santa Barbara, California, USA

Volume 1 of 2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

ISBN: 978-1-60423-577-7

Some format issues inherent in the e-media version may also appear in this print version.

International Loran Association

34th Annual Convention and Technical Symposium of the International Loran Association
2005

TABLE OF CONTENTS

SESSION 1: STATUS REPORTS AND UPDATES

2005 RTCM Conference: Loran Summary	1
<i>Erik Johannessen</i>	
National Boating Federation: Loran Update.....	12
<i>Margot Brown</i>	
The Institute of Navigation	13
<i>James Doherty</i>	
e-Navigation & ERNP	24
<i>Paul Williams, Sally Basker</i>	
Loran and The Royal Institute of Navigation	40
<i>David Last</i>	
The US Loran Decision Process.....	51
<i>John Merrill</i>	
The US Coast Guard LSU: Our World of Work	59
<i>Christopher Nichols</i>	
The US FAA e- Loran program: A Quick-Look.....	77
<i>Mitchell Narins</i>	

SESSION 2: PROGRAMS AND PLANS

Status of FERNs.....	78
<i>Seung-Gi Gug</i>	
Collaboration with GPS/Loran and INS.....	N/A
<i>Takao Sagawa</i>	
Loran C in Europe	111
<i>Jacques Manchard</i>	
Road to a Stronger Business Case for eLoran	138
<i>Durk van Willigen</i>	
The US FAA e-Loran Program	163
<i>Mitchell Narins</i>	

SESSION 3: LORAN SYSTEM MANAGEMENT

U.S. Loran Operations FY 2005	228
<i>James Bailey</i>	

Loran Information, Control, and Operations System	241
<i>Ronald Wright</i>	
It's a Bird, It's a Plane ... No, It's an Allegory of a Life Cycle Support System Centralizing Loran Technical and Logistical Support Systems	252
<i>James Betz, John Elliott</i>	
Loran Enhanced Monitor System	299
<i>Wayne Wawrzyniak</i>	

SESSION 4: TIMING; DIFFERENTIAL LORAN

Modernized LORAN-C Timing Test Bed Status and Results	309
<i>Kevin Shmihluk, Thomas Celano, Casey Biggs, Benjamin Peterson</i>	
The Potential Role of Enhanced LORAN-C in the National Time and Frequency Infrastructure	338
<i>Michael A. Lombardi, Thomas Celano, Edward D. Powers</i>	
Implementation of a UTC Service on the NELS Eurofix Transmitters	384
<i>Arthur Helwig, Gerard Offermans, Rene Kellenbach, Durk van Willigen</i>	
eLoran for Time and Frequency Applications	400
<i>G. Linn Roth, Paul Schick, Dean Gervasi, Chad Schweitzer, Eric Wiley</i>	

SESSION 5: SIGNALS AND PROPAGATION

Early Skywave Detection Network: Preliminary Design and Analysis	421
<i>Sherman Lo, Per Enge, Peter Morris</i>	
Loran-C Additional Secondary Factors: Implications for Meeting Required Navigation Performance (RNP) 0.3	495
<i>David W. Diggle, Curtis Cutright, G. Linn Roth, Chad Schweitzer, Mitchell Narins</i>	

VOLUME 2

Airport ASF Mapping Methodology	547
<i>Gregory Johnson; Peter Swaszek, Richard Hartnett</i>	
Altitude Effect on ASFs	602
<i>Gregory Johnson; Peter Swaszek, Richard Hartnett</i>	

SESSION 6: INTERFERENCE AND NOISE

Analysis of the Effects of Atmospheric Noise on Loran-C	661
<i>Curtis Cutright, Jonathon Sayre, Frank van Graas</i>	
Significant Space Weather in 2005	718
<i>Joe Kunches, William Murtagh</i>	
Atmospheric Noise Measurement and Mitigation	740
<i>Lee Boyce, Sherman Lo, J. David Powell, Per Enge</i>	
Noise – From a Receiver Perspective	794
<i>Wouter Pelgrum</i>	

SESSION 7: eLORAN APPLICATIONS

The Saudi Positioning System - Measurement Results	838
<i>Arthur Helwig, Gerard Offermans, Brian Goodsir</i>	
Performance Analysis of an Integrated GPS/Loran-C Tracking System	891
<i>James Carroll, Henry Wychorski, David Phinney</i>	
Loran-C Trials in the United Kingdom	902
<i>Paul Williams, Dean Furber,</i>	
System Integration for Enhanced Loran	945
<i>Anthony Hawes, Benjamin Peterson, Kenneth Dykstra</i>	

SESSION 8: RECEIVER DEVELOPMENT

Getting aHead(ing) with eLoran	955
<i>Erik Johannessen</i>	
GPS/WAAS/Loran Prototype System	993
<i>Chad Schweitzer, Paul Schick, Dean Gervasi, Eric Wiley, G. Linn Roth</i>	
GPS/WAAS/eLoran Airborne Navigator	1019
<i>James Davis, Chris Eheim</i>	

Author Index