

# The Association of Old Crows

## EW EUROPE 2019

Advancing International Policy,  
Programs, and Professional Development  
related to Electromagnetic Spectrum  
Operations in all Domains

**Mission:**

- Advocate
- Educate
- Support



ASSOCIATION  
OF OLD CROWS

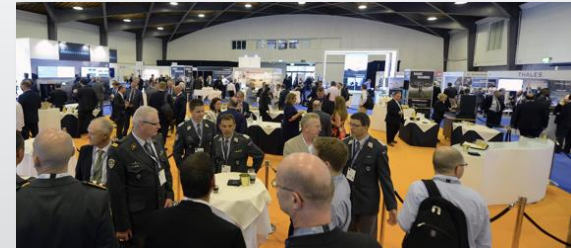
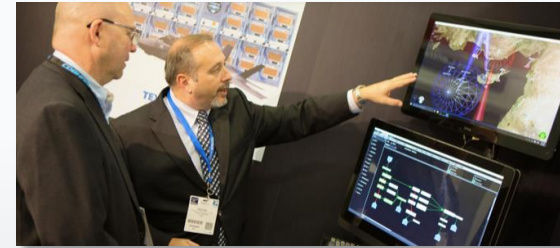
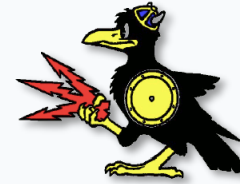


# Our Theme

- **UNIFYING ELECTROMAGNETIC WARFARE IN A COMPLEX WORLD TOGETHER**
- Over the past few years mature, offensive EW activity in Europe has demonstrated that in the electromagnetic domain, warfare is no longer theoretical
- The AOC's 24th European event, **will consider the future of EW and EM Operations in the changing light of current and emerging threats** including Hybrid Warfare, Information Operations/Warfare, the multi-domain battle (MDB), Cyber and Anti Access/Area Denial (A2/AD) where some potential opponents are excelling

# CONFERENCE UPDATE

- 2019 EW EUROPE, largest event to-date
- 1400 Pre Registrations
- 45 Nations
- 80 Sponsors and Exhibitors
- Superb Speakers
- Great Agenda



# AOC Mission Statement

- The Association of Old Crows is an organization for individuals who have common interests in Electronic Warfare (EW), Electromagnetic Spectrum Management Operations (EMSO), Cyber Electromagnetic Activities (CEMA), Information Operations (IO), and other information related capabilities.
- The Association of Old Crows provides a means of connecting members and organizations nationally and internationally across government, defense, industry, and academia to promote the exchange of ideas and information, and provides a platform to recognize advances and contributions in these fields.

# AOC Update

- Global Membership: 10,500 US Members and 2,600 International Members. 67 Active Chapters in 20 countries

- **Aardvark's Roost**, South Africa
- **Arctic Roost**, Norway
- **De Ooievaar Chapter**, Netherlands
- **India Chapter**, India
- **Israeli Chapter**, Israel
- **Pretorian's Roost**, Italy
- **La Fayette Chapter**, France
- **Red Baron Roost**, Germany
- **Saudi Arabia Chapter**, Saudi Arabia
- **Swiss Crows**, Switzerland
- **United Kingdom Chapter**, United Kingdom
- **Viking Roost**, Stockholm, Sweden



- Focus:
  - Supporting the members and chapters
  - Regaining the Technological Advantage

# How to Join

- Website [www.crows.org](http://www.crows.org)
- After Webinars (receive a \$20 discount)
- At Conferences and Symposiums
- One Year Membership at this event is free (Forms at AOC Booth)
- Under the age of 25 - free membership for three years
- Active Duty Military free for one year

# 56th Annual Convention: October 2019

- THEME: “Building the EMS Enterprise”
- DC Convention Center
- Sponsorships, Exhibit Space – Still Available – Going Fast!!!
- Technical Sessions Assigned: View Draft Agenda at [crows.org](http://crows.org)
- Volunteers Needed: [events@crows.org](mailto:events@crows.org)

# Our Job - Deliver Effects

- Detect, ID, Locate, Deny, Deceive, Degrade, Delay, Disrupt, Destroy
- All missions that happen in all domains, reliant on the Electromagnetic Environment





# What has Changed - Technology

- Multi-Function supported by ML/AI
- Sense,, Detect, ID, Locate, Communicate
- Disrupt, Deny, Degrade, Deceive
  - Non-Kinetic effectors
  - EW
  - Cyber
  - Spectrum Maneuver
- Multi-Function/Multi-Domain using the spectrum
  - Affecting the Electromagnetic Environment
  - Protecting the Electromagnetic Environment
  - Maneuver in the Electromagnetic Environment

# Losing the Advantage



“The development and proliferation of more advanced military technologies by other nations means that we are entering an era where dominance of the seas, in the skies, and in space can no longer be taken for granted”

*Russia - Ukraine/Syria Dedicated EW Forces*

*ISIS - Weaponized commercial technology*



# Regaining the Advantage



- We operate and fight in the electromagnetic environment.... Provide the Commander the ability/option to deliver effects on the Battlefield
  - Kinetic
  - Non-Kinetic (EW, Cyber, DE, HPM)
- Invest in and develop 3<sup>rd</sup> Offset capabilities
  - Adaptive, cognitive, swarming, multi-function, penetrating
- Cross Domain Command and Control – *Mission Planning Tools*
- Protect our platforms and weapons
  - EP and Cyber Survivability – *Digital Receivers*
- Speed up our decision cycle and acquisition cycle
- Train like you fight

# Challenges



- Organization
- Sensing in the EME/data fusion
- Multi-domain Command and Control
- Joint Operations
- Coalition/Partner Operations
- Training
- Data Sharing



## Why Are We Here

- Learn – Professional Development
- Meet – Increase Network
- Collaborate – new ideas, new opportunities
- See – technologies, hardware, software
- Enjoy



**YOU are the Leaders**  
**YOU are the cutting edge to regain Electromagnetic Environment Superiority**