



# 48<sup>th</sup> Annual Collaborative EW Symposium



2-4 APRIL 2019

Pt. Mugu, CA

*As of March 7, subject to change*

## Agenda

**All sessions will be held at the Station Theater, NBVC, Pt Mugu, CA**

**Day 1 is Secret US Only, Day 2 & 3 are Secret Releasable to USA and AUS**

**Tuesday, 2 April | *SECRET US Only Session***

### **Welcome**

Mr. Brian Ziegler, Conference Chair  
CAPT Jeff Chism, Commanding Officer, Naval Base Ventura County, CA  
Mr. Muddy Watters, President, Association of Old Crows  
Mike Supko, AIR-4.5 National Military Director, Naval Air Systems Command  
Scot Dillon, Commander Naval Air Warfare Center Weapons Division

### **Keynote Address**

RDML Steve Parade  
Director, Warfare Integration Directorate N2/N6, Office of the Chief of Naval Operations

### **Session 1: Electronic Warfare Enablers**

Session Chair: Mr. Daniel Omoto, NAWC-WD

Non-EA technology trends and advancements that are necessary to produce greater EA effectiveness. Includes networked solutions, interoperability / compatibility concerns, manned / unmanned teaming, assured communications, and other related S&T technologies.

*Future S&T Strategy for Cooperative and Collaborative Airborne EW*

Mr. Shane Stein, Office of Naval Research

*Cooperative Electronic Warfare*

Mr. Reginald Cooper, AFRL

Lab Tour Overview and Instructions

Mr. Kevin Willow, NAWCWD

1200 – 1300

### **LUNCH**

### **Keynote Address**

Dr. William Conley  
Director Electronic Warfare, Director Electronic Warfare, Office of the Under Secretary of Defense, Acquisition and Sustainment

## **Session 2: Collaborative Electronic Attack**

Session Chair: Mr. Brian Hill, NAWC-WD

Collaborative EW is driving mission planning, execution, and assessment to a new reality. To achieve efficient coordination with and tasking of distributed and cognitive networked EW systems, mission planning, execution, and assessment needs to be capable of working with multiple disparate systems before, during, and after a mission. The challenges of enabling dynamic resource allocation by EW operators working with unmanned and cognitive systems at the tactical to operational levels need to be addressed.

*Analytical Modeling Stand-In EA vs Ideal Networked IADS*

Dr. Mark Smith, GTRI

*Collaborative EA using Interwoven Communication and Jamming*

Mr. Brian Stevens, JHU/APL

*Application of Analysis Methodology to a Data Link Use Case*

Mr. Quinn Matthew, JHU/APL

*Decisive Sting/DON M&S - Test, Training, Experimentation and Rehearsal (TTE&R)*

Mr. Marcus Makarehchi, DON M&S

## **Session 3: Warfighter Perspective**

Session Chair: CDR Michael Szczerbinski, AIR-4.5 / NAWC-WD EMW Military Lead

From Operation Allied Forces to present day, lessons learned have highlighted areas where Collaborative EW Data, Networked EW, and EW Decision Aids available to the EW warfighter were employed successfully.

*MH-60R Collection Operations*

LT John "Dom" Bamonte, HSM Weapons School Pacific

## **Closing Remarks**

**Wednesday, 3 April | SECRET//REL to USA, AUS Session**

**0800 – 0810**

### **Opening Remarks**

Mr. Brian Ziegler, Conference Chair

### **Session 1 (cont). Electronic Warfare Enablers**

Session Chair: Mr. Daniel Omoto

*All-domain Overhead Cooperative Operations (AOCO) ELINT Operations Evolution*

LT Kyle Galarneau and Mr. Erik Martin

*Collaborative EW Enablers in the Naval Tactical Grid*

Mr. David Wheeler, PMA-290E

*Evolution of Electronic Warfare Integrate Labs (EWIL) with NEWEG and T2OURNAMINT*

Dr. Bill Metz and Ms. Jenifer Koch, NAWC-WD

*Electromagnetic Maneuver Warfare - Resource Allocation Management (EMW-RAM) Overview*

Mr. Shane Stein, ONR Code 31

*Implementing Collaborate Electronic Attack Solution - A Demonstration Autonomous EW Resource Allocation*

Mr. Michael Garcia, NAWC-WD

*E-2D SHEELD Efforts SHEELD Next-Gen EW Mission Planning/Post-Flight*  
Mr. Scot Napoletano, NAWC-WD

*Quantum Technologies – Hype or Game Changer?*  
Dr. Anthony Szabo, Defense Science and Technology Group

**1200 – 1300 LUNCH**

**Session 2. Collaborative Electronic Attack**

Session Chair: Mr. Brian Hill, NAWC-WD

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*Electronic Warfare for Operations in Multi-domain BATtle (EWOMBAT) Essential Research Program (ERP) Overview*  
Dr. Matthew Higgins, Army Research Lab

*The Bear Jams Over the Mountain: Emulating the EW Bear enabling Multi-Domain Operations*  
Dr. Bill Cojocar, Kerberos International

*Mission Planning for Collaborative Electronic Attack MALD-J Usecase*  
Mr. Niraj Srivastava, Raytheon

**Closing Remarks**

**Aircraft/Static Displays & Tours of NAWCWD EW and Range Facilities**

**Thursday, 4 April | SECRET//REL to USA, AUS Session**

**0800 – 0810 Opening Remarks**  
Mr. Brian Ziegler, Conference Chair

**Keynote Address**  
AIRCDRE Terry Van Haren, Air Force Attache Washington

**Session 4. Coherent Electronic Attack**

Session Chair: Mr. Thomas Bluhm

Technology trends and advancements focused at the precise phase and timing requirements to produce sophisticated coherent jam strategies. This includes the cognitive/AI algorithms that can drive system adjustments at the speeds/precision necessary to produce coherent effects and jamming trials against modern threat systems.

*Outcomes of Collaborative Passive Coherent Location System Test*  
Mr. Joseph Verringer, DSTG and Mr. David Wu, NAWC-WD

*Direct Antenna Modulation: A Novel Pathway for Transmitting High-Bandwidth Signals with Electrically Small Antennas*  
Mr. Jean-Paul Santos, NAWC-WD

*Classification of Unknown Emitters Using Machine Learning*  
Mr. Christopher Lewis, Defence Science and Technology Group

*E-2D ADRP - Survivability Program*  
LCDR Theodore Stow, PMA-231

**1200 – 1300 Lunch**

*E-2D Near-term Experimentation*  
Mr. Larry Branthover, PMA-231

**Session 3. Warfighter Perspective (cont.)**

Session Chair: CDR Michael Szczerbinski, AIR-4.5 / NAWC-WD EMW Military Lead

*VMAQ-2 Post Deployment Debrief*  
TBD

*EA-18G Status of Current Operations*  
TBD

*USAF Big Safari*  
TBD

TBD

TBD

**Closing Remarks**

CAPT Supko, Deputy National Director, Avionics Sensors and E\*Warfare Department (AIR-4.5)

**Conference Wrap Up**

Mr. Brian Ziegler, Conference Chair