Technical Program

Directed Energy Test and Evaluation Conference

Hosted by
Directed Energy Professional Society
and
International Test and Evaluation Association

3-5 August 2010
Albuquerque, New Mexico
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Plenary Session (Open)
Embassy Suites
0630  Registration Desk Opens
0700  Exhibits Open
Continental Breakfast in the Exhibit Area
Speaker/Panel Member Breakfast
0800  Welcome and Introductions
Conference Co-Chairs:
Patrick Cannon and Larry McKee
0815  DE - Success Through Test and Evaluation
Mr. George Rumford, Test and Evaluation
Science and Technology (T&E/S&T)
Program Manager, OUSD
0900  Airborne Laser Lethal Shoot Down
Colonel Andrew Dobrot, Vice Commander
Airborne Laser Program Office
0945  Break in Exhibit Area
1015  DE Task Force/Action Group
Colonel David Robie, AF/A5R - Air Force
Requirements
1100  Maritime Laser Demonstration Update
Mr. David Newton, Naval Surface Warfare
Center
1145  Lunch

SESSION 1: Directed Energy Modeling and Simulation (Open/Limited)
Embassy Suites
Chair: Andy Keipert, 46 TS/OGEE
Session is Open
1300  Advanced Modeling and Simulation for Test and Evaluation of Electromagnetic Threat Assessment
Vijaya Shankar, HyPerComp, Inc.
1330  Combining High Powered Microwave Effects and Conventional Weapons Analysis
Kim Allen, Applied Research Associates
Session is now Limited
Kenny Escobar, 46th Test Wing
1430  Break
1500  HPM Mission Level Modeling to Support Testing and Evaluation (Limited)
Steve Booher, Air Force Research Laboratory/RDHA
1530  Advanced Concepts Event - Maturing Directed Energy Experimentation Wargaming (Limited)
Lauren Viscito, Air Force Research Laboratory/RDTA
1600  VV&A Strategy for DE Tools (Limited)
Linda Lamberson, Air Force Research Laboratory/RDTA
1630  Capabilities of HEL Beam Control Systems Against Maneuvering Targets (Limited)
Travis Taylor, US Army Space & Missile Defense Command
1730  Reception in the Exhibit Area
SESSION 2: Test and Evaluation Lessons Learned: HEL and HPM (Limited/Open)
Embassy Suites
Chair: Richard Welch, 46TS/OGEE (Qualis Corp)

**Session is Limited**

1300 BITS, Beam Irradiance on Target System (Limited)
   David Ward, SemQuest Inc.

1330 Measurement of Thermal Phenomena at HEL Target Surfaces (Limited)
   Jonathan Woolley, AEgis Technologies Group

1400 Solid State Laser Testbed Experiment (SSLTE) Testing Program at HELSTF (Update) (Limited)
   Travis Taylor, US Army Space & Missile Defense Command

1430 Break

**Session is now Open**

1500 Directed Energy Testing at North Oscura Peak, New Mexico
   Ross Conrad, Air Force Research Laboratory/RDSEW

   David Roberts, Georgia Tech Research Institute

1600 Field Characterization with Slab Coupled Optical Sensor (SCOS)
   Bryson Shreeve, Brigham Young University

1630 High Energy Laser Target Surface Temperature Estimation by a 1D Inverse Heat Conduction Algorithm
   James Griggs, Directed Energy Test and Evaluation Capability

1730 Reception in the Exhibit Area

SESSION 3: Science & Technology / T&E Technology Development (Open/Limited)
Embassy Suites
Chair: John Wong, 711 TS/DE

**Session is Open**

1300 Directed Energy Test Science and Technology (DET S&T) Project Overview
   Minh Vuong, PEO STRI

1330 Progress Report: The Integrated Atmospheric Characterization System (IACS)
   David Roberts, Georgia Tech Research Institute

1400 The Development of a Versatile High Power Wideband RF Test System
   Jon Mayes, Applied Physical Electronics

1430 Break

**Session is now Limited**

1500 Off-Axis Monitoring of Laser Energy for Open Air Range Testing (LOHAZ) (Limited)
   Richard Preston, Sensing Strategies, Inc.

1530 Focal Plane Array Developments for High Energy Laser Radiometric Imaging (Limited)
   George Williams, Voxtel, Inc

**Session is Open**

1600 Lessons Learned from Testing a 25GW Wideband High Power Microwave Simulated Threat Source
   Jeffrey Schleher, Directed Energy Test and Evaluation Capability

1630 Acceptance Test Results for the Directed Energy Test and Evaluation Capability High Power Microwave Narrowband Threat Systems
   J. Mark DelGrande, Directed Energy Test and Evaluation Capability

1730 Reception in the Exhibit Area
Thanks to Our Gold Sponsor: Ktech CORP.

Thanks to Our Platinum Sponsors:

BOEING

SAIC
From Science to Solutions

Thanks to Our Exhibitors:

AEgis Technologies Group, Inc.
Air Force Research Laboratory
Applied Physical Electronics
Cobham Sensor Systems
DE²AC
DETEC
Georgia Tech Research Institute
Ktech Corporation

NAVAIR
Northrop Grumman Corporation
Photron USA, Inc.
Science Applications International Corporation
The Boeing Company
U.S. Air Force Operational Test & Evaluation Center - AFOTEC
**THURSDAY MORNING**

**Plenary Session (Open/Limited)**
Embassy Suites

0630  Registration Desk Opens
0700  Exhibits Open
Continental Breakfast in the Exhibit Area
Speaker/Panel Member Breakfast

**Session is Open**

0800  Welcome and Introductions
Conference Co-Chairs: 
*Patrick Cannon* and *Larry McKee*

0815  CHAMP
*Bob Torres*, Air Force Research Laboratory/ RDH

0845  Army Laser Testbed (HELSTF)
*Stephen Squires*, HELSTF Director

0930  Break in Exhibit Area

**Session is now Limited**

1000  PLENARY PANEL:
Advanced Tactical Lasers (Limited)
Chair: *Charles Helms*, Air Armament Center

Panel:
*Charles Helms*, Air Armament Center
*Bryan Kelchner*, The Boeing Company
*Heather Lehmann*, USSTRATCOM/JFCC SPACE/J95 - The Laser Clearing House
*Randy Smith*, The Boeing Company
*Ken Stanley*, Headquarters - Air Force Special Operations Command
*Eric Van Dorn*, 413th Flight Test Squadron (46th Test Wing)

1145  Lunch

1245  Buses Depart for Classified Session

**THURSDAY MORNING**

**Poster Session (Open)**
Embassy Suites, Exhibit Area

1000 - 1145

Dual Oscillator for Microwave Generation (DOMG)
*Doug Byrne*, ITT Corporation

Field Strength Sensor Network (FSSN)
*Gary Demuth*, ITT Corporation

Integrated Electro-Magneto-optic Sensor (IEMS)
*Anthony Garzarella*, Navy Research Laboratory

Heat Flux Sensor Array (HFSA)
*Yuwen Zhang*, University of Missouri
THURSDAY AFTERNOON

SESSION 5: Laser Testing and Satellite Safety (Limited)
Embassy Suites
Chair:  Jim Wolongevicz, Air Force Research Laboratory/RDS

1300 Satellite Safety Solutions for Appropriate and Affordable Directed Energy Test and Evaluation
Heather Lehman, U.S. Navy

1330 Guidance on Mitigating PA Issues and an Introduction to PA Tools
Sarah Myers, Air Force Research Laboratory/RDTE

1400 Airborne Laser Testbed’s Predictive Avoidance Mission Planning
Andrew Corp, U. S. Air Force

1430 Break

1500 Laser Weapon System Satellite Avoidance
David Newton, U. S. Navy

1530 Benefits of a Situational Awareness Tool During a “Ground Laser to a High Altitude Aircraft” Test Program
William Gibson, High Energy Laser Joint Technology Office

1545 HEL-JTO Predictive Avoidance and Aircraft Deconfliction Roadmap
LeAnn Brasure, Schafer Corp

1700 Conference Adjourns

SESSION 4: Data Sharing and Standardization (Limited/Open)
Embassy Suites
Chair: Richard Damron, Air Force Research Laboratory/RDTA

Session is Limited

1300 Introduction to Data Sharing and Standardization (Limited)
Richard Damron, Air Force Research Laboratory/RDTA

1315 HEL Lethality Architecture (Limited)
Dave Loomis, DNL Consulting

1345 Verification, Validation & Accreditation of Existing Directed Energy Models (Limited)
Maqsood Mohammed, Air Armament Center

1430 Break

Session is now Open

1500 Overview of AFIT-Developed Codes
Jonathan Spaulding, Air Force Institute of Technology

1530 Directed Energy Engineering Analysis Center
Karen Hudson, Air Force Research Laboratory/RD

1700 Conference Adjourns
THURSDAY AFTERNOON

SESSION 6: Directed Energy Test Results (SECRET/U.S. Only)
Offsite Location
Chair: James Keith, 46 Test Group/OL-AA
1245  Buses Depart for Classified Session
1300  Airborne Laser Test Bed Results
1330  MATRIX Field Test Results
1400  Preliminary Effects Test Results for CHAMP
1430  Using Field Data and a Wave Optics Model to Compare Tactical Track Algorithms
1500  Break
1530  Mission Planning for the Airborne Laser Test Bed’s High Power Missile Engagements
1600  Low-Mid Power HEL Systems Analysis Against Mortars
1630  Recent Results of Directed Energy Experiments and Field Testing
1645  Buses Return from Classified Sessions
1700  Conference Adjourns

Upcoming Events

2010 ITEA Annual Symposium
ITEA Sponsored Event
13-16 September 2010 - Glendale, AZ

RF Directed Energy Weapons Conference
DEPS Sponsored Event
13-17 September 2010 - Shrivenham, UK

Unmanned Autonomous Systems Workshop
ITEA Sponsored Event
13-14 October 2010 - Atlanta, GA

2010 DEPS Annual DE Symposium
DEPS Sponsored Event
15-19 November 2010 - Bethesda, MD

2010 T&E in the Acoustical Arena Workshop
ITEA Sponsored Event
16-19 November 2010 - Poipu, Kauai, HI

2011 Live-Virtual-Constructive Conference
ITEA Sponsored Event
24-27 January 2011 - El Paso, TX

Directed Energy Systems Symposium
DEPS Sponsored Event
28 March - 1 April 2011 - Monterey, CA
Conference Organizers

Conference Co-Chairs
Mr. Patrick Cannon
Dr. Larry McKee

Technical Program Co-Chairs
Mr. Jeff Estep
Mr. Andy Keipert

Exhibits Chair
Mr. Bill Dallas

Conference Coordinator
Cynnamon Spain

Registration and Short Courses
Donna Storment

Payments and Receipts
Tiffany Bjelke