



A Report on The Second National Workshop on EW India – EWWI 2013 held During 29 Jan to 1 Feb 2013 at NSSC, Indian Institute of Science, Bangalore, India

The Second National EW Workshop India – EWWI 2013, a four day intensive Workshop organised by AOC India Chapter during 29 Jan to 1 Feb 2013 at NSSC, Indian Institute of Science, Bangalore has



concluded on a very successful note. The Workshop was inaugurated by Dr A T Kalghatgi, Director (R&D), Bharat Electronics Limited (BEL), Bangalore, in presence of President of AOC India Chapter, Dr U K Revankar and Vice President, Mr T N Yadgiri Rao. The Workshop was attended by around 150 delegates from Defence Research and Development Organisation, BEL, Indian Armed Services and EW

Industry. While welcoming the Speakers and Delegates, Dr Revankar explained the usefulness and rationale behind organising the National Level Workshop in India. A Souvenir containing the details regarding the Workshop, its Sponsors and the AOC India Chapter was released on the occasion.

The first three days of the Workshop was conducted by the very Eminent Author and Tutor (The Author of EW 101 Series of books), Mr Dave Adamy from Adamy Inc. USA. Dave's Course was very comprehensive covering all the important areas of the field of Electronic and Information Warfare arena right from the Fundamentals to the Advanced Topics, and also included the coverage on the most modern exploitation of Electro Magnetic Spectrum. He used the EW Pocket Dairy and a Special EW Slide Rule during his teachings of the EW Technology. The Two Volume Course material (both Hard copy and Soft copy) provided to Delegates was exhaustive and was well appreciated by the Delegates.

The three day lectures by Dave were divided into the following 12 Modules based on the Topics covered:

1. EW Principles & Overview
2. EW Threats
3. Radio Propagation
4. Antennas & Receivers
5. EW Processing & Search
6. Emitter Location
7. Radar Characteristics
8. ECM Concepts & Calculations
9. Jamming Techniques & EP
10. Chaff & Decoys
11. IR, EW/EO, DEW, & STEALTH
12. Modern Trends in EW/EC & System Integration



On completion of the three days Course, recognising the immense contribution to the EW Technology, Mr Dave Adamy was felicitated by the AOC India Chapter on behalf of Indian EW Fraternity.

On the fourth day of the Workshop, Dr Andrea De Martino, author and Chief Technical Officer from the Elettronica, Italy continued the Workshop with the topics covering the state-of-the-art developments in the EW Technologies.



Dr Martino covered the following advanced topics in greater details on technical information in two Sessions:

- **Active Phased Array and Digital Receiver Technology.**
- **New Generation EW Self Protection Systems and Shared Aperture Systems.**



Another key area in the modern Electronic Warfare scenario, the Cyber Warfare was also a part of the Workshop. A current topic on “EW Cyber Technologies” that included interconnected Systems and Software relevant to Cyber Warfare was covered in two sessions, by Mr David Canone, System Analyst at the Research and Advanced System Design Department in Elettronica, Italy.

In order to give an exposure to Delegates regarding the Current Trends in the EW Technologies, five invited talks from the EW Industry were arranged on the last day of the Workshop.

- **EW Stimulators for Total Life Cycle Support of Integrated EW Systems**
By **Harold Screven**, Product Architect
Northrop Grumman Amherst Systems
- **Optimising the Optical Detection and Optical Defeat of Optically Guided Missiles**
By **Johan Viljoen**, Manager, Missile Warning Group, SAAB
- **High Speed Frequency Synthesis**
By **Mark Elo**, Giga-tronics
- **Design and Validation of Wideband Electronic Warfare (EW) Systems**
By **Anurag Bhargava**, Application Consultant, Agilent Technologies
- **Building EW Systems using COTS Technologies**
By **Tarun Gupta**, Business Manager (Defense /Telecom)
National Instruments



The EWWI 2013 was realised by the AOC India Chapter with the generous support of the Sponsors of the event, both technically and financially. Eight of the Sponsors also displayed the latest EW Products in the accompanying Technical Exposition at the Workshop venue. Delegates and Invitees visited the exhibition booths throughout the Workshop.

All the Delegates were given a Participation Certificate, handed over to them by Lt General Rajesh Pant, VSM AVSM, Commandant, MCTE, Mhow Indian Army, in the Valedictory Function of the Workshop.